PROJECT MANUAL

THE DESERTED VILLAGE
ROOF REPLACEMENT
HOUSES 5, 10, & 11

Cataract Hollow Road
Berkeley Heights, New Jersey

For

UNION COUNTY IMPROVEMENT AUTHORITY

10 ELIZABETHTOWN PLAZA 5th FLOOR
ELIZABETH, NEW JERSEY 07207

PS&S ARCHITECTURE & ENGINEERING
3 Mountainview Road
Warren, New Jersey 07059
732.560.9700

ISSUED FOR BIDS
11.4.2025

(N) = New Section (R) = Revised Section (D) = Deleted Section

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UNION COUNTY IMPROVEMENT AUTHORITY

REQUEST FOR BIDS

FOR

THE DESERTED VILLAGE

ROOF REPLACEMENT

HOUSES 5, 10, & 11

Cataract Hollow Road
Berkeley Heights, New Jersey

ISSUED BY:

Union County Improvement Authority
10 Elizabethtown Plaza
Elizabeth, New Jersey 07207

Bid Submission Date:

Tuesday 12.16.2025

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village
Roof Replacement - Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, NJ

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UNION COUNTY IMPROVEMENT AUTHORITY NOTICE TO BIDDERS -- The Union County Improvement Authority (UCIA) is soliciting bids for the Deserted Village Roof Replacement at Houses 5, 10, & 11, located at Cataract Hollow Road, Berkeley Heights, New Jersey. Sealed bids will be received by the UCIA at its Administrative Offices located at 10 Elizabethtown Plaza, 5th Floor, Elizabeth, New Jersey 07202 on or before **Tuesday 12.16.2025 at 11:00 AM** prevailing time, at which time the bids will be publicly opened and read aloud.

The bid plans and specifications, drawings, and other related documents for this work ("Bid Documents") may be obtained electronically on or after **Tuesday 11.4.2025** by completing the request form on the Union County Improvement Authority web site at: https://ucimprovementauthority.org

Questions regarding the bid shall be directed in writing to Bibi Taylor of Union County Improvement Authority, Timothy Hennessy of RSC Architects and Wayne Napolitano of PS&S Architecture and Engineering via email at btaylorUCIA@ucnj.org, bidding@rscarchitects.com and wnapolitano@psands.com. Written questions must be sent by **Tuesday 12.2.2025 at 5:00 PM.** Any addendum may be obtained electronically on or after **Friday 12.05.2025 on the Union County Improvement Authority web site at: https://ucimprovementauthority.org. It is the responsibility of the bidder to obtain the addendum.**

A **pre-bid meeting** will be held on **Thursday 11.13.2025 at 10:30 AM** at the Deserted Village, Masker's Barn, Cataract Hollow Road, Berkeley Heights, New Jersey. A site tour will be conducted immediately following the pre-bid meeting. Attendance at the prebid meeting in not mandatory. However it is strongly encouraged that the bidder attend the prebid meeting, either personally or through a representative identifying themselves as such.

Bidders must be classified by the State of New Jersey, Division of Property Management and Construction (DPMC) under classification code No. C008, No. C009, as well as other documentary requirements as set forth in the INSTRUCTIONS TO BIDDERS found in the Bid Documents.

Bids must be accompanied by a certified check, cashier's check or bond of a surety authorized to do business in New Jersey in the amount of ten percent (10%) of the total bid amount, but not exceeding $20,000, and must be accompanied by a consent of surety stating that surety will provide the bonds required by the Bid Documents, if bidder is awarded a contract.

Bidders shall submit an **original and two copies** of their bid in a sealed envelope, clearly marked on the outside with the words "The Deserted Village Roof Replacement – Houses 5, 10, & 11" and with bidder's name, address, telephone & fax numbers, and date of bid opening. Bids must be delivered to Dr. Bibi Taylor, Executive Director of the UCIA, 10 Elizabethtown Plaza, 5th Floor, Elizabeth, New Jersey 07207, prior to the stated time of bid opening. Late bids will be returned, unopened, to the bidder. The UCIA will not be responsible for late delivery; bidders shall assume full responsibility for timely delivery of their bids.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.

The award or rejection of a contract for the project shall be made within sixty (60) days of the bid opening date, except that the bids of any bidders who consent thereto may, at the request of the contracting unit, be held for consideration for such longer period as may be agreed. The UCIA reserves the right to (i) reject any Bid in accordance with N.J.S.A. 40A:11-13.2 and any Bidder that is deemed not responsible in accordance with the law; technical errors in accordance with law,

Union County Improvement Authority
10 Elizabethtown Plaza, 5th Floor
Elizabeth, New Jersey 07207

219343v1

ARTICLE 1
INSTRUCTIONS TO BIDDERS

1.01 INVITATION TO BID

A. Sealed bids will be received by the Union County Improvement Authority (UCIA) at its Administrative Offices located at 10 Elizabethtown Plaza, 5th Floor, Elizabeth, New Jersey 07207 at the time and place stated in the Notice to Bidders and shall be publicly opened and read aloud for:

THE DESERTED VILLAGE - ROOF REPLACEMENT
HOUSES 5, 10, & 11

1.02 PREPARATION OF BIDS

A. Bids shall be submitted to the UCIA. Bids shall be submitted only on UCIA bid forms or a true copy thereof. Bids must be submitted in **triplicate (original and two copies)** in an envelope and shall be sealed and plainly marked on the outside to show bidder's name and address, telephone & fax numbers, bid due date, and the name of the bid: "The Deserted Village, Roof Replacement – Houses 5, 10, & 11."

B. Any bid not prepared and submitted in accordance with the provisions described herein may be considered informal by the UCIA, who reserves the right to waive any informalities in the bid or reject all bids. Any bid received after the time and date specified will not be considered. No bidder shall withdraw a bid within sixty (60) days after the date of the bid opening, except due to mistake pursuant to N.J.S.A. 40A:11- 23.3.

C. Before submitting its bid, the bidder shall be familiar with the Bid Documents that will form part of the contract and shall have visited the site of the project to confirm for itself the character and amount of work involved. Bidder shall confirm also that it can secure the necessary labor and equipment and that the materials it proposes to use will comply with the requirements of the contract and can be obtained by bidder in the quantities and at the time required.

D. Where unit prices are required, bidder shall fill in applicable unit prices. Unit prices shall prevail over extended totals, in the event of a discrepancy between them. All unit prices, whether filled in by the bidder or established by the Bid Documents shall become part of the contract. No bid will be considered or award made unless applicable unit prices, as required, are filled in.

E. Should the bidder discover discrepancies in this Request for Bids, such discrepancies shall immediately be brought to the attention of the UCIA, and the discrepancies corrected by written agreement before proceeding further. The correction will be issued by addendum.

F. Any interpretation or instruction regarding the Bid Documents will be in the form of an addendum to the Bid Documents, and will be furnished to all prospective bidders. Oral explanation or instruction will not be binding. Addenda are amendments to the Bid Documents and shall be considered in preparing bids. Addenda take precedence over all earlier documents and over each other according to the latest date.

G. Failure of any bidder to receive an addendum shall not relieve such bidder from the obligation imposed by such addendum. Bidders should keep themselves currently acquainted with the Bid Documents during the bidding period and make inquiry on their own initiative as to issuance of any addenda. Receipt of all addenda shall be acknowledged on the Acknowledgement of Receipt of Addenda form provided at page B-15.

1.03 GENERAL INFORMATION

A. Questions regarding the bid shall be directed in writing to Bibi Taylor of Union County Improvement Authority, Timothy Hennessy of RSC Architects and Bob Pasqual of Pinnacle Consulting and Construction Services via email at btaylorUCIA@ucnj.org , bidding@rscarchitects.com and wnapolitano@psands.com. Written questions must be sent by T**uesday 12.2.2025 at 5:00 PM.**

B. Any bidder who has been found to have prior negative experience, as defined in N.J.S.A 40A:11-4(b). The UCIA reserves the right to exercise this option as it deems proper and/or necessary and in its best interest.

C. The UCIA is exempt from all taxes including federal excise tax, transportation taxes, state excise, sales tax and local taxes. Contractor is required to familiarize itself with all governing tax laws.

D. It is understood and agreed that all prices quoted are firm and not subject to any increase during the life of the contract.

E. Should any difference arise between the contracting parties as to the meaning or intent of these instructions or the drawings and specifications, the UCIA's decision shall be final and conclusive.

F. The UCIA may make such investigation as it deems necessary to determine the ability of the bidder to perform the work, which includes investigation of any and all subcontractors listed with the bid. The bidder shall furnish any information and data

for this purpose as may be reasonably requested by the UCIA. The successful bidder may be subject to a criminal background check in accordance with applicable law.

1.04 DELIVERY OF BIDS

A. Bids shall be delivered to Dr. Bibi Taylor, Executive Director, Union County Improvement Authority, 10 Elizabethtown Plaza, 5th Floor, Elizabeth, New Jersey, no later than the time and date indicated in the Notice to Bidders in a sealed envelope. Bids that arrive after the specified date and time shall be returned to the bidder unopened.

B. The UCIA shall not be responsible for late postal or overnight delivery, nor shall postmark dates or overnight dates be considered in honoring the bids. The UCIA shall not be responsible for hand delivered bids arriving late or at the wrong location. Unsealed, faxed or e-mailed bids will not be accepted. The UCIA shall not be responsible for, nor be required to, grant relief from non-delivery of bids forwarded by mail or third-party messenger/delivery services.

1.05 BID FORMS

A. Attention is directed to the fact that this Request for Bids includes a complete set of bid forms.

B. All bids shall be typewritten or printed in ink on the bid forms furnished by the UCIA. All bids must be signed by the officials of the corporation or company duly authorized to sign bid proposals, and all corrections or erasures shall be initialed by the person signing the proposal or by his/her authorized representative.

C. In the event there is a discrepancy between the unit price bid and the extended total, the unit price will govern. Any discrepancies will be mathematically adjusted.

D. All alternates MUST be bid upon. Any bidder's failure to do so will be deemed a material, non-waivable defect and shall render the bid nonresponsive. The bidder shall clearly designate whether the change in price is an addition or subtraction, by using either as "+" sign or the word "addition," or in the alternative, a "-" sign or the word, "minus." If there is no other change in price, the bidder shall insert, "NC" or "No Charge."

1.06 BID SECURITY

A. Bids must be accompanied by a Certified Check, a Cashier's Check or Bid Bond payable to the order of the UCIA, in the sum of not less than ten (10%) percent of the total amount of the bid, to a maximum of $20,000.

B. All bid deposits shall be returned in accordance with the timeframes provided in N.J.S.A. 40A:11-24, except for the successful bidder(s) whose bid security shall be returned after execution of a formal contract and delivery of the performance bond/labor and material bond and certificates of insurance.

C. Should the successful bidder fail to enter into a contract after acceptance of the bid by the UCIA, the check or security deposited by such bidder shall, at the option of the UCIA, be retained as liquidated damages, or if a bid bond has been supplied, principal and surety shall be liable to UCIA in the amount of the bid bond.

1.07 CERTIFICATION OF SURETY

A. All bids shall be accompanied by a consent of surety from a surety company authorized to transact business in the State of New Jersey, stating that the surety will provide a bond in the sum equal to the full amount of the contract price if the contract is awarded to the bidder, conditioned on the faithful performance of the contract in strict accordance with the contract documents, and for the payment of labor, materials and all other indebtedness that may accrue on account of the work. Failure to submit a consent of surety with the bid will result in automatic rejection.

1.08 NON-COLLUSION AFFIDAVIT

A. The Non-Collusion Affidavit at page B-14 must be filled in completely and sworn to before a Notary Public and provided with the bid. Failure to do so will result in rejection of the bid.

1. Bidder certifies that, to the best of its knowledge, no UCIA official or employee has a vested interest, financial or otherwise, in the bid and if awarded a contract, will have no vested interest, financial or otherwise, in the contract. Bidder or contractor, as the case may be, agrees to comply in all respects with the Public Official and Employee Ethics Act. Bidder or Contractor will inform the UCIA in writing immediately if any potential conflict of interest arises during the course of bidding or during the performance of any contract entered into with the UCIA. Conflict of interest may constitute grounds for disqualification of bidder or termination of any contract following notification by the UCIA to bidder or contractor if same is not corrected by bidder or contractor within the time period established by the UCIA in such notice.

1.09 OWNERSHIP DISCLOSURE STATEMENT

A. The Ownership Disclosure Statement at page B-10 shall be completed and sworn to before a Notary Public and submitted with the bid. Failure to do so will result in rejection of the bid.

1.10 PERFORMANCE/PAYMENT BOND

A. Simultaneously with delivery of the executed contract, the successful bidder shall be required to furnish the UCIA with an executed Performance/Payment Bond (in the sum of one hundred percent (100%) of the Contract amount) from a surety company authorized to do business in the State of New Jersey. The Bond shall be in a form that is satisfactory to the UCIA, and be conditioned for the faithful performance of the contract and for the prompt payment of all materials and labor supplied or performed in the prosecution of the work. It shall be a condition of the bond that labor and material providers furnishing labor and materials in, and for, the prosecution of the work, shall have the right, according to law, to sue in an action of assumpsit, in the name of the oblige, for their use upon said bond, for such sum or sums as may be justly due. A form of Performance/Payment bond acceptable to the UCIA is provided at page B-8. If bidder's surety uses a different form, it must be substantially similar to the form provided at B-8.

1.11 POWER OF ATTORNEY

A. Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified copy of their Power of Attorney to sign said bonds.

1.12 ACCEPTANCE/REJECTION OF BIDS

A. The UCIA reserves the right to accept or reject any or all items covered in the bid request, or any portion(s) thereof, waive formalities, reject all bids, re-advertise and/or take such other steps decreed necessary and in accordance with all applicable law. Where two or more bidders are tied and all other relevant factors being equal, the UCIA reserves the right to make the award to one of the bidders.

B. Except as provided in Section 1.13 hereof, the bid is irrevocable by the bidder or the bidder's representatives. The bid, and any award made to the bidder by the UCIA, shall bind the bidder and the bidder's heirs, executors, administrators, successors or assigns.

C. Any award of a contract shall be made to the lowest responsible and responsive bidder based on the total lump sum base bid price plus allowances and alternate(s) as selected by the UCIA.

D. The award of a contract or the rejection of the bids shall be made within sixty (60) days of the date of receiving bids, unless written extensions are requested by the UCIA and accepted by the bidder(s). All bid securities shall be returned immediately if all bids are rejected. The successful bidder(s) to whom the award is to be made will be notified by receipt of the contract or a written "Notice to Proceed" from the UCIA (or its representative).

1.13 WITHDRAWAL OF BIDS

A. A written request for the withdrawal of a bid, or any part thereof, will be granted if the request is received by the UCIA prior to the specified time of the bid opening. Should a bidder request withdrawal of their bid after the bid opening date and time, the owner has the right to deny said request and require the lowest bidder to perform the work for the price provided in the bid, at the owner's discretion.

B. Should the bidder refuse to perform the work for the price provided, it will forfeit its bid security and will be held liable for the difference between its low bid and the next highest/responsive bidder.

C. A bidder may request withdrawal of its bid due to mistake pursuant to N.J.S.A. 40A:11-23.3.

1.14 INDEMNIFICATION

A. The successful bidder shall be bound by the provisions of the Hold Harmless Clause at page B-13, which Clause shall become part of the contract.

1.15 ASSIGNMENTS

A. Assignment to any third party of any monies due or to grow due the bidder or any contract based on this bid is prohibited and will not be recognized by the UCIA, except for financing.

1.16 CLASSIFICATION AND QUALIFICATION OF BIDDERS

A. Pursuant to Resolution of the UCIA adopting the County of Union's policy pursuant to Ordinance No. 557-2002 of the Union County Board of County Commissioners, all bidders for building construction projects shall be classified and qualified in accordance

with the New Jersey Department of Treasury, Division of Property Management and Construction (DPMC). Bidders must be classified under DPMC classification code No. C008, C009.

1.17 UNCOMPLETED CONTRACTS

A. The bidder shall submit with its bid a current Classification/Prequalification Certificate and accompanying form(s) indicating the dollar amount of uncompleted contracts, and a notarized and itemized list of uncompleted contracts in the form, "Uncompleted Contracts Affidavit," provided at page B-20.

1.18 COMPLIANCE WITH LAWS

A. The contractor shall comply with all State of New Jersey and federal laws as they pertain to the performance under the contract.

Prevailing Wages:

1. The New Jersey Prevailing Wage Law, N.J.S.A. 34:11-56.25 et seq. is hereby made a part of every contract entered into by the UCIA, except those, which are not within the scope of the Law. The successful bidder and its subcontractors shall be obligated to pay workers not less than the prevailing wage rate, to submit certified payrolls as documentation of compliance, and to permit on-site monitoring, including interviews with employees and review of subcontracts, by UCIA and State representatives. The bidder's signature on its proposal is its guarantee that neither bidder nor any of bidder's subcontractors employed to perform the work covered by this bid are listed or are on record as one who has failed to pay prevailing wages in accordance with the provisions of the New Jersey Prevailing Wage Law.

2. Every contractor and subcontractor shall keep an accurate payroll record, showing the name, craft or trade, job title or classification, actual hourly rate or wages paid, hours worked and total wages paid to each workman employed by the contractor in connection with a public work. Payroll records shall be preserved for a period of three (3) years from the date of payment.

3. In the event it is found that any worker employed by the contractor or any subcontractor covered by the contract has been paid a rate of wages less than the prevailing wage required to be paid by the contract, the UCIA may terminate the contractor's or subcontractor's right to proceed with the work or such part of the work as to which there has been a failure to pay required wages, and to prosecute the work to completion or otherwise.

B. Equal Employment/Affirmative Action:

1. The successful bidder shall be required to complete and submit an Initial Project Workforce Report Construction, New Jersey Department of Treasury Form AA-201, upon notification of award.

2. The successful bidder shall also be required to submit a copy of its Monthly Project Workforce Report, New Jersey Department of Treasury Form AA-202, to the New Jersey Department of Treasury's Division of Public Contracts Equal Employment Opportunity Compliance and to the UCIA.

3. The successful bidder expressly agrees to comply with Titles VI and VII of the Civil Rights Act of 1964, as amended, and all other applicable federal, state and/or local laws, ordinances, rules, regulations and orders prohibiting discrimination in hiring or employment opportunities. Compliance is not delegable to any union, training program or other source of recruitment, which prevents the contractor from meeting his obligations

4. In the employment of persons for the performance of public work, no contractor or subcontractor nor any person acting on behalf of such contractor or subcontractor shall by reason of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, discriminate against any individual who is qualified and available to perform the work to which the employment relates.

5. The successful bidder shall agree that:

   a. The successful bidder will be required to comply with the Affirmative Action laws and regulations, including but not limited to, *N.J.S.A*. 10:5-31 *et seq.* and *N.J.A.C*. 17:27-1 *et seq.*

   b. Exhibit B, Mandatory Equal Employment Opportunity Language – Construction, at page B-22, shall be part of any contract awarded to the successful bidder.

   c. In the hiring of persons for the performance of work under the contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under the contract, the successful bidder, and his subcontractors and all persons acting on their behalf, shall not, by reason of, age, race, creed, color, national origin, ancestry, marital status, affectional or sexual

orientation, gender identity or expression, disability, nationality or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;

d. The successful bidder, all subcontractors and all persons on their behalf shall not, in any manner, discriminate against or intimidate any employee engaged in the performance of work under the contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

e. There may be deducted from the amount payable to the successful bidder by the UCIA under the contract a penalty of $50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract by the successful bidder and the subcontractors or any person acting on their behalf;

f. The contract may be canceled or terminated by the UCIA, and all money due or to become due under the contract may be forfeited for any violation of this Section 1.18 occurring after notice to the successful bidder/contractor from the UCIA of any prior violation of this Section.

g. It shall be the successful bidder's (contractor's) responsibility to investigate the applicability of the Civil Rights Act of 1964 and the Americans with Disabilities Act of 1990 and to comply in all respects to the provisions thereof.

C. Use American Goods and Products, Where Available:

1. Bidders shall comply with the requirements of *N.J.S.A*. 40A11-18 and use only manufactured and farm products of the United States, wherever available, for the project.

E. OSHA Compliance:

1. The contractor shall guarantee that all materials, supplies and equipment to be provided under the contract shall meet all applicable requirements, specifications and standards of the Federal Occupational Safety and Health Act (OSHA) of 1970 as amended to date of acceptance by the UCIA, and shall also apply to contractor's construction procedures.

F. Applicable Laws:

1. It shall be the responsibility of the contractor alone to investigate and determine the applicability of any and all federal statutes, New Jersey statutes, local ordinances, rules, regulations, etc., as they affect and impact upon this project, and to take all necessary steps to assure the contractor's compliance with the aforementioned requirements. It is specifically stipulated and agreed by and between the UCIA and contractor that no liability or responsibility whatsoever will attach to the UCIA, architect or construction manager in the event of non- compliance with any federal statute, state statute, local ordinance, rule, regulation, etc.

2. The following list of statutes and regulations, which may be applicable in whole or in part, is provided for the benefit of the contractor and is **not meant to be all-inclusive**. In the event that other laws are applicable, it shall be the responsibility and obligation of the contractor to ascertain and comply with them.

2.1 New Jersey Statutes and Regulations

1. N.J.A.C. 17:27-1 *et seq*., Affirmative Action
2. N.J.S.A. 34:11-56.25 *et seq*., Prevailing Wage Act,
3. N.J.S.A. 34:32-44, Business Registration Certificate
4. N.J.S.A. 34:11-56.48 et seq.; N.J.A.C. 12:62-1.2 *et seq*., Contractor Registration Act
5. N.J.S.A. 52:25-24.2 Stockholder Certificate
6. N.J.S.A. 40A:11-25 Pre-classification of Bidders by NJDPMC

2.2 Federal Statutes

1. Immigration Control and Reform Act (1986) – 8 U.S.C.A. Section 1324(a) *et seq.*
2. Civil Rights Act of 1964 – 42 U.S.C.A. Section 1971 *et seq*.
3. The Americans with Disabilities Act of 1990.

1.19 DELETED

1.20 EXAMINATION OF SITE, DRAWINGS AND SPECIFICATIONS

A. Each bidder shall visit the site(s) of the proposed work during the pre-bid conference and site tour as indicated in the Notice to Bidders and fully acquaint itself with the conditions as they exist so that bidder may fully understand the facilities, difficulties, and restrictions attending the execution of the work under the contract.

B. Bidders shall thoroughly examine and be familiar with the Bid Documents. The failure to receive or examine any form, instrument or document, or to visit the site and acquaint itself with conditions there existing shall in no way relieve any bidder from obligation with respect to its bid. By submitting a bid, the bidder agrees and warrants that it has examined the site, the Bid Documents, and that the specifications and drawings are adequate, and the required result can be produced under the drawings and specifications. No claim for any extra will be allowed because of alleged impossibilities in the productions of the results specified or because of unintentional errors or conflicts in the drawings and specifications. No change orders will be issued for items, materials or issues that existed on or with respect to the site prior to bidding.

1.21 DRAWINGS AND SPECIFICATIONS

A. The project shall be performed in accordance with the requirements of the drawings and specifications, subject to modification as may be provided in General Conditions. The drawings and specifications are intended to complement and supplement each other.

B. Any work required by either of them and not by the other shall be performed as if denoted in both. Should any work be required, which is not denoted in the specifications or on the drawings because of an obvious omission, but which is, nevertheless, necessary for the proper performance of the project, such work shall be performed as fully as if it were described and delineated.

1.22 NUMBER AND TITLE OF DRAWINGS

A. The number and title of drawings accompanying the specifications, which form a part of the Bid Documents and upon which the bids shall be based, are listed within the Project Manual.

1.23 PRE-BID CONFERENCE

A. A pre-bid conference to answer any questions pertaining to the Bid Documents will be held at the time and place designated in the Notice to Bidders. Questions concerning the Bid Documents may be posed in writing at any time as indicated in the Notice to Bidders. Questions received after that date will not be addressed.

B. All interpretations and supplemental instructions given by the UCIA or its representatives at the pre-bid conference will be issued in the form of an addendum to the contract documents, which will be sent to all bidders. All such data shall become a part of the Bid Documents. Failure of any bidder to receive any addendum will not relieve the bidder from any obligation under its bid as submitted.

- No addenda will be issued later than seven (7) days prior to the bid due date, except to extend the bidding due date.

1.24 BRAND NAME OR EQUIVALENT

A. Whenever a material, article, or piece of equipment is identified in the Bid Documents by reference to manufacturer's name, trade names, catalogue numbers, etc., it is intended to establish a standard. Similar materials, articles, or equipment of other manufacturers of the same general design will be considered provided the Contractor complies with the Division 01 Section "Product Requirements." No substitution will be permitted without the Architects' written approval.

B. Whenever in the Division specifications a manufacturer or product is listed, it shall mean that it includes but is not limited to such manufacturer or product.

1.25 SUBCONTRACTS

A. Bidder is specifically advised that any person, firm, or other party to whom it proposes to award a subcontract under the contract must be acceptable to the UCIA, and the Bidder shall furnish all information deemed necessary by the UCIA to determine the qualifications of the proposed subcontractor.

1.26 FORM OF AGREEMENT

A. The contract to be entered into with the successful bidder will be subject to all statutory provisions on the matter of Public Works, The Law Against Discrimination, the laws governing Equal Employment Opportunity and Affirmative Action, Prevailing Wages, and all other applicable federal and State laws.

B. The contract shall be executed by the successful bidder not later than twenty-one (21) days from the date of award by the UCIA.

1.27 MULTIPLE BIDS NOT ALLOWED

No bidder is allowed to submit more than one bid from an individual, firm, partnership, corporation or association under the same or different name. This will be cause for automatic rejection of each bid.

1.28 PUBLIC WORKS CONTRACTOR REGISTRATION ACT

Contractors performing covered "public works" as defined by *N.J.S.A*. 34:11-56.48 *et seq.* must comply with the requirements of *N.J.A.C*. 12:62-1.2, 2.1 and 2.2 (as amended) and described below:

Subchapter 1. General Provisions

12:62-1.2 Definitions

"Act" means "The Public Works Contractor Registration Act" (N.J.S.A. 34:11-56.48 et seq.) and the rules promulgated thereunder.
"Commissioner" means the Commissioner of Labor and Workforce Development or his or her duly authorized representatives.
"Contractor" means a person, partnership, association, joint stock company, trust, corporation, or other legal business entity or successor thereof who enters into a contract which is subject to the provisions of the New Jersey Prevailing Wage Act, P.L. 1963, c.150, N.J.S.A. 34:11-56.25 et seq., and includes any subcontractor or lower tier subcontractor of a contractor as defined in this section.
"Custom fabrication" means the fabrication of plumbing, heating, cooling, ventilation or exhaust duct systems and mechanical insulation.
"Department" means the Department of Labor and Workforce Development.
"Maintenance" means "maintenance work" as that term is defined at N.J.S.A. 34:11-56.26, namely, the repair of existing facilities when the size, type or extent of such facilities is not thereby changed or increased.
"Public work" means construction, reconstruction, demolition, alteration, custom fabrication, or repair work, or maintenance work, including painting and decorating, done under contract and paid for in whole or in part out of the funds of a public body, except work performed under a rehabilitation program. "Public work" shall also mean construction, reconstruction, demolition, alteration, custom fabrication, or repair work done on any property or premises, whether or not the work is paid for from public

funds, if, at the time of the entering into the contract the property or premises is owned by the public body or:
1. Not less than 55 percent of the property or premises is leased by a public body, or is subject to an agreement to be subsequently leased by the public body; and
2. The portion of the property or premises that is leased or subject to an agreement to be subsequently leased by the public body measures more than 20,000 square feet.
"Subcontractor" means any subcontractor or lower tier subcontractor of a contractor, including owner operators or independent contractors.
"Worker" includes a laborer, mechanic, skilled or semi-skilled laborer and apprentices or helpers employed by any contractor or subcontractor and engaged in the performance of services directly upon a public work, regardless of whether their work becomes a component part thereof, but does not include material suppliers or their employees who do not perform services at the job site. For the purposes of these rules, contractors or subcontractors engaged in custom fabrication shall not be regarded as material suppliers.

12:62-2.1 Registration Required

(a) No contractor shall bid on any contract for public work unless the contractor is registered pursuant to the Prevailing Wage Act. In addition:
1. No contractor shall list a subcontractor in a bid proposal for a public works contract unless the subcontractor, as required, is registered pursuant to the terms of N.J.S.A. 34:11-56.48 et seq., the Public Works Contractor Registration Act, at the time the bid is submitted to the public entity; and
2. No contractor or subcontractor not listed on the bid proposal shall engage in the performance of any public work project unless the contractor or subcontractor is registered pursuant to the Act.
(b) Any contractor which seeks to register under the Act shall apply to the Division of Wage and Hour Compliance, within the Department of Labor and Workforce Development. For this purpose, the Department shall prepare a "New Jersey Department of Labor and Workforce Development Application for Public Works Contractor Registration." This form shall be available from the Department.
(c) As part of its application to the Department, a contractor shall provide all required information and documents requested by the Application for Public Works Contractor Registration. The information to be submitted for review shall include:
1. The name, principal business address, telephone and fax number as well as any e-mail address of the business;
2. Whether the contractor or subcontractor is a corporation, partnership, sole proprietorship, or other form of a business entity;
3. The name and address of the custodian of records and agent for service of process within the State of New Jersey;

4. The name, addresses of residence, and telephone number of each person with a financial interest in the business and the percentage of interest, except that if the business is a publicly traded corporation, the contractor shall supply the names and addresses of residence of the corporation's officers;
5. The business' Federal Employer Identification Number and State of New Jersey Taxpayer Identification Number;
6. A history of previous and/or current labor law violations and the final dispositions of such violations and any violations, or pending violations, brought by a governmental entity of criminal or civil statutes and/or regulations which would reflect upon the fitness of the applicant/contractor to bid on or engage in public work projects;
7. Proof of workers' compensation insurance; and
8. Any other relevant and appropriate information from a particular applicant as determined by the Commissioner
(d) The contractor shall pay an initial, non-refundable, annual registration fee of $300.00 to the Commissioner. The non-refundable fee for the second annual registration shall be $300.00. Upon successful completion of two consecutive years of registration, a contractor may elect to register for a two-year period and pay a non- refundable registration fee of $500.00. However, a two-year registration will only be granted if the applicant has not violated the Act and/or the Prevailing Wage Act or these rules during the period of licensure preceding submission of the renewal application.
(e) An applicant shall fully and accurately complete all relevant parts of the Application for Public Works Contractor Registration. Failure to provide a complete application shall result in rejection.
(f) An applicant who fails to provide specifically requested additional information or documentation shall be considered not in compliance with the Act and shall be subject to rejection.
(g) If the applicant knowingly supplies incomplete or inaccurate information to the Department in connection with his or her application, he or she shall be disqualified under these rules, barred from reapplying for registration for a period of up to one year from the date of notice of disqualification, and may be subject to other penalties described in N.J.A.C. 12:62-2.3, 2.4 and 2.5.

12:62-2.2 Issuance and term of a certificate of registration

(a) Upon receipt of the fee, a fully completed form and all documentation required under N.J.A.C. 12:62-2.1, the Commissioner shall issue a certificate of registration to the contractor within 30 days.
(b) An initial certificate of registration shall be valid only for a period of one calendar year from the date of registration.
(c) Registration shall be renewed not less than 30 calendar days prior to the expiration date of the immediately preceding registration. However, renewal shall be predicated

upon the contractor not having knowingly or willfully violated the provisions of the Act or of the New Jersey Prevailing Wage Act during the period of licensure preceding the renewal application.
(d) Each contractor shall, after the bid is made and prior to the awarding of the public works contract, submit to the public entity for whom the work is to be performed the certificates of registration for all subcontractors listed in the bid proposal.
(e) A certificate of registration shall not be transferable.
(f) A registered contractor who allows his or her contractor registration certificate to expire prior to attempting to renew same, must subsequently apply for a registration certificate as if for the first time.

1.29 BUSINESS REGISTRATION CERTIFICATE (*N.J.S.A.* 52:32-44)

A. Business Registration: All for-profit New Jersey business organizations and foreign business organizations doing business in the State of New Jersey are required to obtain a Business Registration Certificate from the State of New Jersey Department of Treasury, Division of Revenue prior to conducting business in the State of New Jersey. "Business organization" means an individual, partnership, association, joint stock company, trust, corporation, or other legal business entity or successor thereof.

B. Proof of valid business registration with the State of New Jersey Department of Treasury, Division of Revenue shall be submitted by the bidder in the form of a valid Business Registration Certificate prior to the time a contract is awarded. The successful bidder must include proof of its own business registration and proof of the business registrations of those subcontractors required to be listed in the bid pursuant to N.J.S.A. 40A:11-16.

C. Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

D. For the term of the contract, the contractor and each of its affiliates and each subcontractor and each of its affiliates, as defined in N.J.S.A. 52:32-44, shall collect and remit to the Director, New Jersey Division of Taxation, the sales and/or use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

1.30 PAY TO PLAY

A. Pursuant to *N.J.S.A*. 19:44A-20.27, contractors doing business with public entities must file an annual disclosure statement of political contributions with the New Jersey Election Law Enforcement Commission (ELEC) if they receive contracts in excess of $50,000 per year from public entities. Bidders are responsible for determining whether a filing with ELEC is necessary. Additional information on this matter may be obtained from ELEC at 888-313-3532 or at www.elec.state.nj.us.

1.31 PUBLIC INFORMATION

A. Any and all information submitted with or, where permitted by law, submitted subsequent to the bids, will be considered public information subject to disclosure to the public. Submission of a bid will constitute a full wavier by bidder of any right to confidentiality with regard to information that is submitted with the bid or subsequently provided to the UCIA pursuant to the requirements of the bid documents. However, if bidder chooses to include material of a proprietary nature in its bid, the UCIA will attempt to keep such material confidential to the extent permitted by applicable law. The bidder must specifically identify each page of its bid that contains such information by properly marking the applicable pages. Preferably, any sections which contain material of a proprietary nature shall be severable or removable from the bid to assist the UCIA in protecting this information. The bidder shall include the following notice in the introduction of the relevant section:

> *"The data on pages ___ identified by ___ (symbol) and labeled "Proprietary Information," contain information that is a trade secret and/or which, if disclosed, would cause substantial injury to bidder's competitive position. (Insert Name of Bidder) requests that such data be used only for the evaluation of its bid, and understands that disclosure will be limited only to the extent that the UCIA determines it proper or to the extent that the UCIA deems disclosure necessary according to law. If an award is made under this bid, the UCIA will have the right to use or disclose the data as permitted or required by law."*

The UCIA will seek to prevent the unauthorized disclosure of this information in applying the proprietary standard to marked data. However, the UCIA assumes no liability for any loss, damage, or injury that may result from any disclosure or use of marked data or any disclosure of this or other information.

1.32 LIQUIDATED DAMAGES

A. **Liquidated Damages**: If the project is not completed within the time specified herein or within such further time as may have been granted by the UCIA, the contractor hereby agrees to pay to the UCIA as liquidated damages, but not as a penalty, $1,500 per day for each and every calendar day that contractor is in default on the time to complete the project. Liquidated damages will be deducted from moneys due the contractor and if the damages exceed such amount, the contractor and/or its surety will be liable to pay the excess.

1.33 INSURANCE REQUIREMENTS

The UCIA requires all bidders to comply with the insurance requirements set forth in the Supplementary Condition to the Contract. A certificate of insurance evidencing the required coverage and amounts must be filed with the UCIA at the time of execution of the contract and prior to commencement of any work.

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village Roof Replacement – Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

BIDDERS CHECKLIST

BIDDER'S NAME_____

Items 1 through 27 are the forms which must be completed and/or provided in **TRIPLICATE (original and two copies)** with the Bid.

BIDDER MUST INITIAL EACH ENTRY AND SIGN AND DATE THIS FORM.

			Bidder's Initials
1.		This Bidder's Checklist	_____
2.		Bid Form, Pages B-3 to B5	_____
3.	**	Bid Security in the form of Certified Check, Cashier's Check or Bid Bond; see Page B-6	_____
4.	**	Consent of Surety, Page B-7 (See sample Performance/Payment Bond at Page B-8)	_____
5.	**	Ownership Disclosure Statement, Page B-10	_____
6.		Plumbers Compliance Affidavit, Page B-12	_____
7.		Hold Harmless Clause, Page B-13	_____
8.		Non-Collusion Affidavit, Page B-14	_____
9.	**	Acknowledgement of Receipt of Addenda to Bid Documents, Page B-15	_____
10.	**	List of Subcontractors as required by N.J.S.A.40A:11-16, Page B-16	_____
11.	**	~~Certified Financial Statement prepared within last 12 months (See Page B-17)~~ ***(Omitted)***	_____
12.		Public Contractors Registration Act Certificate for Contractor and Subcontractors listed in N.J.S.A.40A:11-16. See N.J.S.A. 34:11-56-48	_____
13.		Business Registration Certificate for Contractor and Subcontractors listed in N.J.S.A. 40A:11-16. See N.J.S.A. 52:32-44; see also Page B-19	_____
14.		N.J. Div. of Property Management & Construction (DPMC) Certificate/ Notice of Classification	_____
15		Uncompleted Contracts Affidavit, Page B-20	_____
16.		Affirmative Action Compliance, Page B-21	_____
17.		Certificate of Bidder Showing Ability to Perform Contract, Page B-26	_____

[Continued on next page]

BIDDERS CHECKLIST (Continued)

BIDDER'S NAME_____

18.	Equipment Statement, Page B-27	_____
19.	Americans with Disability Act Language, Page B-28	_____
20.	Statement of Bidder's Qualifications, Page B-30	
21.	Contractor Performance Record, Page B-33	_____
22.	Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders, Page B-36	_____
23.	Certificate of Insurance Statement, Page B-38	_____
24.	DELETED.	_____
25.	Time of Completion, Page B-39	_____
26.	Agreement for Use of Bid Documents in Electronic Form, Page B-40	_____

** Failure to submit any of these items will result in MANDATORY rejection of the bid; failure to submit with the bid cannot be cured. Failure to submit any of the unstarred items may result in rejection of the bid.

The undersigned hereby acknowledges the above-listed requirements.

NAME OF BIDDER:

_____
Person, Firm, or Corporation

_____
Signature

_____
Title

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village Roof Replacement – Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

BID FORM

Having inspected the site of the Work, the undersigned will furnish all labor, material, equipment and services necessary for the complete construction of **The Deserted Village Roof Replacement – Houses 5, 10, & 11**, as defined in the Bid Documents, for the contract amount indicated below, in strict accordance with the Bid Documents:

BASE BID ITEM:
(Identified individually for accounting and invoicing purposes)

_____ _____
Words Figures

BID CONTINGENCY: (To be used if and when directed by the Union County Improvement Authority)

Thirty Thousand Dollars $30,000.00
Words Figures

TOTAL BASE BID PLUS CONTINGENCIES:

_____ $_____
Words Figures

The Deserted Village Roof Replacement – House 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

BID FORM (continued from B-3)

The Deserted Village Roof Replacement – Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

BID FORM (continued from B-3)

Further, the undersigned agrees, if awarded the contract, to execute an agreement for the above stated Work on the Standard Form of Agreement Between Owner and Contractor, AIA Document A132 - 2019/Construction Manager as Advisor Edition. The undersigned also agrees, if awarded the contract, that Bidder will pay the UCIA $1,500 per day for each calendar day beyond the completion Date that is set forth in the schedule provided in the Bid Documents and further agrees to the liquidated damages to be applied to the (21) day office shutdown.

The undersigned acknowledges that, during the progress of the Work or delivery of the materials to be furnished, two percent (2%) of the contract price shall be retained until said work is fully completed and accepted (including all punch list items, delivery of warranties and submission and acceptance of all contract close out documentation).

The undersigned, acting through its authorized officers and intending to be legally bound, agrees that this bid proposal shall constitute an offer by the undersigned to enter into a contract with the acts and things therein provided, which offer shall be irrevocable for sixty (60) calendar days from the date of opening hereof and that the Owner may accept this offer at any time during said period by notifying the undersigned of the acceptance of said offer.

No member, employee or officer of the Deserted Village Roof Replacement – Houses 5, 10, & 11 or the Union County Improvement Authority is directly interested in this proposal, or in the supplies or work to which it relates, or to any portion of the profits thereof

The undersigned further agrees to comply with the requirements as to conditions of employment, wage rates, and hours of labor set forth in the contract documents.

NAME OF BIDDER

_____

_____

_____

ADDRESS OF BIDDER

_____
ORIGINAL SIGNATURE OF CORPORATE SECRETARY

BY:_____
ORIGINAL SIGNATURE

_____
PRINT NAME OF CORP. SECTY

_____
PRINT NAME

[Corporate Seal]

_____

TITLE

FAX: _____

E-Mail: _____

Phone: _____

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village Roof Replacement – Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

BID FORM (continued from B-4)

NOTE:

1. If doing business under a **trade name, partnership or a sole proprietorship**, you must submit the bid under exact title of the trade name, partnership, or proprietorship, and the bid must be signed by either the **owner**, or a **partner** and **witnessed** by a **notary public**.

2. If a **Corporation**, the bid must be signed by the **President** or **Vice President** and **witnessed** by a **Corporate Secretary** (corporate title must be exact) and **affix corporate seal**. If a Corporate Secretary does not exist, President or Vice President's signature shall be witnessed by a Notary Public.

3. Other persons **authorized** by **corporate resolution** to execute agreements on its behalf may also sign the bid documents. **Copy of a resolution must accompany the bid**.

4. The person who signs this bid form **must also** sign the **Non-Collusion Affidavit**.

5. You **cannot** witness your own signature.

SAMPLE BID BOND FORM

THIS SAMPLE BID BOND CONTAINS LANGUAGE THAT IS ACCEPTABLE TO THE UCIA; ANY LANGUAGE THAT LIMITS THE BID BOND TO THE DIFFERENCE BETWEEN THE BID AMOUNT AND SUCH LARGER AMOUNT FOR WHICH THE UCIA COULD CONTRACT SHALL NOT BE ACCEPTABLE

THIS BOND, made this _____ day of _____, 2025.

WITNESSETH:

KNOW ALL MEN BY THESE PRESENT, that we, the undersigned,
_____, as Principal and
_____ as
Surety, are held firmly bound unto the Union County Improvement Authority, as Owner, in the sum of Ten Percent (10%) of Amount of Bid, but in no case in excess of $20,000, for the payment of which we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above is such that whereas the Principal has submitted to the Union County Improvement Authority a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing for
_____.

NOW, THEREFORE,

(a) If said Bid be rejected, or in the alternate,

(b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Agreement attached hereto (properly completed in accordance with said Bid), and shall in all other respects perform the agreement created by the acceptance of said Bid,

Then this obligation shall be null and void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the amount of this obligation as herein stated.

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

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

by Principal:_____ **by Surety:**_____

NOTE: POWER OF ATTORNEY OF OFFICERS OF SURETY COMPANY DEMONSTRATING AUTHORITY TO EXECUTE THE BID BOND MUST BE SUBMITTED WITH THE BID BOND.

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village Roof Replacement – Houses 5, 10, & 11

Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

CONSENT OF SURETY
TO ACCOMPANY PROPOSAL (BID)

_____ (hereinafter called Surety), organized and existing under the laws of the State of _____ duly authorized and qualified to transact business in the State of New Jersey, in consideration of the sum of One Dollar ($1.00), lawful money of the United States of America, to it in hand paid, receipt whereof is hereby acknowledged, and in consideration, hereby certifies and agrees that if the contract for which the attached proposal is made be awarded to _____ (hereinafter called Contractor) for the performance of certain work and labor or the supplying of certain materials, or both, as more particularly set forth in said proposal and described for purposes of this instrument as a proposal to the Union County Improvement Authority (UCIA) for The Deserted Village Roof Replacement at Houses 5, 10, and 11.

- Alteration and Addition, and if Contractor shall enter into the contract, Surety will become bound as surety for its faithful performance, and labor and material payment, and will provide the Contractor with a performance, labor and material payment bond in the full amount of the contract price.

_____

NAME OF SURETY

ADDRESS: _____

_____

_____

By:_____

ORIGINAL SIGNATURE - ATTORNEY-IN-FACT FOR SURETY CO.

NOTE: POWER OF ATTORNEY OF OFFICERS OF SURETY COMPANY DEMONSTRATING AUTHORITY TO EXECUTE THIS DOCUMENT MUST BE SUBMITTED.

SAMPLE PERFORMANCE/PAYMENT/WARRANTY BOND
Consolidated Bond Form

A. **Performance Bond**
B. **Payment of Labor & Material Bond**
C. **1-Year Warranty**

KNOW ALL MEN BY THESE PRESENT THAT WE, the undersigned, _____
_____
_____
_____

as Principal, and_____
as the Surety, are held and firmly bound unto the Union County Improvement Authority, hereinafter called "the Union County Improvement Authority," and as hereinafter set forth, in the full and just several sum of

(a)_____Dollars (_____)

for faithful performance of the contract as designated in Paragraph "A" and

(b)_____Dollars (_____)

for payment of labor and materials as designated in Paragraph "B"

(c)_____Dollars (_____)

to guarantee remedy of defects as designated in Paragraph "C" lawful money of the United States of America, to be paid to the Union County Improvement Authority or its assigns, to which payment well and truly to be made and done, we bond ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

Sealed with our respective seals and dated this _____ day of _____ 20__.

WHEREAS, the above bounden Principal has entered into a contract with the Union County Improvement Authority, bearing even date herewith, for Contract No. _____
_____
_____ upon certain terms and conditions in said contract more particularly mentioned, and:

WHEREAS, it is one of the conditions of the award of the Union County Improvement Authority pursuant to which said contract is about to be entered into, that these presents be executed.

NOW THEREFORE, the joint and several conditions of this obligation are such:

"A" – That if the above bounden Principal as Contractor shall well and faithfully do and perform the things agreed by him to be done and performed according to the terms of the said Contract therein referred to and made a part thereof and such alterations as may be made in said work as therein provided and which are hereby made a part of this Bond the same as though they were set forth herein, and shall indemnify and save harmless the said Union County Improvement Authority and all of its officers, agents and employees from any expenses incurred through the failure of said Contractor and any of its subcontractors to complete the work as specified and for any damages growing out of the manner of performance of said Contract by said Contractor or his subcontractors or his or their agents or servants, including patent, trademark and copyright infringements; then this part of this obligation shall be void; otherwise it shall be and remain in full force and effect.

"B" – That if the above bounden Principal shall and will promptly pay or cause to be paid, all sums of money which may be due any person, co-partnership, association or corporation including any subcontractors for all material furnished and labor supplied or performed in the prosecution of the work, whether or not the said material or labor enter into and become component parts of the work or improvement contemplated, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

"C" – That if the above bounden Principal shall remedy without cost to the said Union County Improvement Authority any defects which may develop during the period of one (1) year from date of completion and acceptance of the work performed under said Contract, provided such defects, in the judgment of the Union County Improvement Authority or its successors, are caused by defective or inferior materials or workmanship, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

It is further agreed that any alterations which may be made in the terms of the contract or in the work to be done or materials to be furnished or labor to be supplied or performed under it or the giving by the Union County Improvement Authority of any extension of time for the performance of the contract or any other forbearance on the part of either the Union County Improvement Authority or the Principal and the Surety or Sureties or either or any of them, their heirs, executors, administrators, successors or assigns, from their liability hereunder, notice to the Surety or Sureties or any such alterations, extension, or forbearance being hereby waived.

The Principal and Surety hereby jointly and severally agree with the obligee herein that every person, co-partnership, association or corporation who, whether as subcontractor or otherwise, has furnished material or supplied or performed labor in prosecution of the work as above provided and who has not been paid therefor, may sue in assumpsit of this bond in the name of the Union County Improvement Authority for his, their, or its use, prosecute the same to final judgment for such sum or sums as may be justly due him, them, or it and have execution thereon; provided, however, that the Union County Improvement Authority shall not be liable for the payment of any costs or expenses of any such suit and further provided that the subcontractors or otherwise shall not have the right to sue or bring action against the Union County Improvement Authority directly.

IN WITNESS WHEREOF, the said Principal and Surety have duly executed this bond under seal the day and year above written.

WITNESS:

_____
(Principal)

_____ BY: _____
(Signature of Principal)

_____
(Type Name and Title of
Principal's Signatory)

_____
(Type Name of Surety Co.)

_____ BY: _____
(Signature of Attorney-in-Fact)

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village Roof Replacement- House 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

OWNERSHIP DISCLOSURE STATEMENT

N.J.S.A. 52:25-24.2 (P.L. 1977 c. 33)

CHECK ONE

☐ I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned or of all partners/principals owning 10% or more of the undersigned.

OR

☐ I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned or that no one partner/principal owns 10% or more of the undersigned.

If a corporation owns all or part of the stock of the corporation or partnership submitting the bid, then the statement shall include a list of the stockholders who own 10% or more of the stock of any class of that owning corporation. If no one owns 10% or more stock, attest to that.

Check the box that represents the type of business organization:

☐Partnership ☐Corporation ☐Sole Proprietorship
☐Limited Partnership ☐Limited Liability Corporation ☐Limited Liability Partnership
☐Subchapter S Corporation

Complete if Bidder is one of the 3 types of corporations:

Date Incorporated:_____ **Where Incorporated:**_____

All Bidders:

Sign and notarize the form below, and, if necessary, complete the stockholder list below.

Stockholders/Partners/Principals:

Name: _____ *Name:* _____

Home Address: _____ *Home Address:* _____

[Continued on next page]

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village Roof Replacement- House 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

OWNERSHIP DISCLOSURE STATEMENT (Continued from B-10)

N.J.S.A. 52:25-24.2 (P.L. 1977 c. 33)

*Name:*_____

Home Address: _____

_____

Name: _____

Home Address: _____

_____

Name: _____

Home Address: _____

_____

*Name:*_____

Home Address: _____

_____

Name: _____

Home Address: _____

_____

Name: _____

Home Address: _____

_____

NAME OF BIDDER:_____

Subscribed and sworn before me this ___ day of _____ , 2 __.

(Notary Public)

My Commission expires:

*By:*_____
(Affiant)

_____
(Print name & title of affiant)

(Corporate Seal)

UNION COUNTY IMPROVEMENT AUTHORITY

Bidder's Name_____

AFFIDAVIT OF COMPLIANCE
PLUMBING CONTRACTOR

FORM NOT USED

Public Law 1987, Chapter 442 (N.J.S.A. 45:14C-2) defines Plumbing Contractor as a licensed master plumber that shall be the holder of not less than 10% of the issued and outstanding shares of stock in the corporation, or not less than 10% of the capital of the partnership, or not less than 10% of the ownership of any other firm or legal entity engaging in the business of plumbing contracting in the State and shall employ either journeyman, plumbers or apprentice plumber or both.

Due to the enactment of Public Law 1987, Chapter 442, Plumbing Subcontractor listed in the Bid pursuant to N.J.S.A. 40A:11-16 must certify the following:

I certify that I own not less than (____) 10% of the issued and outstanding shares of stock in the plumbing subcontractor company set forth below, or not less than (____) 10% of the capital of the partnership, or not less than (_____) 10% of the ownership of any other firm or legal entity.

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me is willfully false, I am subject to punishment.

NAME OF PLUMBING SUBCONTRACTOR

SWORN AND SUBSCRIBED TO
BEFORE ME THE _____ DAY
OF _____, 20_____

_____
Signature of Notary Public
Notary Public of _____
My Commission expires_____

_____
SIGNATURE OF MASTER PLUMBER

_____
PRINT NAME OF MASTER PLUMBER

_____
TITLE

NAME OF BIDDER FOR WHOM THE WORK WILL BE DONE:

_____

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village Roof Replacement – Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

HOLD HARMLESS CLAUSE

A. The Contractor shall indemnify and save harmless the Union County Improvement Authority, the County of Union, The Deserted Village Roof Replacement – Houses 5, 10, & 11, their elected and appointed officers, professionals, consultants, agents and employees, including their individual members, and the Architect and Construction Manager, and their employees and agents (collectively, the "Indemnified Parties"), from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought against or recoverable from the Indemnified Parties, including attorney's fees, by reason of any act or omission of the Contractor, its agents, employees, assigns, subcontractors and any entity acting in the Contractor's behalf and on the Contractor's direction in the execution of any work for the project, and any activities directly or indirectly incidental thereto. This specifically includes any negligence or carelessness of the Contractor in failing to review all plans, specifications, and other documents published by the Indemnified Parties in connection with the preparation and award of the contract.

B. The Contractor shall assume all risk and bear any loss or injury to the property or any person which is caused by Contractor's negligence, including its negligent failure to notify the Indemnified Parties of any dangerous condition requiring the Indemnified Parties' action, during the progress of the work provided for in the contract, including periods when the Contractor is not present on the site, until the work shall have been completed and accepted. The Contractor shall also assume all responsibility for any and all loss by reason of the Contractor's negligence or violation of any local, state, or federal law, regulation, practice, or order. The Contractor shall give the Union County Improvement Authority and all other appropriate authorities all required notices relating to the work provided for in the contract, including all notices of dangerous conditions.

C. The Contractor, in executing the agreement for the work, represents to the Indemnified Parties that the contents of this hold harmless clause have been communicated to its subcontractors and employees and that this representation is made on behalf of both the Contractor and all persons and entities acting in the Contractor's behalf including subcontractors and employees.

_____
Name of Bidder

ATTEST:

_____

By: _____

Print Name: _____

Title: _____

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village Roof Replacement – Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

NON-COLLUSION AFFIDAVIT

(N.J.S.A. 52:34-15)

STATE OF _____)
) **SS:**
COUNTY OF _____)

I _____, of the municipality of _____, in the County of _____, and the State of _____, of full age, being duly sworn according to law, on my oath depose and say that: I am _____ of the firm of _____, the bidder making the proposal for the above named project, and that I executed the said proposal for the above named project, and that I executed the said proposal with full authority to do so; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this Affidavit are true and correct, and made with full knowledge that the UNION COUNTY IMPROVEMENT AUTHORITY relies upon the truth of the statements contained in said proposal and in the statements contained in this Affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bonafide established commercial or selling agencies maintained by the Bidder, _____ (N.J.S.A. 52:34-15).

_____
NAME OF BIDDER

_____
SIGNATURE

_____
TITLE

NOTE: This Affidavit must be executed by the same person who signed the BID FORM (pages B-3 to B-5).

Subscribed and sworn before me
this _____day of _____, 20____.

_____
Notary Public of the State of _____
My commission expires: _____

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village Roof Replacement – Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

Pursuant to N.J.S.A. 40A:11-23.2(e), the undersigned bidder, hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the UCIA's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received

IF NO ADDENDA ISSUED, INSERT "NONE" HERE: _____

ACKNOWLEDGMENT BY BIDDER:

NAME OF BIDDER: _____

SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village - Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

SUBCONTRACTOR IDENTIFICATION STATEMENT

LIST OF SUBCONTRACTORS

This form is ONLY required for plumbing and gas fitting, steam and hot water heating and ventilating apparatus, steam power plants, electrical work, structural steel, ornamental iron work, and any other trades required to be identified by the specifications if bidder is not using any subcontractors, certify below.h

In compliance with N.J.S.A. 40A:11-16 and the bid specifications, the undersigned hereby lists the name or names of the following subcontractors:

Company Name:_____
Address:_____
Telephone: _____ Subcontract Amount: $_____
Description of Work Subcontracted: _____
_____
License No. _____

Company Name:_____
Address: _____
Telephone: _____ Subcontract Amount: $_____
Description of Work Subcontracted: _____
_____
License No. _____

Company Name:_____
Address: _____
Telephone: _____ Subcontract Amount: $_____
Description of Work Subcontracted: _____
_____
License No. _____

NAME OF BIDDER

_____

Date _____

_____
ADDRESS

By: _____

_____
PRINT NAME AND TITLE

IF MORE THAN THREE SUBCONTRACTORS, PLEASE COPY THIS SHEET AS NECESSARY AND SUBMIT ALL SHEETS WITH BID.

(THIS FORM HAS BEEN DELETED)

UNION COUNTY IMPROVEMENT AUTHORITY

Bidder's Name _____

FINANCIAL STATEMENT

as of 2022

NAME_____ RESIDENCE_____

BUSINESS

OCCUPATION OR PROFESSION_____ ADDRESS_____

I make the following statement of all my assets and liabilities at the close of business on the date indicated above

_____ (Name and Location of Financial Institution)

and give other material information for the purpose of obtaining advances on notes and bills bearing my signature, endorsement guaranty, and for obtaining credit upon present and future applications.

ASSETS		LIABILITIES and NET WORTH	
Cash on Hand	$	Notes Payable to Banks-Unsecured Direct borrowings only	$
Cash in Banks		Notes Payable to Banks-Secured Direct borrowings only	
Notes Receivable		Notes Payable to Others-Unsecured	
Accounts Receivable		Notes Payable to Others-Secured	
Loans Receivable		Accounts Payable	
Life Insurance-Cash Surrender Value (Do not deduct loans)		Loans against Life Insurance	
Securities-Readily Marketable U.S. Govt. & listed on Stock Exchanges		Real Estate Mortgages Payable	
Securities-Not Readily Marketable Unlisted stocks & bonds		Real Estate Taxes & Assessments Payable	
Mortgages Owned		Federal & State Income Taxes	
Real Estate Owned		Other Taxes	
Automobile(s) Registered in own name		Interest Payable on loans, mortgages, etc.	
Other Assets (Itemize)		Brokers Margin Accounts	
		Other Liabilities (Itemize)	
		Net Worth	
TOTAL ASSETS		TOTAL LIABILITIES & NET WORTH	

(THIS FORM HAS BEEN DELETED)

Certification – This is to certify that all the statements contained herein and in any supporting schedules are true and give a correct showing of any financial condition as of the date indicated. I further certify that I had no liabilities, direct or contingent, business or accommodation, except as set forth in this statement, and that the title to all assets therein set forth is in my name: Solely, except as may be otherwise noted. IN THE EVENT OF ANY MATERIAL ADVERSE CHANGE IN MY FINANCIAL CONDITION, I AGREE TO NOTIFY THE FINANCIAL INSTITUTION NAMED HEREIN IMMEDIATELY IN WRITING.

Signed this _____ day of _____, 20_____

_____
(Signature)

NOTE: IF YOU ARE ENCLOSING AN ANNUAL REPORT OR AUDITOR'S REPORT IN CONNECTION WITH YOUR BID IN LIEU OF COMPLETING THE SAMPLE "FINANCIAL STATEMENT" INCLUDED IN THE BID PACKAGE, PLEASE SIGN THE CERTIFICATION STATEMENT LISTED BELOW AND ATTACH TO THE ANNUAL/AUDITOR'S REPORT.

CERTIFICATION: This is to certify that all the statements contained herein and in any supporting schedules are true and give a correct showing of my financial condition as of the date indicated. I further certify that I had no liabilities, direct or contingent, business or accommodation, except as set forth as in my name solely, except as may be otherwise noted.

Signed this_____ day of _____, 2022.

_____
Signature

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village - Roof Replacement Houses 5, 10, 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

BUSINESS REGISTRATION

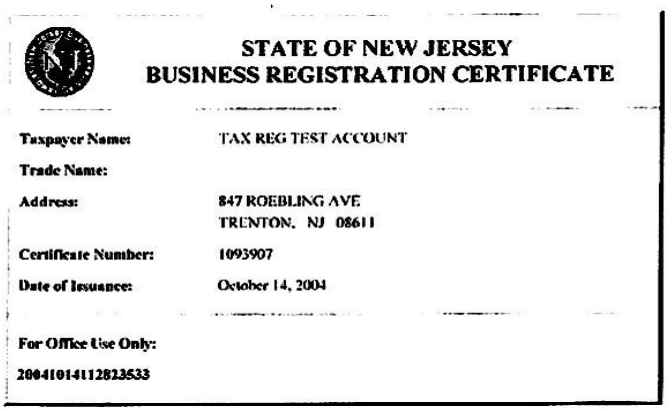
P.L. 2009, c.315, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each must be provided prior to the award of a contract. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

Proof of business registration shall be:

- A copy of a Business Registration Certificate issued by the Department of Treasury, Division of Revenue; or
- A copy of the web printed version provided by the NJ Division of Revenue

Register online at www.nj.gov/treasury/revenue/taxreg.htm. Click the "online" link and then select "Register for Tax and Employer Purposes or call the Division at 609-292-1730.
Note: A NJ Certificate of Authority is not acceptable.



ATTACH BRC HERE

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, Jersey

Bidder's Name_____

UNCOMPLETED CONTRACTS AFFIDAVIT

PURSUANT TO N.J.A.C. 17:19-2.13, BIDDER DECLARES THE FOLLOWING WITH RESPECT TO ITS UNCOMPLETED CONTRACTS, ON ALL WORK, FROM WHATEVER SOURCE (PUBLIC AND PRIVATE), BOTH IN NEW JERSEY AND FROM OTHER GOVERNMENTAL JURISDICTIONS				
Entity	Project Title	Original Contract Amount	Uncompleted Amount As Of Bid Opening Date	Name and Telephone Number of Party to be Contacted From Entity For Verification

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS $_____

Sworn and Subscribed to Before me
this _____ day of _____, 20__

_____
Notary Public

BIDDER:

_____
(Signature)

_____
(Print Name)

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

AFFIRMATIVE ACTION COMPLIANCE

General Requirements of P.L. 1975, c. 127 – The undersigned bidder is hereby put on notice and acknowledges that:

Bidders are required to comply with Affirmative Action / Equal Employment Opportunity law as set forth in N.J.S.A. 10:5-31 *et seq.* and N.J.A.C. 17:27.

In particular, Exhibit B, Mandatory Equal Employment Opportunity Language (Construction Contracts), attached hereto, shall be incorporated into the contract awarded by the UCIA for the construction of the Project.

Additionally, the bidder to whom the contract is awarded shall submit to the UCIA, prior to the signing of the contract, Form AA-201, Initial Project Workforce Report Construction.

Bidders are referred to the State of New Jersey website www.state.nj.us/treasury/contract_compliance for further information and forms regarding AA/EEO laws and regulations.

If the successful contractor does not submit the Initial Project Workforce Report Construction (AA-201) prior to signing of the contract, the UCIA will declare the contractor non-responsive and may award the contract to the next lowest responsible bidder.

_____
NAME OF BIDDER

By: _____

Print Name: _____

Title: _____

Date: _____

(REVISED 4/10)

EXHIBIT B

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)
N.J.A.C. 17:27

CONSTRUCTION CONTRACTS

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

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided,

however, that the Dept. of LWD, Construction EEO Monitoring Program may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Dept. of LWD, Construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. l7:27‑7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5- 31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:

(l) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA 201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to **Subchapter l0 of the Administrative Code (NJAC 17:27).**

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT

STATE OF _____)
) SS:
COUNTY OF _____)

I, _____, of the municipality of _____ _____ in the State of _____, of full age, being duly sworn according to law on my oath depose and say that:

I am _____ of the firm of _____ _____, the Bidder making the proposal for the above named Project ("Contractor'), and that I executed said proposal with full authority to do so; and that said Contractor, pursuant to N.J.S.A. 40A:11-20, certifies that it owns, leases or controls all the necessary equipment required by the Bid Documents and as set forth on the Equipment Statement.

If the Bidder is not the actual owner or lessee of any such equipment, then the Bidder shall attach to this Certificate information identifying the source from which the equipment will be obtained, and such information shall be accompanied by a certificate from the owner or person in control of the equipment definitively granting to the Bidder the control of the equipment required during such time as may be necessary for the completion of that portion of the contract.

_____
Sworn to and subscribed before me
this _____ day of _____, 20____.

Name of Affiant

_____
Print Name of Affiant

_____
A Notary Public of New Jersey
My Commission Expires:

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

EQUIPMENT STATEMENT

The undersigned hereby certifies that Bidder is fully prepared with the necessary capital, material, and machinery to conduct the Work as herein specified and further certifies that the equipment required for the proper execution of this contract in the time specified is available as follows:

LIST EQUIPMENT OWNED BY THE BIDDER:
(Attach additional sheets if necessary)

LIST EQUIPMENT TO BE LEASED BY THE BIDDER FOR THIS JOB:
(Attach additional sheets if necessary)
Include certifications from owner or person in control of equipment, including subcontractor, definitively granting the bidder control of the equipment as may be necessary for the completion of work.

_____ _____
Witness **NAME OF BIDDER**

_____
_____ _____
Date **ADDRESS**

BY: _____

_____
PRINT NAME

_____
TITLE

YOU MAY ATTACH ADDITIONAL SHEETS, BUT YOU MUST SIGN AND WITNESS THIS SHEET

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village – Roof Replacement Houses 5, 10 & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

AMERICANS WITH DISABILITIES ACT
EQUAL OPPORTUNITY FOR INDIVIDUALS WITH DISABILITIES

The Contractor and the Union County Utilities Authority (hereafter "Owner") do hereby agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C.S12.101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereunto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the Owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the Owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the Owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Owner's grievance procedure, the contractor agrees to abide by any decision of the Owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the Owner, or if the Owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The Owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the Owner or any of its agents, servants, and employees, the Owner shall expeditiously forward or have forwarded to the contractor every demand, complaint, notice, summons, pleading, or process received by the Owner or its representatives.

It is expressly agreed and understood that any approval by the Owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the Owner pursuant to this paragraph.

It is further agreed and understood that the Owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractors for any claim which

Bidder's Name_____

AMERICANS WITH DISABILITIES ACT (Continued)

may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the Owner from taking any other actions available to it under any other provisions of this Agreement or otherwise at law.

Name of Bidder _____

By:_____
Signature

Print Name: _____

Title:_____

Date _____

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

1. _____
(Name of Bidder)

2. _____
(Permanent Main Office Address)

3. _____
(When Organized)

4. _____
(If a Corporation, Where Incorporated)

5. Number of years engaged in construction or contracting business under present firm or trade name?
_____

6. Contracts on hand: (Show gross amount of each Contract and the appropriate dates of Completion)
_____

_____

_____

_____

7. General character of work performed by you._____

_____

8. Have you ever failed to complete any work awarded to you? _____

_____

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

STATEMENT OF BIDDER'S QUALIFICATIONS (Continued)

9. Have you ever defaulted on a Contract?_____ If so, complete details, including where and why?

_____

_____

10. List your major equipment available for this Contract. (Attach separate sheet, if necessary)

_____

_____

11. Experience in the Construction work similar in importance to this Project.

_____

_____

12. Have you had any material adverse changes from the trades as listed in NJ Notice of Classification within last five (5) years? _____. If so, list prior classification.

13. Background and experience of the principal members of your organization, including the officers.

_____

_____

14. Bank Reference. (Name, Address, Phone, Representative) _____

15. Will you, upon request, furnish any other information that may be required by the UCIA?

_____

16. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the UCIA in verification of the recitals comprising this Statement of Bidder's Qualifications.

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

STATEMENT OF BIDDER'S QUALIFICATIONS (Continued)

17. Bidder's telephone number, fax number and e-mail address.

Phone _____

Fax _____

E-mail_____

Mobile _____

NAME OF BIDDER

_____

By: _____

Print Name: _____

Title: _____

Subscribed and sworn to before me
this _____day of _____, 20____.

_____
Notary Public of New Jersey
My Commission Expires:
_____, 20__.

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

CONTRACTOR PERFORMANCE RECORD

How many years has your organization been in business as a Contractor under your present business name? _____.

How many years experience in construction work has your organization had (a) as a general contractor? _____; (b) as a subcontractor? _____.

What is the construction experience of the principal individuals of your organization?

Individual's Name	Present Position or Office	Yrs. of Construction Experience	Magnitude & Type of Work	In What Capacity

Has bidder ever failed to complete any work contracted to you?

If so, where and why? (Attach separate sheet if necessary)

Has any officer or partner of your organization ever failed to complete a construction contract handled in its own name?

If so, state name of individual, name of owner, location and type of project, and reason for the failure to complete.

PERFORMANCE RECORD (Continued) List of all contracts completed by you within past 10 years. **Bidder's Name**_____

Name of Owner	Name & Location of Project: Type Of Work	Prime or Sub-Cont.	Engineer or Architect in Charge for Owner	Contract Price (Omit Cost)	Date Completed	Was Time* Extension Necessary	Were Any Penalties Imposed	Were Liens* Claims or Stop Notice Filed

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

CONTRACTOR PERFORMANCE RECORD (Continued)

Explanation of details in connection with non-completion of contracts, time extensions, penalties imposed, labor troubles experience, liens, claims and notices filed again contracts listed in preceding item "Performance Record:"

CERTIFICATION

The information above is true and complete to the best of my knowledge and belief.

_____
(Name of Bidder)

By: _____
(Signature)

_____
(Title)

Subscribed and sworn to before me
this _____ day of _____, 20____.

_____
A Notary Public of New Jersey
My Commission Expires: _____, 20__.

UNION COUNTY IMPROVEMENT AUTHORITY
The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

AFFIDAVIT REGARDING LIST OF DEBARRED, SUSPENDED OR DISQUALIFIED BIDDERS

STATE OF NEW JERSEY _____)
) SS:
COUNTY OF _____)

I, _____, of the municipality of _____ in the State of _____, of full age, being duly sworn according to law on my oath depose and say that:

I am _____ of the firm of _____, the Bidder making the Proposal for the above named Project. I have executed the said Proposal with full authority to do so. Said Bidder is not at the time of the making of this bid included on the New Jersey State Treasurer's or the Federal Government's List of Debarred, Suspended or Disqualified Bidders as a result of action taken by any State or Federal Agency.

_____
Name of Bidder

By:_____
(Signature of Authorized Representative)

Subscribed and sworn to before me
this _____ day of _____, 20____.

_____
Notary Public of New Jersey
My Commission Expires: _____, 20____.

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

CERTIFICATE OF INSURANCE STATEMENT

The Bidder fully understands the UCIA's insurance requirements as stated in the Bid Documents as well as the Owner/Contractor Agreement and agrees to provide all insurance required by these documents prior to the issuance of the Notice to Proceed.

NAME OF BIDDER_____

By: _____
(Signature)

Print Name :_____

Title: _____

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

TIME OF COMPLETION

The undersigned agrees that, if awarded the Contract, the scope of work will begin within ten (10) Calendar Days after Notice to Proceed by the Owner and will be completed within 40 calendar days.

I, _____ of _____
NAME (Print or type) NAME OF COMPANY

agree to complete work in the time frame specified

_____
SIGNATURE

Date: _____, 20____ _____
TITLE

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

Bidder's Name_____

AGREEMENT FOR USE OF BID DOCUMENTS IN ELECTRONIC FORM

This Agreement is made in reference to the following project: **The Deserted Village - Roof Replacement Houses 5, 10, & 11 (**"Project") for **Union County Improvement Authority** ("Owner").

The Union County Utilities Authority (UCIA) will provide to _____("Recipient") certain drawings, specifications and other documents prepared by PS&S Architecture and Engineering, P.C. ("PS&S") in electronic or other machine-readable format. These documents shall be referred to herein as the "Electronic Documents." It is understood and agreed that Recipient may wish to make certain Electronic Documents available to other individuals and entities in connection with the Project. This Agreement is intended to govern the use of the Electronic Documents by the Recipient and other individuals and entities.

In consideration of PS&S's agreement to release the Electronic Documents to Recipient, Recipient agrees as follows:

1. Any distribution by Recipient of all or any portion of the Electronic Documents shall be limited for use on this Project only. Such distribution is subject to PS&S's approval and may be made only after written notice is given to PS&S by Recipient, and any additional recipient agrees in writing to be bound by the terms of this Agreement.

2. This Agreement shall be incorporated in the General Conditions for the Contract for Construction and shall become binding on all parties who use the Electronic Documents. Any individual or entity, including the Owner, to whom PS&S release all or any portion of the Electronic Documents, or who thereafter receives all or any portion of the Electronic Documents, shall be a Recipient for purposes of this Agreement.

3. All drawings, specifications or other documents of any kind prepared by PS&S as the case may be, whether in hard copy or any electronic or machine readable format including the Electronic Documents (collectively the "PS&S Documents"), are instruments of PS&S's services prepared solely for use in connection with the Project. PS&S shall reserve all rights, including copyrights, for their respective Documents. This Agreement is not intended in any way to alter the respective interests of the parties in the PS&S Documents as may be set forth in any other agreement, notwithstanding PS&S's agreement to release the Electronic Documents to Recipient.

4. The Electronic Documents are provided to the Recipient in connection with the Recipient's performance of its responsibilities and obligations relating to the Project, including bidding. PS&S shall retain a set of paper copies of the Electronic Documents, which Recipient may review at the UCIA at a mutually agreeable time. If it is determined that any difference exists between the paper copies and the Electronic Documents, the paper copies shall be presumed to be

correct and take precedence over the Electronic Documents, unless PS&S specifically advises Recipient to the contrary in writing.

5 The parties agree that the Electronic Documents are not, and shall not be construed to be, a product. It is expressly agreed by the Recipient that there are no warranties of any kind in the Electronic Documents or in the media in which they are contained, either express or implied.

6. Recipient agrees not to add to, delete from, or otherwise modify or alter in any way, or to allow others to add to, delete from, or otherwise modify or alter in any way, the Electronic Documents or any copies Recipient prints from the Electronic Documents. Recipient recognizes that additions, deletions, alterations or modifications to the PS&S Documents introduced by anyone other than PS&S, as the case may be, may result in adverse consequences that PS&S can neither predict nor control. Therefore, even in the event that PS&S may have specifically given the Recipient permission to use the Electronic Documents in connection with Recipient's obligation to prepare certain documents for the Project which requires Recipient to add to, delete from, modify or alter the PS&S Documents, Recipient shall be subject to the provisions of Paragraphs 9 and 10 of this Agreement. Furthermore, if Recipient receives PS&S's permission to add to, delete from, modify or alter the PS&S Documents, Recipient shall, in addition to the other obligations set forth herein, remove PS&S's title block, as the case may be, from the paper copy of the Electronic Documents used by Recipient.

7. The Electronic Documents are supplied in the following format: **PDF Format**.

Any conversion of the format is solely the responsibility of the Recipient. Recipient understands and agrees that the conversion of the paper copies of the PS&S Documents into electronic or machine-readable format or the conversion of the Electronic Documents from the machine-readable formats to a different format may introduce errors and inaccuracies. Recipient therefore agrees to confirm the accuracy of the Electronic Documents before using them. Recipient shall accept all responsibility for any errors or inaccuracies and shall release PS&S and the UCIA from any liability or claims for recovery of damages or expenses arising as the result thereof.

8. Recipient further agrees that the PS&S Documents were prepared for use in connection with this Project only, and that the Electronic Documents are supplied to Recipient only for the limited purpose stated herein. Recipient agrees not to use, or allow others to use, the Electronic Documents, in whole or in part, for any purpose or project other than as stated herein.

9. Recipient agrees to waive any and all claims and liability against PS&S and the UCIA, and their respective subconsultants and consultants, as the case may be, arising under this Agreement or as a result of Recipient's use of the Electronic Documents.

10. Recipient agrees to indemnify and save harmless PS&S and their respective subconsultants, and each of their partners, officers, shareholders, directors and employees, and the Owner and its officers and employees and professionals, from any and all claims, judgments, suits, liabilities, damages, costs or expenses (including reasonable defense and attorneys fees) arising as the result of 1) Recipient's failure to comply with any of the requirements of this Agreement; or 2) a defect, error or omission in the Electronic Documents or the information contained therein, which defect, error or omission was not contained in the paper copies of the Contract Documents; or 3) from any addition, deletion, modification or alteration to, or the misinterpretation of the Electronic Documents.

RECIPIENT

Name: _____ **Date:** _____

Title: _____

Company: _____

DRAFT

AIA® Document A132® – 2019

Standard Form of Agreement Between Owner and Contractor,
Construction Manager as Adviser Edition

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month, and year.)

BETWEEN the Owner:
(Name, legal status, address, and other information)

« »« »
« »
« »
« »

and the Contractor:
(Name, legal status, address, and other information)

« »« »
« »
« »
« »

for the following Project:
(Name, location, and detailed description)

« »
« »
« »

The Construction Manager:
(Name, legal status, address, and other information)

« »« »
« »
« »
« »

The Architect:
(Name, legal status, address, and other information)

« »« »
« »
« »
« »

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser. AIA Document A232™–2019 is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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TABLE OF ARTICLES

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ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

[« »] The date of this Agreement.

[« »] A date set forth in a notice to proceed issued by the Owner.

[« »] Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

« »

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

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§ 3.3 Substantial Completion of the Project or Portions Thereof

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the date of Substantial Completion of the Work of all of the Contractors for the Project will be:
(Insert the date of Substantial Completion of the Work of all Contractors for the Project.)

« »

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of all of the Contractors for the Project are to be completed prior to Substantial Completion of the entire Work of all of the Contractors for the Project, the Contractors shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
« »	

§ 3.4 When the Work of this Contract, or any Portion Thereof, is Substantially Complete

§ 3.4.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall substantially complete the entire Work of this Contract:
(Check one of the following boxes and complete the necessary information.)

[« »] Not later than « » (« ») calendar days from the date of commencement of the Work.

[« »] By the following date: « »

§ 3.4.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work of this Contract are to be substantially complete prior to when the entire Work of this Contract shall be substantially complete, the Contractor shall substantially complete such portions by the following dates:

Portion of Work	Date to be substantially complete
« »	

§ 3.4.3 If the Contractor fails to substantially complete the Work of this Contract, or portions thereof, as provided in this Section 3.4, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:
(Check the appropriate box.)

[« »] Stipulated Sum, in accordance with Section 4.2 below

[« »] Cost of the Work plus the Contractor's Fee, in accordance with Section 4.3 below

[« »] Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 4.4 below

(Based on the selection above, complete Section 4.2, 4.3 or 4.4 below.)

§ 4.2 Stipulated Sum

§ 4.2.1 The Contract Sum shall be « » ($ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2.2 Alternates

§ 4.2.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
« »	

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§ 4.2.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
« »		

§ 4.2.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price
« »	

§ 4.2.4 Unit prices, if any:
(Identify the item and state the unit price, and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)
« »		

§ 4.3 Cost of the Work Plus Contractor's Fee without a Guaranteed Maximum Price
§ 4.3.1 The Cost of the Work is as defined in Exhibit B, Determination of the Cost of the Work.

§ 4.3.2 The Contractor's Fee:
(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee.)

« »

§ 4.3.3 The method of adjustment of the Contractor's Fee for changes in the Work:

« »

§ 4.3.4 Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

« »

§ 4.3.5 Rental rates for Contractor-owned equipment shall not exceed « » percent (« » %) of the standard rental rate paid at the place of the Project.

§ 4.3.6 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)
« »		

§ 4.3.7 The Contractor shall prepare and submit to the Construction Manager, within 14 days of executing this Agreement, a written Control Estimate for the Owner's review and approval. The Control Estimate shall include the items in Section B.1 of Exhibit B, Determination of the Cost of the Work.

§ 4.4 Cost of the Work Plus Contractor's Fee with a Guaranteed Maximum Price
§ 4.4.1 The Cost of the Work is as defined in Exhibit B, Determination of the Cost of the Work.

§ 4.4.2 The Contractor's Fee:
(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee.)

« »

§ 4.4.3 The method of adjustment of the Contractor's Fee for changes in the Work:

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« »

§ 4.4.4 Limitations, if any, on a Subcontractor's overhead and profit for increases in the cost of its portion of the Work:

« »

§ 4.4.5 Rental rates for Contractor-owned equipment shall not exceed « » percent (« » %) of the standard rental rate paid at the place of the Project.

§ 4.4.6 Unit Prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)
« »		

§ 4.4.7 Guaranteed Maximum Price
§ 4.4.7.1 The Contract Sum is guaranteed by the Contractor not to exceed « » ($ « »), subject to additions and deductions by Change Order as provided in the Contract Documents. This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.

§ 4.4.7.2 Alternates
§ 4.4.7.2.1 Alternates, if any, included in the Guaranteed Maximum Price:

Item	Price
« »	

§ 4.4.7.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
« »		

§ 4.4.7.3 Allowances, if any, included in the Guaranteed Maximum Price:
(Identify each allowance.)

Item	Price
« »	

§ 4.4.7.4 Assumptions, if any, upon which the Guaranteed Maximum Price is based:
(Identify each assumption.)

« »

§ 4.4.8 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes, or equipment, all of which, if required, shall be incorporated by Change Order.

§ 4.4.9 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in Section 4.4.7.4. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions contained in Section 4.4.7.4 and the revised Contract Documents.

§ 4.5 Liquidated damages, if any:

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(Insert terms and conditions for liquidated damages, if any, to be assessed in accordance with Section 3.4.)

« »

§ 4.6 Other:
(Insert provisions for bonus, cost savings or other incentives, if any, that might result in a change to the Contract Sum.)

« »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Construction Manager by the Contractor, and Certificates for Payment issued by the Construction Manager and Architect, the Owner shall make progress payments on account of the Contract Sum, to the Contractor, as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that an Application for Payment is received by the Construction Manager not later than the « » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the « » day of the « » month. If an Application for Payment is received by the Construction Manager after the application date fixed above, payment of the amount certified shall be made by the Owner not later than « » (« ») days after the Construction Manager receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Progress Payments Where the Contract Sum is Based on a Stipulated Sum

§ 5.1.4.1 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Construction Manager and Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.4.2 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.4.3 In accordance with AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.4.3.1 The amount of each progress payment shall first include:

- **.1** That portion of the Contract Sum properly allocable to completed Work;
- **.2** That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- **.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.4.3.2 The amount of each progress payment shall then be reduced by:

- **.1** The aggregate of any amounts previously paid by the Owner;
- **.2** The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;
- **.3** Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

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.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019; and

.5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.5 Progress Payments Where the Contract Sum is Based on the Cost of the Work without a Guaranteed Maximum Price

§ 5.1.5.1 With each Application for Payment, the Contractor shall submit the cost control information required in Exhibit B, Determination of the Cost of the Work, along with payrolls, petty cash accounts, receipted invoices, or invoices with check vouchers attached, and any other evidence required by the Owner, Construction Manager or Architect to demonstrate that payments already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor, plus payrolls for the period covered by the present Application for Payment, less that portion of the payments attributable to the Contractor's Fee.

§ 5.1.5.2 Applications for Payment shall show the Cost of the Work actually incurred by the Contractor through the end of the period covered by the Application for Payment and for which the Contractor has made or intends to make actual payment prior to the next Application for Payment.

§ 5.1.5.3 In accordance with AIA Document A232-2019 and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.5.3.1 The amount of each progress payment shall first include:

.1 The Cost of the Work as described in Exhibit B, Determination of the Cost of the Work;

.2 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified; and

.3 The Contractor's Fee computed upon the Cost of the Work described in the preceding Section 5.1.5.3.1.1 at the rate stated in Section 4.3.2; or if the Contractor's Fee is stated as a fixed sum in Section 4.3.2 an amount which bears the same ratio to that fixed-sum Fee as the Cost of the Work included in Section 5.1.5.3.1.1 bears to a reasonable estimate of the probable Cost of the Work upon its completion.

§ 5.1.5.3.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019;

.5 The shortfall, if any, indicated by the Contractor in the documentation required by Section 5.1.5.1 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.6 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.5.4 The Owner, Construction Manager and Contractor shall agree upon a mutually acceptable procedure for review and approval of payments to Subcontractors and the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements.

§ 5.1.5.5 In taking action on the Contractor's Applications for Payment, the Construction Manager and Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Contractor, and such action shall not be deemed to be a representation that (1) the Construction Manager and Architect have made a detailed examination, audit or arithmetic verification of the documentation submitted in accordance with Article 5 or other supporting data; (2) that the Construction Manager and Architect have made exhaustive or continuous on-site inspections; or (3) that the Construction Manager and Architect have made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

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§ 5.1.5.6 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.1.5.7 If final completion of the Work is materially delayed through no fault of the Contractor, then the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A232-2019.

§ 5.1.6 Progress Payments Where the Contract Sum is Based on the Cost of the Work with a Guaranteed Maximum Price

§ 5.1.6.1 With each Application for Payment, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner, Construction Manager or Architect to demonstrate that payments already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Contractor's Fee.

§ 5.1.6.2 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Guaranteed Maximum Price among: (1) the various portions of the Work; (2) any contingency for costs that are included in the Guaranteed Maximum Price but not otherwise allocated to another line item or included in a Change Order; and (3) the Contractor's Fee.

§ 5.1.6.2.1 The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Construction Manager and Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.6.2.2 The allocation of the Guaranteed Maximum Price under this Section 5.1.6.2 shall not constitute a separate guaranteed maximum price for the Cost of the Work of each individual line item in the schedule of values.

§ 5.1.6.2.3 When the Contractor allocates costs from a contingency to another line item in the schedule of values, the Contractor shall submit supporting documentation to the Architect and Construction Manager.

§ 5.1.6.3 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. The percentage of completion shall be the lesser of (1) the percentage of that portion of the Work which has actually been completed; or (2) the percentage obtained by dividing (a) the expense that has actually been incurred by the Contractor on account of that portion of the Work and for which the Contractor has made payment or intends to make payment prior to the next Application for Payment by (b) the share of the Guaranteed Maximum Price allocated to that portion of the Work in the schedule of values.

§ 5.1.6.4 In accordance with AIA Document A232-2019, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.4.1 The amount of each progress payment shall first include:

- **.1** That portion of the Guaranteed Maximum Price properly allocable to completed Work as determined by multiplying the percentage of completion of each portion of the Work by the share of the Guaranteed Maximum Price allocated to that portion of the Work in the most recent schedule of values;
- **.2** That portion of the Guaranteed Maximum Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction or, if approved in writing in advance by the Owner, suitably stored off the site at a location agreed upon in writing;
- **.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified; and
- **.4** The Contractor's Fee, computed upon the Cost of the Work described in the preceding Sections 5.1.6.4.1.1 and 5.1.6.4.1.2 at the rate stated in Section 4.4.2 or, if the Contractor's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum fee as the Cost of the Work included in Sections 5.1.6.4.1.1 and 5.1.6.4.1.2 bears to a reasonable estimate of the probable Cost of the Work upon its completion.

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§ 5.1.6.4.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019;

.5 The shortfall, if any, indicated by the Contractor in the documentation required by Section 5.1.6.1 to substantiate prior Applications for Payment, or resulting from errors subsequently discovered by the Owner's auditors in such documentation; and

.6 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.6.5 The Owner and the Contractor shall agree upon a mutually acceptable procedure for review and approval of payments to Subcontractors and the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements.

§ 5.1.6.6 In taking action on the Contractor's Applications for Payment, the Construction Manager and Architect shall be entitled to rely on the accuracy and completeness of the information furnished by the Contractor and such action shall not be deemed to be a representation that (1) the Construction Manager or Architect have made a detailed examination, audit, or arithmetic verification of the documentation submitted in accordance with Section 5.1.6.1 or other supporting data; (2) that the Construction Manager or Architect have made exhaustive or continuous on-site inspections; or (3) that the Construction Manager or Architect have made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Contract. Such examinations, audits, and verifications, if required by the Owner, will be performed by the Owner's auditors acting in the sole interest of the Owner.

§ 5.1.6.7 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.1.6.8 If final completion of the Work is materially delayed through no fault of the Contractor, then the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A232-2019.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to when the Work of this Contract is substantially complete, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

« »

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

« »

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to when the entire Work of this Contract is substantially complete, including modifications for completion of portions of the Work as provided in Section 3.4.2, insert provisions for such modifications.)

« »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, when the Work of this Contract is substantially complete, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted when the Work of this Contract is substantially complete shall not include retainage as follows:

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(Insert any other conditions for release of retainage when the Work of this Contract is substantially complete, or upon Substantial Completion of the Work of all Contractors on the Project or portions thereof.)

« »

§ 5.2 Final Payment

§ 5.2.1 Final Payment Where the Contract Sum is Based on a Stipulated Sum

§ 5.2.1.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A232–2019, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect.

§ 5.2.1.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment, or as follows:

« »

§ 5.2.2 Final Payment Where the Contract Sum is Based on the Cost of the Work with or without a Guaranteed Maximum Price

§ 5.2.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A232–2019, and to satisfy other requirements, if any, which extend beyond final payment;

.2 the Contractor has submitted a final accounting for the Cost of the Work, pursuant to Exhibit B, Determination of the Cost of the Work and a final Application for Payment; and

.3 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect in accordance with Exhibit B, Determination of the Cost of the Work.

§ 5.2.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment, or as follows:

« »

§ 5.3 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

« » % « »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as Initial Decision Maker pursuant to Article 15 of AIA Document A232–2019, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« »
« »
« »
« »

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A232–2019, the method of binding dispute resolution shall be as follows:

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(Check the appropriate box.)

[« »] Arbitration pursuant to Article 15 of AIA Document A232–2019.

[« »] Litigation in a court of competent jurisdiction.

[« »] Other: *(Specify)*

« »

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 Where the Contract Sum is a Stipulated Sum

§ 7.1.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2019.

§ 7.1.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A232–2019, then the Owner shall pay the Contractor a termination fee as follows:
(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

« »

§ 7.1.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232–2019.

§ 7.2 Where the Contract Sum is Based on the Cost of the Work with or without a Guaranteed Maximum Price

§ 7.2.1 Termination

§ 7.2.1.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2019.

§ 7.2.1.2 Termination by the Owner for Cause

§ 7.2.1.2.1 If the Owner terminates the Contract for cause as provided in Article 14 of AIA Document A232–2019, the Owner shall then only pay the Contractor an amount as follows:

.1 Take the Cost of the Work incurred by the Contractor to the date of termination;

.2 Add the Contractor's Fee, computed upon the Cost of the Work to the date of termination at the rate stated in Section 4.3.2 or 4.4.2, as applicable, or, if the Contractor's Fee is stated as a fixed sum in that Section, an amount that bears the same ratio to that fixed-sum Fee as the Cost of the Work at the time of termination bears to a reasonable estimate of the probable Cost of the Work upon its completion;

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract the costs and damages incurred, or to be incurred, by the Owner under Article 14 of AIA Document A232–2019.

§ 7.2.1.2.2 When the Contract Sum is based on the Cost of the Work with a Guaranteed Maximum Price, if the Owner terminates the Contract for cause as provided in Article 14 of AIA Document A232-2019, the amount, if any, to be paid to the Contractor under Article 14 of AIA Document A232-2019 shall not cause the Guaranteed Maximum Price to be exceeded, nor shall it exceed the amount calculated in Section 7.2.1.2.1.

§ 7.2.1.2.3 The Owner shall also pay the Contractor fair compensation, either by purchase or rental at the election of the Owner, for any equipment owned by the Contractor that the Owner elects to retain and that is not otherwise included in the Cost of the Work under Section 7.2.1.2.1.1. To the extent that the Owner elects to take legal assignment of subcontracts and purchase orders (including rental agreements), the Contractor shall, as a condition of receiving the payments referred to in this Article 7, execute and deliver all such papers and take all such steps, including the legal assignment of such subcontracts and other contractual rights of the Contractor, as the Owner may require for the purpose of fully vesting in the Owner the rights and benefits of the Contractor under such

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subcontracts or purchase orders. All Subcontracts, purchase orders and rental agreements entered into by the Contractor will contain provisions allowing for assignment to the Owner as described above.

§ 7.2.1.3 Termination by the Owner for Convenience
If the Owner terminates the Contract for convenience in accordance with Article 14 of AIA Document A232–2019, then the Owner shall pay the Contractor a termination fee as follows:
(Insert the amount of or method for determining the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

« »

§ 7.3 Suspension
The Work may be suspended by the Owner as provided in Article 14 of AIA Document A232–2019; in such case, the Contract Sum and Contract Time shall be increased as provided in Article 14 of AIA Document A232–2019, except that the term "profit" shall be understood to mean the Contractor's Fee as described in Section 4.3.2 or 4.4.2, as applicable, of this Agreement.

ARTICLE 8 MISCELLANEOUS PROVISIONS
§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A232–2019 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds
§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A132™–2019, Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A232–2019, may be given in accordance with a building information modeling exhibit, if completed, or as otherwise set forth below:
(If other than in accordance with a building information modeling exhibit, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

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« »

§ 8.7 Relationship of the Parties

Where the Contract is based on the Cost of the Work plus the Contractor's Fee, with or without a Guaranteed Maximum Price, the Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

§ 8.8 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition

.2 AIA Document A132™–2019, Exhibit A, Insurance and Bonds Exhibit

.3 AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

.4 Building Information Modeling Exhibit, if completed:

« »

.5 Drawings

Number	Title	Date
« »		

.6 Specifications

Section	Title	Date	Pages
« »			

.7 Addenda, if any:

Number	Date	Pages
« »		

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[« »] AIA Document A132™–2019, Exhibit B, Determination of the Cost of the Work

[« »] AIA Document E235™–2019, Sustainable Projects Exhibit, Construction Manager as Adviser Edition, dated as indicated below:
(Insert the date of the E235-2019 incorporated into this Agreement.)

« »

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[« »] The Sustainability Plan:

Title	Date	Pages
« »		

[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
« »			

.9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A232–2019 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

« »

This Agreement is entered into as of the day and year first written above.

« »	« »
OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
« »« »	« »« »
(Printed name and title)	*(Printed name and title)*

DRAFT

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AIA® Document A232® – 2019

General Conditions of the Contract for Construction,
Construction Manager as Adviser Edition

for the following PROJECT:
(Name, and location or address)

« »
« »

THE CONSTRUCTION MANAGER:
(Name, legal status, and address)

« »« »
« »

THE OWNER:
(Name, legal status, and address)

« »« »
« »

THE ARCHITECT:
(Name, legal status, and address)

« »« »
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ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents. The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract. The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and the Construction Manager or the Construction Manager's consultants, (3) between the Owner and the Architect or the Architect's consultants, (4) between the Contractor and the Construction Manager or the Construction Manager's consultants, (5) between the Owner and a Subcontractor or Sub-subcontractor (6) between the Construction Manager and the Architect, or (7) between any persons or entities other than the Owner and Contractor. The Construction Manager and Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of their duties.

§ 1.1.3 The Work. The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Contractors, and by the Owner's own forces and Separate Contractors.

§ 1.1.5 Contractors. Contractors are persons or entities, other than the Contractor or Separate Contractors, who perform Work under contracts with the Owner that are administered by the Architect and Construction Manager.

§ 1.1.6 Separate Contractors. Separate Contractors are persons or entities who perform construction under separate contracts with the Owner not administered by the Architect and Construction Manager.

§ 1.1.7 The Drawings. The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

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

§ 1.1.9 Instruments of Service. Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.10 Initial Decision Maker. The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

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§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon written protocols governing the transmission and use of, and reliance on, Instruments of Service or any other information or documentation in digital form.

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§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to written protocols governing the use of, and reliance on, the information contained in the model shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Construction Manager and the Architect do not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work, and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. Unless otherwise provided under the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit.

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§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 The Owner shall retain a construction manager adviser lawfully practicing construction management in the jurisdiction where the Project is located. That person or entity is identified as the Construction Manager in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.4 If the employment of the Construction Manager or Architect terminates, the Owner shall employ a successor construction manager or architect to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Construction Manager or Architect, respectively.

§ 2.3.5 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.6 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.7 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3.8 The Owner shall forward all communications to the Contractor through the Construction Manager. Other communication shall be made as set forth in Section 4.2.6.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to review by the Construction Manager and prior approval of the Architect, and the Construction Manager or Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Construction Manager's and Architect's and their respective consultants' additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

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§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager or Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.5, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Construction Manager and Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information submitted to the Construction Manager in such form as the Construction Manager and Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Construction Manager and Architect any nonconformity discovered by or made known to the Contractor as a request for information submitted to Construction Manager in such form as the Construction Manager and Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner, the Construction Manager, and the Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. The Construction Manager shall review the proposed alternative for sequencing, constructability, and coordination impacts on the other Contractors. Unless the Architect or the Construction Manager objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

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§ 3.3.3 The Contractor shall be responsible for inspection of portions of the Project already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

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

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect, in consultation with the Construction Manager, and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner, Construction Manager, and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Construction Manager or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices, and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit. The Contractor shall secure and pay for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner, Construction Manager, and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect and Construction Manager will promptly investigate such conditions and, if the Architect, in consultation with the

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Construction Manager, determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect, in consultation with the Construction Manager, determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner, Construction Manager, and Contractor, stating the reasons. If the Owner or Contractor disputes the Architect's determination or recommendation, either party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner, Construction Manager, and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- **.1** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- **.2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- **.3** whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect, through the Construction Manager, of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor, stating whether the Owner, the Construction Manager, or the Architect (1) has reasonable objection to the proposed superintendent or (2) require additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner, Construction Manager, or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information, and the Construction Manager's use in developing the Project schedule, a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the

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Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Contractors, or the construction or operations of the Owner's own forces or Separate Contractors.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Construction Manager's and Architect's approval. The Architect and Construction Manager's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Construction Manager and Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall participate with other Contractors, the Construction Manager, and the Owner in reviewing and coordinating all schedules for incorporation into the Project schedule that is prepared by the Construction Manager. The Contractor shall make revisions to the construction schedule and submittal schedule as deemed necessary by the Construction Manager to conform to the Project schedule.

§ 3.10.4 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner, Construction Manager, and Architect, and incorporated into the approved Project schedule.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Construction Manager, Architect, and Owner, and delivered to the Construction Manager for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data, and Samples

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

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

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

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect and Construction Manager is subject to the limitations of Sections 4.2.10 through 4.2.12. Informational submittals upon which the Construction Manager and Architect are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Construction Manager or Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Construction Manager, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the Project submittal schedule approved by the Construction Manager and Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of other Contractors, Separate Contractors, or the Owner's own forces. The Contractor shall cooperate with the Construction Manager in the coordination of the Contractor's Shop Drawings, Product Data, Samples, and similar submittals with related documents submitted by other Contractors.

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§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner, Construction Manager, and Architect, that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been reviewed and approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Construction Manager and Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Construction Manager and Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner, the Architect, and the Construction Manager shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Construction Manager shall review submittals for sequencing, constructability, and coordination impacts on other Contractors.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Construction Manager and Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.13.2 The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Construction Manager before using any portion of the site.

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§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner, Separate Contractors, or of other Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner, Separate Contractors, or by other Contractors except with written consent of the Construction Manager, Owner, and such other Contractors or Separate Contractors. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Separate Contractors, other Contractors, or the Owner, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner, or Construction Manager with the Owner's approval, may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner, Construction Manager, and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner, Construction Manager, and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner, Architect, or Construction Manager. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect through the Construction Manager.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Construction Manager, Architect, Construction Manager's and Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

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ARTICLE 4 ARCHITECT AND CONSTRUCTION MANAGER

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 The Construction Manager is the person or entity retained by the Owner pursuant to Section 2.3.3 and identified as such in the Agreement.

§ 4.1.3 Duties, responsibilities, and limitations of authority of the Construction Manager and Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Construction Manager, Architect, and Contractor. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Construction Manager and Architect will provide administration of the Contract as described in the Contract Documents and will be the Owner's representatives during construction until the date the Architect issues the final Certificate for Payment. The Construction Manager and Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect will keep the Owner and the Construction Manager reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner and Construction Manager known deviations from the Contract Documents and defects and deficiencies observed in the Work.

§ 4.2.3 The Construction Manager shall provide one or more representatives who shall be in attendance at the Project site whenever the Work is being performed. The Construction Manager will determine in general if the Work observed is being performed in accordance with the Contract Documents, will keep the Owner and Architect reasonably informed of the progress of the Work, and will promptly report to the Owner and Architect known deviations from the Contract Documents and the most recent Project schedule, and defects and deficiencies observed in the Work.

§ 4.2.4 The Construction Manager will schedule and coordinate the activities of the Contractor and other Contractors in accordance with the latest approved Project schedule.

§ 4.2.5 The Construction Manager, except to the extent required by Section 4.2.4, and Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, and neither will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Neither the Construction Manager nor the Architect will have control over or charge of, or be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or of any other persons or entities performing portions of the Work.

§ 4.2.6 Communications. The Owner shall communicate with the Contractor and the Construction Manager's consultants through the Construction Manager about matters arising out of or relating to the Contract Documents. The Owner and Construction Manager shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Construction Manager otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with other Contractors shall be through the Construction Manager. Communications by and with the Owner's own forces and Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.7 The Construction Manager and Architect will review and certify all Applications for Payment by the Contractor, in accordance with the provisions of Article 9.

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§ 4.2.8 The Architect and Construction Manager have authority to reject Work that does not conform to the Contract Documents, and will notify each other about the rejection. Whenever the Construction Manager considers it necessary or advisable, the Construction Manager will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, upon written authorization of the Owner, whether or not the Work is fabricated, installed or completed. The foregoing authority of the Construction Manager will be subject to the provisions of Sections 4.2.18 through 4.2.20 inclusive, with respect to interpretations and decisions of the Architect. However, neither the Architect's nor the Construction Manager's authority to act under this Section 4.2.8 nor a decision made by either of them in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Construction Manager to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons performing any of the Work.

§ 4.2.9 Utilizing the submittal schedule provided by the Contractor, the Construction Manager shall prepare, and revise as necessary, a Project submittal schedule incorporating information from other Contractors, the Owner, Owner's consultants, Owner's Separate Contractors and vendors, governmental agencies, and participants in the Project under the management of the Construction Manager. The Project submittal schedule and any revisions shall be submitted to the Architect for approval.

§ 4.2.10 The Construction Manager will receive and promptly review for conformance with the submittal requirements of the Contract Documents, all submittals from the Contractor such as Shop Drawings, Product Data, and Samples. Where there are other Contractors, the Construction Manager will also check and coordinate the information contained within each submittal received from the Contractor and other Contractors, and transmit to the Architect those recommended for approval. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Construction Manager represents to the Owner and Architect that the Construction Manager has reviewed and recommended them for approval. The Construction Manager's actions will be taken in accordance with the Project submittal schedule approved by the Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness while allowing sufficient time to permit adequate review by the Architect.

§ 4.2.11 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Upon the Architect's completed review, the Architect shall transmit its submittal review to the Construction Manager.

§ 4.2.12 Review of the Contractor's submittals by the Construction Manager and Architect is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Construction Manager and Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Construction Manager and Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.13 The Construction Manager will prepare Change Orders and Construction Change Directives.

§ 4.2.14 The Construction Manager and the Architect will take appropriate action on Change Orders or Construction Change Directives in accordance with Article 7, and the Architect will have authority to order minor changes in the Work as provided in Section 7.4. The Architect, in consultation with the Construction Manager, will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.15 Utilizing the documents provided by the Contractor, the Construction Manager will maintain at the site for the Owner one copy of all Contract Documents, approved Shop Drawings, Product Data, Samples, and similar required submittals, in good order and marked currently to record all changes and selections made during construction. These will be available to the Architect and the Contractor, and will be delivered to the Owner upon completion of the Project.

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§ 4.2.16 The Construction Manager will assist the Architect in conducting inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion in conjunction with the Architect pursuant to Section 9.8; and receive and forward to the Owner written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10. The Construction Manager will forward to the Architect a final Application and Certificate for Payment or final Project Application and Project Certificate for Payment upon the Contractor's compliance with the requirements of the Contract Documents.

§ 4.2.17 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Construction Manager of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.18 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of the Construction Manager, Owner, or Contractor through the Construction Manager. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.19 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions so rendered in good faith.

§ 4.2.20 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.21 The Construction Manager will receive and review requests for information from the Contractor, and forward each request for information to the Architect, with the Construction Manager's recommendation. The Architect will review and respond in writing, through the Construction Manager, to requests for information about the Contract Documents. The Construction Manager's recommendation and the Architect's response to each request will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include other Contractors or Separate Contractors or the subcontractors of other Contractors or Separate Contractors.

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

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Construction Manager, for review by the Owner, Construction Manager and Architect, of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor whether the Owner, the Construction Manager or the Architect (1) has reasonable objection to any such proposed person or entity or, (2) requires additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

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§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner, Construction Manager or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner, Construction Manager or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Construction Manager or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner, Construction Manager or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, that the Contractor, by these Contract Documents, assumes toward the Owner, Construction Manager and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner, Construction Manager and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- **.1** assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- **.2** assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor Contractor or other entity. If the Owner assigns the subcontract to a successor Contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor Contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

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§ 6.1.2 When the Owner performs construction or operations with the Owner's own forces or Separate Contractors, the Owner shall provide for coordination of such forces and Separate Contractors with the Work of the Contractor, who shall cooperate with them.

§ 6.1.3 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner's own forces, Separate Contractors, Construction Manager and other Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces, Separate Contractors or other Contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Construction Manager and Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor or other Contractors that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Construction Manager and the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's or other Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractors or other Contractors that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs, including costs that are payable to a Separate Contractors or to other Contractors, because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of delays, improperly timed activities, damage to the Work or defective construction by the Owner's own forces, Separate Contractors, or other Contractors.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction, or to property of the Owner, Separate Contractors, or other Contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner, Separate Contractors, and other Contractors shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, other Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Construction Manager, with notice to the Architect, will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Construction Manager, Architect and Contractor. A Construction Change Directive requires agreement by the Owner, Construction Manager and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

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§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

A Change Order is a written instrument prepared by the Construction Manager and signed by the Owner, Construction Manager, Architect, and Contractor, stating their agreement upon all of the following:

.1 The change in the Work;
.2 The amount of the adjustment, if any, in the Contract Sum; and
.3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Construction Manager and signed by the Owner, Construction Manager and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
.2 Unit prices stated in the Contract Documents or subsequently agreed upon;
.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
.4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Construction Manager shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

.1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Construction Manager and Architect;
.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
.5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

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§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Construction Manager and Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Construction Manager and Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Construction Manager and Architect determine to be reasonably justified. The interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Construction Manager and Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Construction Manager shall prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Construction Manager and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Construction Manager that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

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

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner, Architect, Construction Manager, or an employee of any of them, or of the Owner's own forces, Separate Contractors, or other Contractors; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section

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15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts and the Architect, based on the recommendation of the Construction Manager, determines justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

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

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Construction Manager, before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Construction Manager and the Architect. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. The Construction Manager shall forward to the Architect the Contractor's schedule of values. Any changes to the schedule of values shall be submitted to the Construction Manager and supported by such data to substantiate its accuracy as the Construction Manager and the Architect may require, and unless objected to by the Construction Manager or the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least fifteen days before the date established for each progress payment, the Contractor shall submit to the Construction Manager an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner, Construction Manager or Architect require, such as copies of requisitions, and releases of waivers of lien from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Construction Manager and Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the

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Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 Where there is only one Contractor, the Construction Manager will, within seven days after the Construction Manager's receipt of the Contractor's Application for Payment, review the Application, certify the amount the Construction Manager determines is due the Contractor, and forward the Contractor's Application and Certificate for Payment to the Architect. Within seven days after the Architect receives the Contractor's Application for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Certificate for Payment, in the full amount of the Application for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward to the Contractor the Architect's notice of withholding certification.

§ 9.4.2 Where there is more than one Contractor performing portions of the Project, the Construction Manager will, within seven days after the Construction Manager receives all of the Contractors' Applications for Payment: (1) review the Applications and certify the amount the Construction Manager determines is due each of the Contractors; (2) prepare a Summary of Contractors' Applications for Payment by combining information from each Contractor's application with information from similar applications for progress payments from the other Contractors; (3) prepare a Project Application and Certificate for Payment; (4) certify the amount the Construction Manager determines is due all Contractors; and (5) forward the Summary of Contractors' Applications for Payment and Project Application and Certificate for Payment to the Architect.

§ 9.4.2.1 Within seven days after the Architect receives the Project Application and Project Certificate for Payment and the Summary of Contractors' Applications for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Project Certificate for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Project Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Project Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward the Architect's notice of withholding certification to the Contractors.

§ 9.4.3 The Construction Manager's certification of an Application for Payment or, in the case of more than one Contractor, a Project Application and Certificate for Payment, shall be based upon the Construction Manager's evaluation of the Work and the data in the Application or Applications for Payment. The Construction Manager's certification will constitute a representation that, to the best of the Construction Manager's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.4 The Architect's issuance of a Certificate for Payment or, in the case of more than one Contractor, Project Application and Certificate for Payment, shall be based upon the Architect's evaluation of the Work, the recommendation of the Construction Manager, and data in the Application for Payment or Project Application for Payment. The Architect's certification will constitute a representation that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.5 The representations made pursuant to Sections 9.4.3 and 9.4.4 are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Construction Manager or Architect.

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§ 9.4.6 The issuance of a Certificate for Payment or a Project Certificate for Payment will not be a representation that the Construction Manager or Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Construction Manager or Architect may withhold a Certificate for Payment or Project Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Section 9.4.3 and 9.4.4 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager will notify the Contractor and Owner as provided in Section 9.4.1 and 9.4.2. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment or a Project Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Construction Manager or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment or Project Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from the acts and omissions described in Section 3.3.2 because of

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- **.4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- **.5** damage to the Owner or a Separate Contractor or other Contractor;
- **.6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- **.7** repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect or Construction Manager withholds certification for payment under Section 9.5.1, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Construction Manager, and both will reflect such payment on the next Certificate for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment or Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Construction Manager will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner, Construction Manager and Architect on account of portions of the Work done by such Subcontractor.

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§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner, Construction Manager nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Construction Manager and Architect do not issue a Certificate for Payment or a Project Certificate for Payment, through no fault of the Contractor, within fourteen days after the Construction Manager's receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Construction Manager and Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Construction Manager, and the Contractor and Construction Manager shall jointly prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the list, the Architect, assisted by the Construction Manager, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect, assisted by the Construction Manager, to determine Substantial Completion.

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§ 9.8.4 When the Architect, assisted by the Construction Manager, determines that the Work of all of the Contractors, or designated portion thereof, is substantially complete, the Construction Manager will prepare, and the Construction Manager and Architect shall execute, a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor and Construction Manager shall jointly prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect after consultation with the Construction Manager.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Construction Manager, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon completion of the Work, the Contractor shall forward to the Construction Manager a notice that the Work is ready for final inspection and acceptance, and shall also forward to the Construction Manager a final Contractor's Application for Payment. Upon receipt, the Construction Manager shall perform an inspection to confirm the completion of Work of the Contractor. The Construction Manager shall make recommendations to the Architect when the Work of all of the Contractors is ready for final inspection, and shall then forward the Contractors' notices and Application for Payment or Project Application for Payment, to the Architect, who will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Construction Manager and Architect will promptly issue a final Certificate for Payment or Project Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Construction Manager's and Architect's final Certificate for Payment or Project Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect through the Construction Manager (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5) documentation of any special

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warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

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

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- **.1** liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- **.2** failure of the Work to comply with the requirements of the Contract Documents;
- **.3** terms of special warranties required by the Contract Documents; or
- **.4** audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Construction Manager for review and coordination with the safety programs of other Contractors. The Construction Manager's responsibilities for review and coordination of safety programs shall not extend to direct control over or charge of the acts or omissions of the Contractors, Subcontractors, agents or employees of the Contractors or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Construction Manager.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- **.1** employees on the Work and other persons who may be affected thereby;
- **.2** the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- **.3** other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction; and
- **.4** construction or operations by the Owner, Separate Contractors, or other Contractors.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings

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against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

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

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner, Construction Manager or Architect or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

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

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner, Construction Manager and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor, Construction Manager and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor, the Construction Manager and the Architect will promptly reply to the Owner in writing stating whether or not any of them has reasonable objection to the persons or entities proposed by the Owner. If the Contractor, Construction Manager or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor, the Construction Manager and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Construction Manager, Architect, their consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of

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bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Construction Manager and Construction Manager's consultants, and the Architect and Architect's consultants, shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice directly to the Owner, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

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§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform both the Contractor and the Construction Manager, separately and in writing, prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice directly to the Contractor, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Construction Manager and Construction Manager's consultants; (3) the Architect and Architect's consultants; (4) other Contractors and any of their subcontractors, sub-subcontractors, agents, and employees; and (5) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Construction Manager, Construction Manager's consultants, Architect, Architect's consultants, other Contractors, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor, Architect, and Construction Manager for loss of use of the Owner's property, due to fire or other hazards however caused.

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§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Construction Manager, Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Construction Manager, Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Construction Manager's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by either, be uncovered for their examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Construction Manager or Architect has not specifically requested to examine prior to its being covered, the Construction Manager or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Construction Manager or Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion, and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner, Construction Manager or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

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§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner, Separate Contractors, or other Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

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

§ 13.3.2 No action or failure to act by the Owner, Construction Manager, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Construction Manager and Architect timely notice of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded.

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The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Construction Manager, Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Construction Manager and Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Construction Manager and Architect of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Construction Manager's and Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager for transmittal to the Architect.

§ 13.4.5 If the Construction Manager or Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Construction Manager or Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- **.1** Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- **.2** An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- **.3** Because the Construction Manager has not certified or the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- **.4** The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

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§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees, or any other persons performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- **.1** repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- **.3** repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- **.4** otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, after consultation with the Construction Manager, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- **.1** Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- **.2** Accept assignment of subcontracts pursuant to Section 5.4; and
- **.3** Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall, upon application, be certified by the Initial Decision Maker after consultation with the Construction Manager, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and the Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

- **.1** that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- **.2** that an equitable adjustment is made or denied under another provision of this Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- **.1** cease operations as directed by the Owner in the notice;
- **.2** take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

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.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Construction Manager and Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost. If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

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§ 15.1.7 Waiver of Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties, the Construction Manager, and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days of receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

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§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

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§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

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SUPPLEMENTARY CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

CONSTRUCTION MANAGEMENT EDITION

ARTICLE 16

MODIFICATION OF THE GENERAL CONDITIONS
OF AIA DOCUMENT A232-2019 - GENERAL CONDITIONS OF THE CONTRACT
FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISER EDITION
(the "GENERAL CONDITIONS")

16.1 PRECEDENCE

16.1.1 Wherever these Supplementary Conditions make deletions, revisions. and insertions to the General Conditions, the Supplementary Conditions shall take precedence over the General Conditions.

16.2 MODIFICATIONS OF ARTICLE 1. CONTRACT DOCUMENTS

16.2.1 Add the following under Paragraph 1.1:

1.1.9 ENUMERATION OF THE DRAWINGS, SPECIFICATIONS AND ADDENDA

The Drawings and Specifications which form a part of this Contract are enumerated in the List of Drawings and the List of Contents of the Specifications. The Addenda which form a part of this Contract are enumerated in Article 9 of the Owner-Contractor Agreement.

16.2.2 Add the following under Paragraph 1.4:

1.4.1 The Architect shall be the sole interpreter of the plans and specifications and the Contractor's performance therewith. It is the intent of these plans and specifications to provide materials of a quality consistent with the average of those provided under similar circumstances in the same general geographical area. The Architect shall be the sole authority in making such determination.

16.3 MODIFICATIONS OF ARTICLE 2. OWNER

16.3.1 Delete Subparagraph 2.2.3 in its entirety.

1.6.3.2 Delete Subparagraph 2.2.5 in its entirety and insert the following:

2.2.5 The Architect shall furnish the Contractor, without charge, the following number of sets (black line prints) of drawings and specifications. The Contractor shall make his own additional sets at their expense.

General Contractor - 3 sets

16.4 MODIFICATIONS OF ARTICLE 3. CONTRACTOR

16.4.1 Add the following under Paragraph 3.2:

3.2.5 The Contractor shall forward, through the Construction Manager, to the Architect written request for supplementary drawings and data needed by him to carry on his work. Such request shall be timed so as to enable the Construction Manager and the Architect to properly act well in advance of need at the site.

16.4.2 Add the following under Paragraph 3.6

3.6.1 All Contractors, subcontractors, suppliers, etc. are required to pay all applicable taxes as required by law, outside of those taxes for which the Union County Improvement Authority is exempt.

16.4.3 Delete Subparagraph 3.7.1 and substitute the following:

3.7.1.1. All fees and charges, including engineer review charges are the responsibility of the Contractor for the Work in question. The Contractor is responsible for procuring all permits required by the Bidding and Contract Requirements and by law.

3.7.1.2 If a permit fee is required, the Contractor shall pay the fee s and be reimbursed by the Owner upon presentation of receipt for same for the cost of the fee only.

3.7.1.3 If a fee is required for any utilities connection, the Contractor shall pay the fee and be reimbursed by the Owner upon presentation of a receipt for same for the fee only. .

16.4.5 Add the following under Subparagraph 3.12.8:

3.12.8.1 Work performed contrary to this procedure shall be at the risk and expense of the Contractor. All shop drawings used for fabrication and erection shall be those approved by the Architect, without change. If change is found to be necessary on any approved shop drawing, product data or sample, it shall be resubmitted for record purposes only.

Add the following under Paragraph 3.12.6

3.12.6.1 All shop drawings shall be submitted within 90 calendar days of the Notice to Proceed, unless required earlier for the progress of the project. No monthly Applications for Payment will be processed thereafter until all shop drawings have been submitted.

16.5 INTENTIONALLY OMITTED

16.6 MODIFICATIONS OF ARTICLE 5. SUBCONTRACTORS

16.6.1 Delete Subparagraph 5.2.1 in its entirety and insert the following:

5.2.1 Within 15 days after Notice to Proceed, the Contractor shall furnish to the Construction Manager in writing for review by the Owner, Construction Manager, and the Architect, a list of the names of all Subcontractors, Sub-subcontractors, fabricators, manufacturers, sources of supply, articles, devices, fixtures, pieces of equipment, materials and processes proposed for each item of Work on List of Subcontractors, AIA Document G805. The Construction Manager will promptly notify the Contractor in writing if either the Owner, Construction Manager or Architect, after due investigation, has reasonable objection to any names on such list. Failure of the Owner, Construction Manager, and Architect to make objection within 10 working days to any name on the list shall constitute acceptance of such name.

5.2.1.1 In submitting the names of Subcontractors, the Contractor shall list 1) the extent or limitations of the trades or work included by Specifications paragraph number, 2) the name and address of the Subcontractor, 3) the name and address of all Sub-subcontractors for each significant subdivision of the trade or work, and if required by the Construction Manager, 4) reference in the form of a list of at least 3 jobs similar in size and quality to this Project performed in the last 5 years, with name and location of work, dollar value and names of the Owner and Architect.

5.2.1.2 In submitting sources of supply of materials, articles and pieces of equipment including those under subcontracts and sub-subcontracts, the Contractor shall list 1) the extent or limitations of the trades or work included by Specifications paragraph number 2) the name and address of the source of supply 3) the name of the manufacturer of the items.

16.7 MODIFICATION OF ARTICLE 8. TIME

16.7.1 Add the following Paragraph under Article 8:

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 The Owner shall have right to defer the beginning or to suspend the whole or any part of the Work herein Contracted to be done whenever, in the opinion of the Architect/Engineer, it may be necessary or expedient for the Owner to do so. If the Contractor is delayed in completion of the Work by any act or neglect or default of the Owner or of any other Contractor employed by the Owner, or by changes ordered in the Work, or by strikes, lockouts, fire, unusual delay by common carriers, unavoidable casualties, or any cause beyond the Contractor's control or by any cause which the Architect/Construction Manager shall decide to justify the delay, then for all such delays and suspensions the Contractor shall be allowed one day additional to the time limitations herein stated for each and every day of such delay so caused in the completion of the Work, the same to be ascertained solely by the Architect/Construction Manager, and a similar allowance of extra time will be made for such delays as the Architect/Construction Manager may find to have been caused by the Owner.

(1) No such extensions of time shall be made for any one or more delays unless within 24 hours after the beginning of such delays a written request for additional time shall be filed with the Architect/Construction Manager. In case of a continuing cause of delay, only one request is necessary.

(2) No claim for damages or any claim other than for extensions for time as herein provided shall be made or asserted against the Owner/Architect /Construction Manager by reason of any of the delays herein mentioned.

(3) Anything contained in the Contract to the contrary notwithstanding, the Contractor shall not be entitled to damages or extra compensation.

8.3.4 Where the cause of delay is due to weather conditions, extension of time shall be granted only for unusually severe weather, as determined by reference to historical data. The term "historical data" as used in the preceding sentence shall be construed according to this formula: Average rainfall (or snow or low temperature) for the past five years for the month in question, plus 10 percent. In other words, weather is not deemed to be unusually severe unless it is 10 percent worse than the average for that month over the last five years.

8.3.5. Apart from extension of time, and notwithstanding anything to the contrary in the General Conditions, no payment or allowance of any kind shall be made to the Contractor as compensation for damages on account of hindrance or delay from any cause in the progress of the Work, whether such delay be avoidable or unavoidable, ,unless such delay is caused solely by the act(s) of the Owner. The Contractor agrees that he will make no claim for compensation, damages for any such delays, and will accept in full satisfaction for such delays said extension of time.

8.4 COMPLETION AND LIQUIDATED DAMAGES

8.4.1 The Contractor shall substantially complete all the Work included in the Contract Documents ready for the Owner's utilization and occupancy as defined in Subparagraphs 8.1.3 of the General Conditions within the time stated in these Documents subject to extensions of Contract time as provided in Paragraph 8.3 of the General Conditions.

8.4.2 Pursuant to the provisions of Subparagraph 8.4.1, for each calendar day delay in said completion, the Contractor shall pay to the Owner as liquidated damages, and not as a penalty, the sum noted in Section 1.32 of the Request for Bids, and each Contractor and his surety shall be liable for the amount thereof.

8.4.3 Any delay attributable to lack of coordination or cooperation by or between the Contractor and his Subcontractors will not be recognized by the Owner as the basis for any claim for increase in the Contract Sum, but shall be settled as provided in Paragraph 6.2 of the General and Supplementary Conditions.

8.4.4 In the event of the failure of the Contractor to complete the said Work within the time stated in his

proposal, the Contractor shall be liable to the Owner in the sum listed in these documents for each calendar day that the Work shall be and remain in an incomplete state of construction, alteration or repair, as the case may be, and for added administrative and inspection costs to the Owner on account of delay. The liquidated damages provided for herein shall not prevent the Owner, in the alternative, from seeking other consequential losses or damages that the Owner may incur by reason of such delay, such as, but not limited to, added costs of the project and the cost of furnishing temporary services , if any. Any such sums for which the Contractor is liable may be deducted by the Owner from any monies owed to the Contractor.

8.4.5 It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion of the Contract are ESSENTIAL CONDITIONS of this Contract; and it is further mutually understood and agreed that the Work embraced in this Contract shall be commenced on a date to be specified in the "Notice to Proceed".

8.4.5.1 The Contractor agrees that the Work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time stated in the Bidding and Contract Requirements and the Contractor's proposal.

8.4.6 If the Contractor shall neglect, fail or refuse to complete the Work within the time 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, not as a penalty but as liquidated damages for such breach of Contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the Work.

8.4.6.1 Liquidated Damages in the amount set forth in the Bidding and Contract Requirements is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would sustain for such breach, , and said amount is agreed to be the amount of damages the Owner would sustain. Liquidated Damaged shall be retained from time to time by the Owner from current periodical estimates.

8.4.6.2 The Contractor shall not be charged with liquidated damages or any excess cost if the Owner has determined that the Contractor is without fault and the Contractor's reasons for a request for an extension of time are acceptable to the Owner. The Contractor shall not be charged with liquidated damages of any excess cost when the delay in the completion of the Work is due to:

a. any preference, priority or allocation order duly issued by the Owner;

b. unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner which acts are contrary to the terms of such contract, fires, floods, epidemics, quarantine restrictions, freight embargoes, and severe weather; as defined herein, and

c. any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article:

d. provided, further, that the Contractor shall, within 24 hours from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the Contract, notify the Owner, in writing of the causes of the delay. The Owner shall first ascertain the facts and extent of the delay and notify the Contractor within a reasonable time that good cause has been shown to warrant the granting of an extension.

8.4.7. It is further agreed that time is of the essence of each and every portion of this Contract and the specifications wherein a definite and certain length of time is fixed for performance of any act whatsoever. In the event additional time is allowed for the completion of any Work, the new time limit fixed by such extension shall be of the essence of this Contract.

8.4.7.1 If job progress has been adversely affected by the unexcused non-attendance of the Contractor at a scheduled job meeting of which he has been duly notified, such adverse effect shall be considered as job delay, the Contractor shall be subject to payment of damages to the Owner in an amount not to exceed $100.00 for each occurrence.

16.8 MODIFICATIONS OF ARTICLE 9. PAYMENTS AND COMPLETION

16.8.1 Delete Subparagraph 9.3.2 in its entirety and insert the following:

9.3.2 Payments on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site, or at some other location agreed upon in writing, will be made by the Owner subject to the following conditions:

9.3.2.1 Such materials or equipment shall have been fabricated or assembled specifically for the Project and delivered to storage no earlier than needed for the orderly progress of the Work as demonstrated by the Progress Schedule.

9.3.2.2 Title to such materials or equipment shall pass to the Owner pursuant to the Contractor's bill of sale which shall contain guarantee of replacement thereof in the event of damage thereto or disappearance thereof due to any cause. The Contractor shall also affirm that he will pay for such materials or equipment immediately upon receipt of payment therefor from the Owner.

9.3.2.3 In the case of offsite storage, the Contractor shall also provide consent of Surety to such payment and insurance of such materials or equipment against the perils set forth in Subparagraph 11.3.1 of the General Conditions both while storage and during transportation to the site.

9.3.2.4 Raw materials or other materials or equipment readily duplicated or usable on other projects will be paid for only after the materials are incorporated in the construction.

16.8.2 Add the following under Subparagraph to 9.4.1.

9.4.1.1 Until final completion of the entire Project, the Owner shall retain 2% of the amount due to Contractor on account of progress payments, until all Releases, Guarantees, Warranties, Record Documents, Certificates of Inspection of Governing Authorities, Maintenance Manuals, Certifications, etc., are delivered to the Architect at the end of the entire Contract.

16.8.3 Add the following under Subparagraph t 9.9.1

9.9.1.1 The Owner reserves the right to occupy any portion of the Project which is ready for occupancy prior to completion and acceptance of the Project, so long as all required governmental permits have been obtained.
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9.9.1.2 The occupancy of any portion of the Project does not waive the Owner's right to liquidated damages or constitute the Owner’s acceptance of any Work, as the Project will be accepted as a whole and not in units. Prior to partial occupancy, the Architect, a representative of the Owner, and the Contractor shall fully inspect the portions of the Project to be occupied, and prepare a complete list of omissions of materials, faulty workmanship, and items to be repaired, torn out, or replaced. The Owner shall assume responsibility for damage to the premises so occupied of any items not on the aforesaid list when such damage is due to greater than normal wear and tear; however, the Owner shall not assume responsibility for improper, omitted, or defective workmanship or materials.

16.9 MODIFICATIONS OF ARTICLE 11. INSURANCE AND BONDS

ARTICLE 11 – INSURANCE AND BONDS

Delete 11.1, 11.2, 11.3, and 11.4 in their entirety and substitute the following:

Note: 1.5, Bonding, in AIA Document A20, should be retained unless the Owner wishes to use alternative wording.

11.1 - General Insurance Requirements

11.1.1 The Contractor shall not commence the Work until the Contractor has obtained, at the Contractor's own expense, all of the insurance required hereunder and such insurance has been approved by the Owner; nor shall the Contractor allow any Subcontractor to commence work on any subcontract until all insurance required of the Subcontractor has been obtained and approved by the Contractor. The Owner shall approve the insurance required of the Contractor only upon the Contractor's submission to the Owner of original certificates of insurance signed by authorized representatives of the insurers or, at the Owner's request, certified copies of the required insurance policies.

11.1.2 Insurance as required hereunder shall be in force throughout the term of the Contract and for one year after final acceptance of the Project by Owner in accordance with 11.3.1.1.iv hereof. Original certificates signed by authorized representatives of the insurers or, at the Owner's request, certified copies of insurance policies, evidencing that the required insurance is in effect, shall be maintained with the Owner throughout the term of the Contract and for one year after final acceptance of the Project by Owner.

11.1.3 During the term of the Contract, the Contractor shall require all Subcontractors to maintain Contractor commercial general liability insurance, business auto liability insurance, workers compensation insurance, and employers liability insurance, (and umbrella excess or excess liability insurance) to the same extent required of the Contractor in 11.3.1.1, 11.3.1.2 and 11.3.1.3 (and 11.3.1.4) unless any such requirement is expressly waived or amended by the Owner in writing. The Contractor shall furnish Subcontractors' certificates of insurance to the Owner immediately upon request.

11.1.4 All insurance policies required hereunder shall be endorsed to provide that the policy may not be cancelled, non-renewed or materially reduced in coverage until sixty (60) days prior written notice has been given to the Owner. Accordingly, the phrases "endeavor to" and "…but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives" are to be eliminated from the cancellation provision of standard ACORD certificates of insurance.

11.1.5 No acceptance and/or approval of any insurance by the Owner shall be construed as relieving or excusing the Contractor or the Contractor's Surety from any liability or obligation imposed upon either or both of them by the provisions of this Contract.

11.1.6 Not used.

11.1.7 All required insurance coverage must be underwritten by insurers allowed to do business in the State of New Jersey and acceptable to the Owner. The insurers must also have a policyholders' rating of "A" or better, and a financial size of "Class VII" or better in the latest evaluation by A. M. Best Company, unless Owner grants specific approval for an exception.

11.1.8 Any deductibles or retentions in excess of $10,000 shall be disclosed by the Contractor, and are subject to Owner's written approval. Any deductible or retention amounts elected by the Contractor or imposed by the Contractor's insurer(s) shall be the sole responsibility of the Contractor.

11.1.9 Any and all return premiums and/or dividends for insurance coverage directly charged to the Owner by the Contractor in connection with this Contract shall belong to and be payable to the Owner.

11.1.10 If the Owner is damaged by the failure or neglect of the Contractor to purchase and maintain insurance as described and required herein, without so notifying the Owner, then the Contractor shall bear all costs properly attributable thereto.

11.2 - Owner's Liability Insurance

11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance. In the alternative, and solely at the Owner's option, the Owner may self-insure its liability exposures.

11.3 - Contractor's Liability Insurance

11.3.1 The Contractor shall purchase and maintain the following insurance coverage to insure against claims which may arise out of or result from the Contractor's operations under the Contract, and for which the Contractor may be legally liable, whether such operations be by the Contractor or a Subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Insurance shall be written for not less than the limits specified below or required by law, whichever is greater.

11.3.1.1 Commercial general liability insurance or its equivalent for bodily injury, personal injury and property damage including loss of use, with minimum limits of:

$1,000,000 each occurrence;
$1,000,000 personal and advertising injury;
$2,000,000 general aggregate per project;
$2,000,000 products/completed operations aggregate.

This insurance shall include coverage for all of the following:

i. General aggregate limit applying on a per project basis;

ii. Liability arising from premises and operations;

iii. Liability arising from the actions of independent contractors;

iv. Liability arising from products and completed operations with such coverage to be maintained for two years after completion of the Work;

v. Contractual liability including protection for the Contractor from bodily injury and property damage claims arising out of liability assumed under this Contract; and

vi. Liability arising from the explosion, collapse, or underground (XCU) hazards.

11.3.1.2 Business auto liability insurance or its equivalent with a minimum limit of $1,000,000 per accident and including coverage for all of the following:

i. Liability arising out of the ownership, maintenance or use of any auto; and

ii. Automobile Contractual liability.

11.3.1.3 Workers compensation insurance or its equivalent with statutory benefits as required by any state or federal law, including "other states" coverage; employers liability insurance with minimum limits of:

$100,000 each accident for bodily injury by accident;
$100,000 each employee for bodily injury by disease; and
$500,000 policy limit for bodily injury by disease.

11.3.1.4 Umbrella excess liability to be purchased by the Prime Contractors and Sub-Contractors

with minimum limits:

Contractors:
($5,000,000) per occurrence:
($5,000,000) aggregate for other than products/completed operations and auto liability and
($5,000,000) products/completed operations aggregate.

Sub-contractor:
($1,000,000) per occurrence:
($1,000,000) aggregated for other than products/completed operations and auto liability and
($1,000,000) products/completed operations aggregate

and including all of the following coverage on the applicable schedule of underlying insurance:

i. Commercial general liability;

ii. Business auto liability; and

iii Employers liability.

11.3.1.5 Owner, Union County Improvement Authority, and the County of Union, and their elected and appointed officials, officers, consultants, agents and employees (the "Insured Parties") shall be named as additional insured on the Contractors commercial general liability insured and umbrella excess or excess liability insurance policies with respect to liability arising out of the Contractors products, installation, and/or services products provided under this Contract. Such coverage shall extend to cover the additional insured for liability arising out of the following:

i Ongoing operations;

ii Owner's general supervision and/or services as provided by the Contractor under this Contract; and

iii Products and completed operations.

The commercial general liability policy and the umbrella liability or excess liability policies, if required herein, must include additional insured language in i., ii. and iii. as follows:

"This policy is amended to include as insured Owner (Union County Improvement Authority), the County of Union, and their elected and appointed officials, officers, consultants, agents and employees, but only for liability arising out of "your product" or "your work" for the Union County Improvement Authority by or for you."

Special Note: ISO forms GC 2009 and CG 2010 entitled, "Additional Insured - Owners, Lessees or Contractors - Scheduled Person or Organization" (previously Forms A and B respectively) and CG 2033 entitled, "Additional Insured - Owners, Lessees or Contractors - Automatic Status When Required in Construction Agreement with You" are not acceptable. A manuscript endorsement with the above wording is required. Copy of the endorsement is to be included with all certificates of insurance.

11.3.1.6 Insurance or self-insurance provided to the Insured Parties under any Contractor's liability insurance or self-insurance required herein, including, but not limited to, umbrella or excess liability policies, shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of insurance or self-insurance. (Any cross suits or cross liability exclusion shall be deleted from Contractor's liability insurance policies required herein.)

11.3.1.7 Insurance or self-insurance provided to the Insured Parties shall be primary, and any other insurance, self-insurance, coverage or indemnity available to the Owner and Owner's elected and appointed officials, officers, consultants, agents and employees shall be excess of and non-contributory with insurance or self-insurance provided to the Owner and Owner's elected and appointed officials, officers, consultants, agents and employees as specified herein.

11.3.1.8 Installation Floater All Risk form, on a replacement cost basis for supplies and materials until they have been inspected and approved by the Owner.

11.3.2 If any liability insurance purchased by the Contractor has been issued on a "claims made" basis, the Contractor must comply with the following additional conditions:

11.3.2.1 The Contractor shall agree to provide certificates of insurance evidencing the above coverage for a period of one year after final payment of the Contract. Such certificates shall evidence a retroactive date no later than the beginning of the Work under this Contract; or

11.3.2.2 The Contractor shall purchase, at its own expense, an extended (minimum two years) reporting period endorsement for each "claims made" policy in force as of the date of final acceptance. The Contractor shall provide evidence the purchase of an extended reporting period endorsement by means of certificate of insurance or a copy of the endorsement itself, which . shall state a retroactive date no later than the beginning of the Work under this Contract.

11.3.3 Certificates of Insurance shall show the Certificate Holder as follows:

THE UNION COUNTY IMPROVEMENT AUTHORITY

1499 ROUTES 1 & 9 NORTH
RAHWAY, NEW JERSEY 07065 Certificates of Insurance that do not contain the above-stated Certificate Holder information will not be accepted by the Owner and may delay Contract approval.

INSURANCE SPECIFICATION ADDENDUM

Prior to Contractor submitting a Certificate of Insurance to the Owner, it is suggested that the Contractor check with their insurance agent to assure that the insurance company shown on their Certificate has a proper spread of risk, soundness of reinsurance, quality of assets, adequacy of loss reserves and experience of management which qualifies it to receive the A.M. Best Rate as described herein.

The insurance should be furnished by insurance companies with an "A:VII" or better as published in the most recent edition of Best Insurance Key Ratings and shall be authorized to conduct business in the State of New Jersey.

11.4 - Builders Risk Insurance (Owner to Purchase)

11.4.1 The insurance required by this Paragraph 11.4 is not intended to cover machinery, tools or equipment owned or rented by the Contractor, or its Subcontractors, which are utilized in the performance of the Work but not incorporated into the permanent improvements. The Contractor and its Subcontractors, shall, at their own expense, purchase and maintain property insurance coverage for owned, leased or rented machinery, tools or equipment. The Contractor, and its Subcontractors, hereby waive all rights against the Owner and its elected and appointed officials, officers, agents, employees and consultants for property damage to or loss of use of such machinery, tools or equipment to the extent that such property damage or loss of use is covered by the Contractor's or Subcontractor's property or equipment floater insurance or other similar property insurance maintained by the Contractor or its Subcontractors. The policies shall provide such waivers of subrogation by endorsement or otherwise.

Note: 11.5, Bonding is to be retained unless the Owner wishes to use alternative means

16.9.2 Change paragraph 11.4 Performance Bond and Payment Bond to 11.5, change subparagraph 11.4.1 to 11.5.1, change subparagraph 11.4.2 to 11.5.2

16.9.3 Add the following under Paragraph 11.5:

11.5.3 The Contractor shall require the attorney in fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power of attorney indicating the monetary limit of such power.

16.10 MODIFICATIONS OF ARTICLE 12. UNCOVERING AND CORRECTION OF WORK

16.10.1 Delete Subparagraph 12.1.1 in its entirety and insert the following:

12.1.1 If any portion of Work should be covered contrary to the instruction of the Architect or the Construction Manager, or to requirements specifically expressed in the Contract Documents, it shall, if required by the Owner, the Architect and the Construction Manager, be uncovered for observation, inspection, testing or approval, and the Work shall be replaced, as the case may be, at the Contractor's expense.

16.10.2 Add the following Subparagraph under Paragraph 12.2:

12.2.6 If, in the opinion of the Architect and the Construction Manager, the Contractor delays final completion of his work beyond a reasonable time after the Date of Substantial Completion of the Project to such extent that the period between the Date of Substantial Completion of the Project and the end of the guarantee period becomes less than eleven months, the start of the guarantee period shall be the date of the final Project Certificate of Payment in lieu of the Date of Substantial Completion of the Project.

16.11 MODIFICATIONS OF ARTICLE 13. MISCELLANEOUS PROVISIONS

16.11.1 Delete Subparagraph 13.5.1 in its entirety and insert the following:

13.5.1 The Owner, through a licensed independent testing agent and laboratory, shall conduct all tests, inspections and approvals of portions of the Work, as required by the Contract Documents and applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Except as provided in Section 13.5.1.1, and Section 15.2.1, the Owner shall bear the costs of such testing.

13.5.1.1 When Work has been installed contrary to any Contract requirement and the Contractor requests the privilege of testing in lieu of removal, such testing shall be at the Contractor's expense.

Delete Subparagraph 13.5.2. in its entirety

Subparagraph 13.5.3 becomes new Subparagraph 13.5.2.

Delete Subparagraphs 13.5.4., 13.5.5 and 13.5.6 in their entirety

16.12 MODIFICATIONS OF ARTICLE 15 CLAIMS AND DISPUTES

The following will take precedence over Article 15 CLAIMS AND DISPUTES:

1 General. All Claims asserted by the Contractor against the Authority shall be subject to the New Jersey Tort Claims Act, N.J.S.A. 59: I - I ct seq.

2 Notice of Claim. The Contractor shall file notice of its Claim on a form provided by the Authority, which form shall be completed in its entirety and signed by the Contractor. Incomplete forms will be rejected and have no effect.

3 False Claims Liability. The Contractor shall be held liable and subject to all penalties and damages under the New Jersey False Claims Act. N.J.S.A. 2A:32C- I et seq., for any false or fraudulent Claim submitted to the Authority.

4 Review of Claims. The administrative process for review of Claims is sequential in nature and mandatory. The Authority's Claims procedure is composed of the following steps:
Step One: Review by the Authority
Step Two: Non-binding Mediation

Completion of the two (2) steps of Claims review is a mandatory prerequisite to the initiation of litigation by e ither Party.

5 Compliance with Claim Review Procedure. Each Claim will begin its review at Step One. A Claim will not proceed to the next step unless the Contractor submits a written objection to the prior step and requests that its Claim proceeds to the next step. If at any step in the process a Claim is resolved, the Contractor must sign a full and final release as to any and all matters arising from the Claim.

6 Step One: The Authority's Review.

6.1 The Contractor must provide to the CM and the Authority the required forms as required by this Section in order to begin the Authority's administrative process for the review of Claims. The Contractor shall also submit to the Authority all documentation supporting the Contractor's Claim. The documentation provided to the Authority will serve as the basis for evaluation of the Contractor's position regarding the Claim throughout Step One of the administrative process. the Contractor shall submit additional information upon request by the Authority. No formal action will be taken by the Authority unless and until the Authority receives complete Claim documentation front the Contractor.

6.2 Authority Review and Decision. At the option of the Authority, a meeting may be scheduled with the Contractor, the Authority and the CM to discuss the Claim. The Authority shall render its decision regarding the Claim in writing within thirty (30) Days of the receipt of the required forms and all supporting documentation or within thirty (30) Days of any meeting with the Contractor, the Authority and the CM, whichever is later. This time limit may be extended by mutual agreement of the Parties. the Contractor, within fifteen (15) Days of the receipt of the decision by the Authority, shall accept or reject the Authority's decision in writing. If the Contractor neither accepts nor rejects in writing the Authority's decision within fifteen (I5) Days, the Claim will be considered withdrawn from the administrative process and there will be no further administrative remedy available to the Contractor for the subject Claim.

7 Step Two: Non-Binding Mediation. If the Contractor rejects in writing the decision of the Authority, there is no further automatic administrative review of the Claim. Within fifteen (l5) Days after issuance of a Certificate of Occupancy or Certificate of Acceptance for this Project, the Contractor may request in writing that any or all outstanding Claims regarding this Project, which include any or all Claims that have been processed through Step One of the Claim resolution process, and that were neither withdrawn nor considered withdrawn from the process be submitted to Step Two, non-binding mediation. Such request shall be sent to the Authority and shall specifically identify which Claim(s) are to be submitted to Step Two. Any Claim not specifically identified shall be deemed withdrawn. No Claim will proceed automatically to Step Two and the Contractor must make a specific written request that the Claim be elevated to Step Two. Step Two will not be available until after the issuance of a Certificate of Occupancy or Certificate of Acceptance, unless an earlier time for submission of the Claim to Step Two is agreed to by the Contractor and the Authority. The cost of non-binding mediation shall be shared equally by the Contractor and the Authority. The mediator shall be selected by the Authority, with the concurrence of the Contractor. The rules for the mediation shall be agreed to by the Authority, the Contractor and the mediator prior to the start of the mediation. The mediation will not proceed, however, if the Parties fail to agree on the rules for the mediation, in which case Step Two will be deemed complete.

16.12.1 Delete Paragraph 15.3.2 in its entirety and insert the following:

15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties agree otherwise, shall be conducted by a mediator chosen by the parties. The mediator shall conduct the mediation in accordance with the rules of the American Arbitration Association, unless the parties agree otherwise. A party's request for mediation shall be made in writing to the other party.

16.12.2 Delete Paragraph 15.4 in its entirety and add the following:

15.3.4 In the event the parties are unable to mediate a Claim(s) to conclusion, either party may proceed to litigate the Claim(s) in any court of competent jurisdiction in the State of New Jersey.

END OF SUPPLEMENTARY CONDITIONS

GENERAL SPECIFICATIONS

1. LABOR AND MATERIALS

The prices shall cover all costs of any nature incident to and growing out of the Work, including all labor, material, equipment, transportation, loss by damage or destruction of the Project, settlement of damages, and for replacement of defective work or materials. N.J.S.A. 54:32B-1 et seq. exempts all materials sold to the UCIA from sales or use taxes and should not be included in the prices provided on the Bid Form.

When applicable, The New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, as amended, and Supplemental Specifications for State Aid Projects, herein after referred to as the "Standard Specifications", are made a part of these specifications and contract for the improvements, and will govern the construction of this Project, the material used and the execution of this Project, except as revised and modified herein. The references to the foregoing specifications are given herein for the purpose of aiding in the rapid location of the description of the various items herein specified.

2. GUARANTEE AGAINST DEFECTIVE WORK

Prior to final payment being made or before the release of the Performance/Payment Bond required by Section 1.10 of the Request for Bids, the Contractor and Surety shall execute and deliver to the Owner an original Maintenance Bond with an original signature and seal having a penal sum equal to:

A) One hundred percent (100%) of the final adjusted Contract amount, if such amount is $50,000.00 or less;
B) Fifty percent (50%) of the final adjusted Contract amount, if such amount be greater than $50,000.00 but less than $250,000.00; and,
C) Twenty-five percent (25%) of the final adjusted contract amount, if such amount is $250,000.00 or more.

The Bond and Surety shall be satisfactory to the UCIA. The Surety shall hold a Certificate of Authorization to do business in the State of New Jersey and shall conform to P.L. 1995 c.384, codified as N.J.S.A. 2A:44-143, 144. The Surety Disclosure Statement and Certification required by N.J.S.A. 2A: 44-143, 144, shall be attached to the Bond. Such Maintenance Bond shall remain in full force and effect for a period of one (1) year from the date of Final Completion. Such Maintenance Bond shall also provide that the Contractor and the Surety guarantee to replace for the said period of one (1) year from the date of Final Completion, all Work performed and/or all materials furnished that were not performed or were not furnished in accordance to the terms and performance requirements of the Contract Documents, and will make good any defects thereof which become apparent

before the expiration of one (1) year. If, during that period, any part of the Project, in the judgment of the Engineer, is found defective, the Contractor will repair or replace same within five (5) days of receipt of notice from the Owner. If the Contractor refuses or neglects to do such Work in the time specified, the Owner may have the Work done by others and the Contractor or his Surety thereof will pay the cost.

The Contractor will furnish the Owner a Maintenance Bond for a percentage of the final adjusted contract price, as stated above. The one (1) year period will start the day of Final Completion of Project by the Owner. Final payment is conditional on the receipt of a maintenance bond in a form acceptable to the Owner.

3. LINES AND GRADES

Normally, horizontal and vertical control points will be provided in the technical specifications. All other surveying will be the responsibility of the Contractor unless otherwise noted.

4. PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)

Pursuant to NJSA 2A:30A-1 et. seq., payment to the Contractor, other than for Work done pursuant to a contract allowance, where applicable, shall be processed and paid as follows:

1. All contractor bills shall be either approved for payment, or notice provided as to why the bill or any portion of it will not be approved by the representative(s) of the governing body no later than the next scheduled public meeting of the UCIA following 20 calendar days of the billing date as defined in the statute.

2. If the billing is approved at such meeting, said bill shall be paid in the UCIA's subsequent payment cycle.

5. STOPPING WORK ON ACCOUNT OF BAD WEATHER

Work must only be performed in weather suitable for the type of construction planned or underway. Extremes in temperature, humidity, precipitation, evaporation, etc. can detrimentally affect the constructed product. Refer to manufacturer's product data installation requirements.

6. ACCESS FOR OTHER CONTRACTORS

The Contractor for this Work shall give proper access to other contractors who may be employed upon the Project and must not hinder or delay unnecessarily any Work that may be progressing under other contracts.

7. REJECTED MATERIALS AND WORK

Any materials and or part of the Work that may be rejected by the Owner shall be removed and replaced by the Contractor or otherwise rectified, as may be directed by the Owner. No payment will be made upon the Work until such faulty work has been made good as may be directed. In the event the Contractor refuses or neglects to make good such faulty work, he will be deemed to have abandoned the contract and proceedings may be taken against him as provided herein.

8. SAFETY

The Contractor shall observe all rules and regulations of the federal, State, and local health officials. Attention is directed to federal, State, and local laws, rules, and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to the worker's health or safety.

The Contractor shall admit to the site, without delay and without the presentation of an inspection warrant, any inspector of OSHA or other legally responsible agency involved in safety and health administration upon presentation of proper credentials.

The Contractor shall make available to the Contractor's employees, subcontractors, the Owner, and the public, all information pursuant to OSHA 29 CFR Part 1926.59 of The Hazard Communication Standard 29 CFR 1910.1200, and shall also maintain a file on each job site containing all Material Safety Data Sheets (MSDS) for products in use at the Project. These Material Safety Data Sheets shall be made available to the Engineer upon request.

The Contractor shall at all times conduct the Work to provide for the safety and convenience of the general public and protection of persons and property. The safety provisions of applicable laws, OSHA regulations, building and construction codes, and the rules and regulations of the New Jersey Department of Labor and Commerce shall be observed.

9. MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS

Any Work, material, or method, not specifically described in these specifications, but shown upon the plans of the Work, shall be carried out as shown on said plan.

10. PERMITS

The Contractor shall obtain all necessary permits required by law and provide the Owner with necessary approvals prior to commencement of permitted Work.

11. PROGRESS PAYMENTS

In the event of any conflict between this Paragraph 11 of the General Specifications and Section 01290 – PAYMENT PROCEDURES, the latter shall control. Monthly progress payments will be made based on the value of labor and materials incorporated in the Work and of materials suitably stored at the site. An itemized schedule of values shall be submitted with each Application for Payment.

In accordance with N.J.S.A. 40A:11-16.3, Contractor agrees that Owner shall withhold 2% of the amount due on each progress payment pending completion of the contract.

All Applications for Payment shall be accompanied by paid invoices for materials incorporated in the Work and for materials suitably stored at the site, and affidavit(s) by Subcontractors whose Work was included in the next to the last application to the effect such Work and such materials have been paid for.

All Applications shall require the Certified Payroll to be uploaded to the "NJ Wage Hub" and hard copies supplied to the UCIA in support of each Payment Application submitted.

No payment shall be made without Contractor having provided all submittals set forth in this Section, and the approval of same by the Owner.

For contracts exceeding $100,000.00, monthly payments will be made on the Work to the extent of 98% of the value of the Work done which is considered to be retainage.

For contracts less than $100,000.00, monthly payments will be on the Work to the extent of 90% of the value of the Work done. In lieu of the retainage, the Contractor will, at his/her/its option, deposit with the Owner negotiable bearer bonds of the State of New Jersey or any political subdivision thereof, equal to the amount otherwise withheld as retainage.

When the Project is completed, the final cost of the Project will be based on actual quantities of authorized Work done under each item scheduled in the bidding sheet and approved Change Orders, if any. The money due to the Contractor as determined by said final certificate after deduction of previous monthly payments on account, will be paid to the Contractor in accordance with the terms of the contract dealing with Prompt Payment, providing, however that before such final payment is made, all outstanding claims against the Contractor must be satisfied. Before final payment is released, the Contractor must furnish: a**)** Maintenance Bond; b) Certification of Compliance, New Jersey Prevailing Wage Act; and

c) General Release in a form satisfactory to Owner Counsel; d) complete set of as-built plans in the latest AutoCad on compact disc; and e) a complete set of in-progress photos in jpg, jpeg, or bmp digital format on a compact disc, and must comply with the Final Payment Application requirements under Section 01290, "Payment Procedures. "

12. INSPECTION

The Work must be done in accordance with the plans and specifications, and will be inspected by the Owner. An inspector may be placed upon the Work at any time by the Owner to see that the plans, specifications, and instructions of the Owner are carried out.

13. UTILITIES

Attention of the bidder is directed to the fact that the approximate locations of known utility structures and facilities that may be encountered within and adjacent to the limits of the Work are shown on the plans and described herein. The accuracy and completeness of this information is not guaranteed by the Owner and the bidder is advised to ascertain for himself all the facts concerning the location of these and other utilities.

The Contractor shall not proceed with his/her/its Work until he/she/it has made diligent inquiries of all public utility and municipal officials to determine the exact location of all-underground structures and pipes within the site of the Project. The Contractor shall notify utility owners not less than ten (10) days in advance of the time he/she/it proposes to perform any Work that will endanger or affect their facilities in compliance with **New Jersey One-Call.** In excavating in any part of the Work, care must be taken not to remove or damage any gas, water, sewer, or other pipe, conduit, or structure, - public or private - without the concurrence of the Owner. The Contractor shall, at his own expense, shore up, secure and maintain a continuous flow in such structures, and will keep them in repair until final acceptance of the Work.

When pipes or other structures are encountered or when the removal, relocation or protection of these utilities are necessary in carrying out the Project as planned, the Contractor will cooperate with the owner of said utilities and will permit the owners or their agents access to the site of the Work in order to relocate or protect their facilities and not hinder or delay unnecessarily the Work of the owners in moving same. No extra allowance of payment will be made to the Contractor for the use of any materials, equipment, etc., or for the performance of any Work in connection with the moving of said structures unless the Contractor is specifically ordered by the Owner to furnish such materials, equipment, or services. If directed by the Owner to do any Work or furnish any materials or equipment, payment will be allowed the Contractor in accordance with the unit prices bid for such Work, or, if such items are not scheduled in the proposal, such Work shall be allowed "Supplemental Work" as provided in Article 7, Changes in the Work, of the General Conditions of the Contract (AIA Document A232 – 2009). The corporations, companies, agencies or municipalities owning or controlling the utilities, and the name, and telephone numbers are listed in the beginning of the Technical Specifications.

14. MATERIAL COMPLIANCE AND SHOP DRAWINGS

The Contractor shall require the manufacturer or supplier to furnish three (3) copies of manufacturer's product data with each delivery of materials, components and manufactured items for the Project. Two (2) copies will be furnished to the Owner; one copy will be retained by the Contractor. Manufacturer's product data shall be accompanied by the following information:

1. Project to which material is consigned;
2. Name of the Contractor to which the material is supplied;
3. Kind of material supplied;
4. Quantity of material represented by the Certificate;
5. Means of identifying the consignment, such as label marking, seal number, etc.;
6. Date and method of shipment;
7. That the material is in conformity with the pertinent specifications stated in the certificate; and
8. Signature of a person having legal authority to bind the supplier.

The Contractor shall submit to the Owner for its approval five (5) copies of complete and fully detailed shop or working drawings for those work items requiring submission as identified in each of the Divisions of work within the technical specifications.

Each drawing shall identify the name of the job, location and Contractor. Contractor is referred to Section 01330, Article 2.1C, SHOP DRAWINGS, for specific requirements. In the event of a conflict between this Paragraph 14 of the General Specifications and Section 01330, Article 2.1C, the latter shall control.

All drawings will be approved in accordance with the technical specifications. Refer to the Technical Specifications for specific items.

15. PRECONSTRUCTION

In order to provide full coordination of this Project among the parties concerned, the Owner will arrange for a preconstruction meeting between the Contractor, Owner and other interested parties as soon as possible after the contract is executed. At this meeting the Contractor will present his proposed schedule of Work which shall be subject to review and approval of the Owner through its designated representatives.

16. NEW JERSEY SALES AND USE TAX REQUIREMENTS,

Contractors are required to comply with the following:

New Jersey Sales and Use Tax Requirements: All contractors with subcontractors, or any of their affiliates, who enter into contracts for the provision of goods or services with or for New Jersey local government entities, are required to collect and remit to the New Jersey Director of Taxation in the Department of the Treasury the use tax due on all of their sales of tangible personal property delivered into the State of New Jersey pursuant to the "Sales and Use Tax Act," (NJSA 54:32B-1 et, seq.), regardless of whether the tangible personal property is intended for a contract with the contracting agency. This tax shall be remitted for the term of the Contract.

For purposes herein "affiliate" shall mean any entity that: (a) directly, indirectly, or constructively controls another entity, (b) is directly, indirectly, or constructively controlled by another entity, or (c) is subject to the control of a common entity. For purposes of the immediately preceding sentence, an entity controls another entity if it owns, directly or indirectly, more than fifty percent (50%) of the ownership interest in that entity. NJSA 52:32-44(g)(3).

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END OF GENERAL SPECIFICATIONS

UNION COUNTY IMPROVEMENT AUTHORITY

The Deserted Village – Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

SPECIAL CONDITIONS

1. DEFINITIONS

a) OWNER: Union County Improvement Authority (UCIA)

b) PROJECT SITE: The Deserted Village
Cataract Hollow Road, Berkeley Heights, New Jersey

c) PROJECT TITLE: The Deserted Village –
Roof Replacement Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, New Jersey

d) ARCHITECT: **PS&S Architecture and Engineering, P.C.**
3 Mountainview Road
Warren, New Jersey 07059
Telephone: (732) 560-9700
Facsimile: (732) 905-0669

e) EXECUTIVE DIRECTOR: Dr. Bibi Taylor

f) INSPECTOR: An authorized representative of the UCIA Executive Director assigned to make all necessary inspections of the work performed by the Contractor.

g) PRONOUNS: The masculine pronoun shall include the feminine and neuter and the singular shall include the plural.

h) PERSON: Any individual, partnership, society, association, joint company, corporation, estate, receiver, trustee, assignee, referee, or capacity, whether appointed by a court or otherwise, and any combination of individuals.

i) OR EQUAL: Whenever in the technical specifications and Plans, any particular brand, make of materials, device, or piece of equipment is shown or specified, such brand make of material or device or piece of equipment shall be regarded merely as a standard and the expression "or equal" shall apply to the same extent as if it is being written therein in full. If two or more brands, make of materials, devices, or pieces of equipment are shown as specified, each is to be regarded as the equal of the other. Any other brand, make of material, device or piece of equipment which, in the opinion of the Architect, is the recognized equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, will be accepted, subject to the submission process described at Section 01600.

j) BIDDER: Any person who submits a Proposal upon the project described in the Invitation for Bids

l) BID DOCUMENTS: The Bid Documents, sometimes referred to as the "plans and specifications," shall mean and include the following:

1. Legal Documents (Notice to Bidders; Instructions to

Bidders; Bid Forms; AIA Standard Contract; AIA General Conditions of Contract; Supplementary Conditions of the Contract; NJ Prevailing Wage Determination

2. General Specifications
3. Special Conditions
4. Division 01 General Requirements
5. Division 02 through 14; 21 through 23; 26; 28 and 31 through 33 Specifications
6. Addenda, if any
7. Plans and Drawings
8. Clarifications to Plans or Specifications

k) CONTRACTOR: The person whose proposal shall be accepted by the Owner and who shall thereafter enter into a formal Contract with the Owner to furnish the materials and do the work as bid upon.

l) SUBCONTRACTOR: A person supplying material, labor, equipment and appurtenances for work at the site of the project. Such person has contractual relations with the Contractor, but not with the Owner.

m) PRINCIPAL: When used in the Bid Bond, the word Principal means the same as the word Bidder. When used in the Performance Bond, the word Principal means the same as the word Contractor.

n) SURETY: The corporation or individual, bound by the Performance Bond, with and for the Contractor and who is primarily liable and engages to be responsible for the Contractor's acceptable performance of the Work for which the Contract has been made, and for his payment of all debts pertaining thereto.

o) CONTRACT The Contract Documents DOCUMENTS shall be those documents enumerated in the Standard Form of Agreement (AIA Document A132-2019 CMa), and shall include the Bid Documents and the successful bidder's proposal:

p) WORK: All the work to be performed by the Contractor in the fulfillment of the contract, including all necessary materials, labor, equipment and transportation, as described in the Contract Documents for the contemplated improvement.

q) SCOPE OF WORK: The specified work, improvement or job, to which these Contract Documents apply, as described in the Contract.

r) PLANS: The prints of the drawings which show the location, character, dimensions and details of the Work to be done and which are to be considered part of the Contract Documents, the same as though attached thereto.

s) NOTICE TO PROCEED: The official letter from the Owner to the successful Bidder, notifying him that he has been awarded the Contract.

t) SUBSTANTIAL COMPLETION: Date when a certificate of occupancy or temporary certificate of occupancy is issued, allowing the building to be occupied by the owner.

u) DATE OF FINAL ACCEPTANCE: The date the Owner accepts the completed Work and authorizes final payment therefor.

2. CORRELATION, INTENT AND INTERPRETATION OF THE CONTRACT DOCUMENTS

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor for the benefit of the Owner. The Contract Documents are complementary, and what is required by one shall be binding as if required by all. Performance by the Contractor (and its sub-contractors, consultants, agents and those acting on the Contractor's behalf), shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results, and in accordance with the priority established by Paragraph 10 of these Special Conditions. Any ambiguities in or conflicts between any of the Contract Documents shall be resolved in favor of the Owner, including, without limitation, Owner's design intent, and the rights, remedies and protections to which the Owner is entitled. In the event of a discrepancy and/or ambiguity between or among any Contract Documents, the document that provides greater rights, remedies or protections to the Owner shall govern, as determined by the Owner.

3. INTENT OF CONTRACT

The contract includes, but is not necessarily limited to, Roofing Replacement, General Construction work, and Masonry Work. All labor and equipment shall be provided as necessary to satisfactorily complete all work within the project as specified within the Contract Documents. All new systems shall be made fully operational in a first class workmanship manner and guaranteed for one year from the date of the Certificate of Occupancy. The contractor shall be responsible for investigating existing conditions on the site and shall be responsible for doing whatever is required to keep the site fully operational without any adverse impact on the existing facilities on site.

This is a lump sum contract for all work. Each **contractor** or **subcontractor** shall refer to **ALL** drawings to completely familiarize him/herself with the work.

4. NO PRODUCT OR MANUFACTURER SPECIFIED

Whenever in the Division specifications a manufacturer or product is listed, it shall mean that it includes but is not limited to such manufacturer or product

5. TEMPORARY FIELD OFFICE

The Contractor shall set up a field office on site as specified in Division 01 Section “Temporary Facilities.”

6. PROJECT COORDINATION

Throughout the project, the Contractor shall coordinate all activities with the CM as well as the UCIA staff and with department heads affected by the work taking place, in an effort to cause the least amount of disturbance to the daily operations of those departments.

7. PROJECT SITE, BUILDING LIMITATIONS AND JOB CONDITIONS

The Contractor shall cause the least amount of disruption to the operations, the facility operations, the personnel and visitors to the Project Site and existing facilities on the Project Site.

The Contractor shall be aware that **Houses 5, 10, and 11** will not be occupied during the entire construction period. **The Deserted Village** premises however is open to the public and will remain so during the entire construction period. The Contractor shall maintain security at the project sites during construction. Construction operations shall not impact in any way operations and the ability to quickly respond to emergencies. Proper security shall be coordinated with CM.

Phasing of the project must be coordinated with the **CM** as well as the Architect and Owner.

The Contractor shall schedule phasing and deliveries of materials from 7:00am-8:00am so as not to cause undue hardship to the Deserted Village operations or premises to ensure that no unsafe conditions are caused on the Project Site or the Deserted Village premises. Contractor shall also coordinate with the Owner for removal of demolition and construction debris, and a staging area for storage of materials.

Upon suspension of Work, at the end of the day or for protracted periods, the Contractor shall remove all rubbish and materials from the Work site to the approved storage/staging location. All road cuts, saw cuts, and trenches that may pose hazard to vehicular, pedestrian, or bicycle traffic, to include handicapped users, shall be filled to the surface of the roadway or sidewalk. At no time will steel plates or settled trenches be allowed at the daily suspension of Work, unless specifically approved by the Owner.

With respect to pedestrian traffic, the Contractor shall install signs restricting access of the general public and, as necessary, employees, to the area of construction. The Contractor shall provide safe access to required areas and place physical barriers to restricted areas. These barriers may range from caution tape to actual barriers, at the direction of the Owner.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF FIRE ALARM WIRING AND DEVICES. TO BE COORDINATED WITH THE OWNERS FIRE ALARM VENDOR

THE CONTRACTOR SHALL COORDINATE ITS WORK AND THAT OF CONTRACTOR'S SUBCONTRACTORS AND PROVIDE ACCESS TO WORK AREAS AND ALL ELECTRICAL CONDUIT WITH PULL STRINGS AND BOXES AS REQUIRED AND IDENTIFIED ON DRAWINGS NECESSARY FOR THE INSTALLATION OF THE WORK.

8. TRAFFIC AND STREET MAINTENANCE

The Work must be started and performed by the Contractor in such a manner as to minimize delays to the traveling public and pedestrians. It must be completed in a timely fashion, with little or no inconvenience to traffic and pedestrians, where such inconvenience may be avoided.

Should the CM deem it expedient for the best interest of the Owner or for the safety of the public, the CM may concentrate the Work at specific places or may suspend the Work entirely for a period not to exceed seven (7) days, providing that, if necessary, the further suspension of the Work due to inclement weather will not be a detriment to the entire Work operation. Upon any suspension of Work, all unused materials shall be placed so as not to impede traffic and all rubbish shall be removed. Whenever a street is partially closed, the Contractor shall erect plainly worded signs announcing such fact, together with proper barricades at the nearest cross street upon each side of such obstruction and upon intersecting streets. Contractor shall also receive approval from the appropriate departments of Union County.

All municipal, county, and state roadways shall remain open to traffic unless otherwise provided for in the technical specifications.

If modified traffic patterns are authorized in order to provide a safe working or traveling environment, the Contractor is responsible for providing all equipment, barrels, cones, signs, and barricades to implement the work zone and detours, unless otherwise specified in the technical specifications. All work zones and detours shall be established in accordance with the technical plans and specifications if provided or in strict compliance with the current version of the Manual for Uniform Traffic Control Devices (MUTCD). The Contractor shall obtain approval for these work zones and detour plans from the Municipal Police or applicable police agency and the Union County Bureau of Traffic Maintenance prior to implementation. Contractor shall pay for all required police safety officers during road construction work.

All traffic control plans shall provide for safe movement of vehicular, bicycle, and pedestrian traffic. Particular attention shall be given to requirements of the Americans with Disabilities Act.

No portion of any street or alleyway may be used for the storage of any materials or equipment without the approval of the Municipal Police or other applicable police agency. Sidewalks, gutters, drains, fire hydrants and private drives shall be maintained for their intended use unless specifically approved by the Owner.

Contractor shall coordinate the use of cranes or other hoisting equipment with Owner and local authorities so as to minimize disruptions on Project Site and adjoining streets. If use or blocking of streets is necessary, Contractor shall obtain and pay for required permits or approvals and pay all fees and police security officer/flagmen as required. Contractor shall provide all of the materials, tools, equipment and labor for cleaning the public streets, public sidewalks, roadways, alleys, driveways, etc., which are affected and/or disturbed by the Work.
Use of Traffic Control Officers shall be determined by the Owner in accordance with the provisions of N.J.S.A. 40A:11-23.1(c). If applicable to the Project, the Owner shall have provided an allowance for same as set forth in the Bid Form.

9. CONSTRUCTION SIGNS

The contractor shall install signs restricting access of the general public to the area of construction. As a minimum, they should state "**CONSTRUCTION AREA – NO ADMITTANCE**". Restricted areas, however, shall not block public exit ways. Provide temporary signs as required where work is being phased.

10. GUARANTEES AND WARRANTEES:

All guarantees and warrantees shall start at the time a Certificate of Occupancy is issued, not at the time of start-up of equipment. This applies to **ALL** equipment, systems and services of the building.

11. PRECEDENCE OF LARGE SCALE DETAILS AND DOCUMENTS

A. The general character of the detail work is shown on the drawings, but minor modifications may be made in large-scale details. Where the word "similar" occurs on the drawings, it shall be used in its general sense and not as meaning identical. All details shall be worked out in relation to their location and their connection to other parts of the work. On any drawings where a portion of the work is drawn out and the remainder is indicated in outline, the parts indicated in outline shall also apply to other like portions of the work. Where details are indicated by starting only, such details shall be continued throughout the courses or parts where it occurs and shall also apply to all other similar parts in the work unless otherwise noted. In case of differences between small and large- scale drawings, the larger scale drawings shall take precedence. Any discrepancies shall be referred to the Architect/Engineer before any work affected thereby has been performed.

B. Work specified but not shown on the drawings, or shown on the drawings but not specified, shall be considered as if indicated in both. In the event of conflict between various parts of the plans and specifications, the document shall take precedence in the following order: (1) for extent, sizes, quantity of work, and design intent, drawings shall govern over specifications; and (2) for quality of materials and workmanship, specifications shall govern over drawings. If there are conflicts between drawings, the Architect shall render a decision, which shall be final. The Contractor shall not increase the Contract price due to any interpretations made by the Architect.

12. THE BIDDER SHALL ALSO THOROUGHLY EXAMINE AND BECOME FAMILIAR WITH ALL BID DOCUMENTS.

The Bidder shall review all drawings for the project and not limit his/her/its bid to only work that is shown on drawings referenced for a Prime Contractor. The drawings are done so for ease of reference only and not intended to limit the work of the Contractor. If work is shown to be done on one drawing that usually requires work of another contractor or trade and is standard in the industry as such, then the contractor whose trade it is shall include the work in his/her/its bid. It is assumed to be reasonable since the contractor whose trade must do the work has reviewed and familiarized itself with the entire set of drawings and specifications, and therefore knew that it had to be furnished or hooked up and installed. Also if equipment is shown on one drawing but not shown as being hooked up on other drawings, the contractor whose trade usually does the hook up shall do so at no additional charge since he/she/it reviewed and familiarized himself/herself/itself with the entire set of drawings and therefore knew the equipment was there and it had to be hooked up. If steel work is shown on the architectural, but not on the structural, it still shall be provided since the steel subcontractor reviewed the entire set of drawings. By submitting a proposal, the Bidder covenants that he/she/it has carefully examined the complete set of Bid Documents, Addenda, if any, and the Site; and that from Bidder's investigation Bidder has satisfied himself/herself/itself as to the nature and location of the work, the phasing required for the work, the general and local conditions and all matters that may in any way affect the work or its performance and that as a result of such examination,

Bidder fully understands the intent and purpose thereof, Bidder's obligations thereunder, and that Bidder will not make any claim for, or have any right to damages, because of a lack of any information.

13. CONSTRUCTION START AND DURATION

The Contractor shall begin construction and shall complete the work in/or before the time of completion set forth in the Bid Form (B-39), reference Section 01100 Summary for schedule and phasing duration requirements. Failure of the Contractor to begin construction activities within 20 days for any reason not approved by the Owner shall constitute a Contractor default for which the Owner may take whatever action that is deemed appropriate under the contract. The Contractor shall include within his bid all costs associated with the coordination required between the various subcontractors to meet these dates.

END OF SPECIAL CONDITIONS SECTION

STATE OF NEW JERSEY
Department of Labor and Workforce Development
Division of Wage and Hour Compliance - Public Contracts Section
PO Box 389
Trenton, NJ 08625-0389

PREVAILING WAGE RATE DETERMINATION

The New Jersey Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq.) requires that the Department of Labor and Workforce Development establish and enforce a prevailing wage level for workers engaged in public works in order to safeguard their efficiency and general well being and to protect them as well as their employers from the effects of serious and unfair competition.

Prevailing wage rates are wage and fringe benefit rates based on the collective bargaining agreements established for a particular craft or trade in the locality in which the public work is performed. In New Jersey, these rates vary by county and by the type of work performed.

Applicable prevailing wage rates are those wages and fringe benefits in effect on the date the contract is awarded. All pre-determined rate increases listed at the time the contract is awarded must also be paid, beginning on the dates specified. Rates that have expired will remain in effect until new rates are posted.

Prevailing Wage Rate

The prevailing wage rate for each craft will list the effective date of the rate and the following information:

W = Wage Rate per Hour **B** = Fringe Benefit Rate per Hour* **T** = Total Rate per Hour

* Fringe benefits are an integral part of the prevailing wage rate. Employers not providing such benefits must pay the fringe benefit amount directly to the employee each payday. Employers providing benefits worth less than the fringe benefit amount must pay the balance directly to the employee each payday.

Unless otherwise stated in the Prevailing Wage Rate Determination, the fringe benefit rate for overtime hours remains at the straight time rate.

When the Overtime Notes in the Prevailing Wage Rate Determination state that the overtime rates are "inclusive of benefits," the benefit rate is increased by the same factor as the wage rate (i.e. multiplied by 1.5 for time and one-half, multiplied by 2 for double time, etc.).

Apprentice Rate Schedule

An “apprentice” is an individual who is registered with the United States Department of Labor - Office of Apprenticeship and enrolled in a certified apprenticeship program during the period in which they are working on the public works project.

The apprentice wage rate is a percentage of the journeyman wage rate, unless otherwise indicated. The apprentice benefit rate is the full journeyman benefit rate, unless otherwise indicated.

If there is no apprentice rate schedule listed, the individual must be paid at least the journeyman rate even if that individual is in a certified apprentice program for that trade.

If there is no ratio of apprentices to journeymen listed for a particular craft, then the ratio shall be one (1) apprentice to every four (4) journeymen.

Comments/Notes

For each craft listed there will be comments/notes that cover the definition of the regular workday, shift differentials, overtime, recognized holidays, and any other relevant information.

Public Works Contractor Registration

The Public Works Contractor Registration Act (N.J.S.A. 34:11-56.48, et seq.) requires that **all** contractors, subcontractors, or lower tier subcontractors who are working on or who bid on public works projects register with the Department of Labor and Workforce Development. Applications are available at *www.nj.gov/labor* (click on Wage & Hour and then go to Registration & Permits).

Pursuant to N.J.S.A. 34:11-56.51:

No contractor shall bid on any contract for public work as defined in section 2 of P.L.1963, c. 150 (C.34:11-56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L.1999, c.238 (C.34:11-56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor or subcontractor is registered pursuant to that act.

Snow Plowing

Snow plowing contracts are <u>not</u> subject to the New Jersey Prevailing Wage Act or the Public Works Contractor Registration Act.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Air Conditioning & Refrigeration - Service and Repair **PREVAILING WAGE RATE**

	03/07/25
Journeyman (Mechanic)	W46.23 B31.42 T77.65

Craft: Air Conditioning & Refrigeration - Service and Repair **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
As Shown	1st Year	2nd Year	3rd Year	4th Year	5th Year	Wage = %	of Jnymn	Wage		
Wage and Bene	40%	50%	60%	70%	80%	Bene = %	of Jnymn	Bene		

Ratio of Apprentices to Journeymen - 1:4

Craft: Air Conditioning & Refrigeration - Service and Repair **COMMENTS/NOTES**

THESE RATES MAY BE USED FOR THE FOLLOWING:
- Service/Repair/Maintenance Work to EXISTING facilities.
- Replacement or Installation of air conditioning and refrigeration equipment when the combined tonnage does not exceed 15 tons for refrigeration, or 25 tons for air conditioning.
- Replacement or Installation of "packaged" or "unitary" rooftop-type units when the combined tonnage of the units does not exceed 75 tons.

NOTE: These rates may NOT be used for any work in new construction (including work on new additions).

The regular workday shall consist of 8 hours, starting between 6:00 AM and 10:00 AM, Monday through Friday.

SHIFT DIFFERENTIALS:
- The second and third shifts shall be paid an additional 15% of the hourly rate.
- All shifts must run for a minimum of 5 consecutive days.

OVERTIME:
Hours worked in excess of 8 per day or before or after the regular workday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Boilermaker **PREVAILING WAGE RATE**

	01/12/24
Foreman	W54.11 B47.08 T101.19
General Foreman	W56.11 B48.14 T104.25
Journeyman	W49.11 B45.31 T94.42

Craft: Boilermaker **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
1000 Hours	65%	70%	75%	80%	85%	90%	95%			
Benefit =	38.33	39.30	40.32	41.31	42.32	43.32	44.30			

Ratio of Apprentices to Journeymen - *

* 1 apprentice will be allowed for the first 5 journeymen, 1 apprentice for the next 10 journeymen and 1 apprentice for each succeeding 20 journeymen up to a maximum of 5 apprentices per contractor on any one job.

Craft: Boilermaker **COMMENTS/NOTES**

HIGH WORK: All apprentices working on the erection, repair, or dismantling of smoke stacks, standpipes, or water towers shall be paid the Journeyman rate.

The regular workday shall consist of 8 hours, between 8:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:
- The second shift shall work 7.5 hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 10%.
- The third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 20%.
- For "Municipal Water Works" projects only, the following shall apply: Two, four day, 10 hour shifts may be worked at straight time Monday through Thursday. The day shift shall work four days, at 10 hours, for 10 hours pay. The second shift shall work four days, at nine and a half hours, for 10 hours pay, plus 10% the hourly rate for new work and .25 cents on repair work. Friday may be used as a make-up day at straight time, due to weather conditions, hoilday or any other circumstances beyond the employer's control.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.
- If any other craft employed by the same contractor, or a subcontractor thereof, receives double time in lieu of time and one-half, then the Boilermaker shall receive double time in lieu of time and one-half.
- For "Municipal Water Works" projects only, the following shall apply: Four 10 hour days may be worked Monday through Thursday at straight time. Friday may be used as a make-up day for a day lost to inclement weather, holiday or other conditions beyond the control of the employer. Overtime shall be paid for any hours that exceed 10 hours per day or 40 hours per week.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Boilermaker - Minor Repairs **PREVAILING WAGE RATE**

	01/12/24
Foreman	W35.88 B17.89 T53.77
General Foreman	W36.38 B17.89 T54.27
Mechanic	W34.38 B17.89 T52.27

Craft: Boilermaker - Minor Repairs **COMMENTS/NOTES**

NOTE: These rates apply to MINOR REPAIR WORK ONLY (repair work in the field for which the contract amount does not exceed $125,000.00), for boilers that do not produce electric or are not used in the heating of petroleum products.

OVERTIME:
Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Thanksgiving Day, day after Thanksgiving, Christmas Day. Saturday holidays observed the preceding Friday, Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Bricklayer, Stone Mason **PREVAILING WAGE RATE**

	05/13/25
Deputy Foreman	W52.60 B38.68 T91.28
Foreman	W57.35 B38.68 T96.03
Journeyman	W49.60 B38.68 T88.28

Craft: Bricklayer, Stone Mason **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
6 Months	40%	50%	55%	60%	65%	70%	75%	80%		
Benefits	4.66	5.83	6.41	6.99	25.90	27.73	29.57	31.38		

Ratio of Apprentices to Journeymen - 1:5

Craft: Bricklayer, Stone Mason **COMMENTS/NOTES**

The regular workday shall consist of 8 hours, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:
- When a 2 shift schedule (including a day shift) is established, the first, or day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 10%, inclusive of benefits.

OVERTIME:
- The first 2 hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. The first 10 hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Saturday may be used as a make-up day for hours lost to inclement weather.
- When Bricklayers/Stone Masons work on Saturday with Laborers, and no other crafts are working on the project for the day, benefits may be paid at straight time. If other crafts are present, the applicable overtime rate for benefits shall be paid.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Carpenter **PREVAILING WAGE RATE**

	06/03/25
Foreman	W66.03 B39.70 T105.73
General Foreman	W74.65 B44.81 T119.46
Journeyman	W57.42 B34.60 T92.02

Craft: Carpenter **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
Yearly	40%	55%	65%	80%	90%					
Benefit	59.25% of	Appren	tice	Wage Rate	for all	intervals	+ $0.58			

Ratio of Apprentices to Journeymen - 1:3

For Solar installation- all work on solar projects that fall under the jurisdiction of the carpenters, and does not require an electrician, the ratio of Apprentices to Journeymen shall be 1:1.

Craft: Carpenter **COMMENTS/NOTES**

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 5-1-19:

INTERVAL PERIOD AND RATES
Yearly 40% 55% 65% 80%
Benefits 59.25% of apprentice wage rate for all intervals + $0.58

FOREMAN REQUIREMENTS:
- When there are 2 or more Carpenters on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Carpenters on a job, 2 shall be designated as Foremen.
- When there are 36 or more Carpenters on a job, there shall be 1 General Foreman and 2 Foremen. Thereafter, an additional Foreman shall be required for each additional 10 Carpenters on a job.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:
- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.
- All time worked before and after a regularly established shift shall be paid at the applicable overtime rate. When a portion

of the regularly established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.

OVERTIME:
- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Carpenter - Resilient Flooring **PREVAILING WAGE RATE**

	05/01/25
Foreman	W66.03 B39.62 T105.65
Journeyman	W57.42 B34.52 T91.94

Craft: Carpenter - Resilient Flooring **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
Yearly	40%	55%	65%	80%	90%					
Benefit	59.25%	of	Appren	tice	Wage Rate	for all	intervals	+ $0.50		

Ratio of Apprentices to Journeymen - *

* 1 apprentice shall be allowed to every 2 journeymen or major fraction therof. No more than 3 apprentices on any one job or project.

Craft: Carpenter - Resilient Flooring **COMMENTS/NOTES**

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 5-1-19:

INTERVAL PERIOD AND RATES
Yearly 40% 55% 65% 80%
Benefits 59.25% of apprentice wage rate for all intervals + $0.50.

FOREMAN REQUIREMENTS:
- On any job where there are 4 or more Carpenters of Resilient Flooring, 1 must be designated a Foreman.

FOR SYNTHETIC TURF INSTALLATION ONLY:
- The rate shall be 90% of the wage and benefit rate.

The regular workday consists of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:
- When a 2 shift schedule (including a day shift) is established, the day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular wage rate plus 10%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular wage rate, the second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:
- Hours in excess of 8 per day or 40 per week, or before or after the regular workday, Monday through Friday, shall be paid at time and one-half the wage rate. Saturday may be used as a make-up day, at straight time, up to 8 hours, for hours lost to reasons beyond the control of the employer, up to a total of 40 hours per week; hours in excess of 8 on Saturday shall

then be paid at time and one-half the wage rate. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the wage rate. All hours on Sundays and holidays shall be paid at double the wage rate.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for hours lost to reasons beyond the control of the employer. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the wage rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Cement Mason **PREVAILING WAGE RATE**

See "Bricklayer, Stone Mason" Rates

Craft: Cement Mason **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									

Ratio of Apprentices to Journeymen - 1:4

Craft: Cement Mason **COMMENTS/NOTES**

See "Bricklayer, Stone Mason" Rates

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Commercial Painter **PREVAILING WAGE RATE**

	05/01/25
Foreman	W50.11 B31.61 T81.72
General Foreman	W54.66 B31.61 T86.27
Journeyman	W45.55 B31.61 T77.16

Craft: Commercial Painter **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
6 Months	40%	45%	55%	65%	70%	75%	80%	80%		
Benefits	9.84	9.84	12.55	12.55	13.65	13.65	16.55	16.55		

Ratio of Apprentices to Journeymen - 1:4

Craft: Commercial Painter **COMMENTS/NOTES**

* Commercial Painters perform work on all commercial structures such as offices, schools, hotels, shopping malls, restaurants, condominiums, etc.

Spraying, sandblasting, lead abatement work on commercial buildings, work performed above 3 stories or 30 feet in height, or using swing scaffolds requires an additional 10% of the wage rate.

FOREMEN REQUIREMENTS:
- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:
- Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day,

Veterans' Day, Thanksgiving Day, Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Diver **PREVAILING WAGE RATE**

	05/01/25
Diver	W65.97 B53.74 T119.71
Tender	W54.23 B53.74 T107.97

Craft: Diver **COMMENTS/NOTES**

NOTE: All dive crews must consist of a Tender, a Diver, and a standby Diver (standby Diver is the same rate as a Diver).

DEPTH & PENETRATION RATES: Divers shall be paid the following depth and penetration rates, in addition to the regular hourly rate, when applicable:

AIR DIVES:
0-59 feet: No additional wage
60-74 feet: + $0.25 per foot
75-125 feet: + $0.78 per foot

MIXED GAS DIVES:
0-74 feet: No additional wage
75-125 feet: + $1.00 per foot
126-200 feet: + $2.00 per foot

PENETRATION DIVES:
126-200 feet: + $1.50 per foot
201-275 feet: + $1.75 per foot
276-350 feet: + $2.00 per foot
351-425 feet: + $2.50 per foot

SHIFT DIFFERENTIAL:
- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis and receive an additional 113% of the wage rate.
- When a three shift schedule is established, all three shifts shall be established on an 8 hour basis, but the second and third shifts shall receive an additional 113% of the wage rate.
- Benefits on shift work shall be paid at the straight-time rate.

OVERTIME:
Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Dockbuilder/Pile Driver **PREVAILING WAGE RATE**

	05/01/25
Foreman	W62.36 B53.74 T116.10
Foreman (Concrete Form Work)	W61.26 B40.39 T101.65
Journeyman	W54.23 B53.74 T107.97
Journeyman (Concrete Form Work)	W53.27 B40.39 T93.66

Craft: Dockbuilder/Pile Driver **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
Yearly	21.69	27.12	35.25	43.38						
Benefits	35.34	for all	intervals							

Ratio of Apprentices to Journeymen - *

* When there are 4 or fewer Dockbuilders/Pile Drivers on a job, no more than 1 may be an apprentice. When there are 5 or more Dockbuilders/Pile Drivers, there may be 1 apprentice for every 5 Dockbuilders/Pile Drivers.

Craft: Dockbuilder/Pile Driver **COMMENTS/NOTES**

APPRENTICE RATE SCHEDULE FOR CONCRETE FORM WORK ONLY:

INTERVAL PERIOD AND RATES
Yearly 21.31 26.64 34.63 42.62
Benefits 27.41 for all intervals

NOTE: The following shall be required for type of work indicated-
- There shall be one foreman and four journeymen on all land pile driving rigs. As part of the crew, one may be an apprentice.
- There shall be one foreman and two journeymen on self-contained hydraulic driving rigs. As part of the crew, one may be an apprentice.
- There shall be one foreman and two journeymen when driving sheeting with an excavator. As part of the crew, one may be an appprentice.
- When utilizing a drill rig to install Auger cast piles there shall be one foreman and two journeymen. As part of the crew , one may be an apprentice.
- There shall be one foreman and one journeyman on drilled or bored soldier piles.
- There shall be one foreman and not less than one journeyman per rig on all drilled shaft and caissons.
- There shall be one foreman and not less than one journeyman per rig on all earth retention tie-back and anchors.
- There shall be one foreman and three joruneymen for driving of piles 60 feet or less. As part of the crew, one may be an apprentice.

CREOSOTE HANDLING:
When handling creosote products on land piledriving, floating marine construction, and construction of wharves, the worker shall receive an additional $0.25 per hour.

HAZARDOUS WASTE WORK:
- Hazardous waste removal work on a state or federally designated hazardous waste site where Level A, B, or C personal protection is required: an additional 20% of the hourly rate, per hour.
- Hazardous waste removal work in Level D, or where personal protection is not required: an additional $1.00 per hour.

CERTIFIED WELDER: When required on the job by the project owner, a Certified Welder shall receive an additional $1.00 per hour.

FOREMAN REQUIREMENTS:
The first Dockbuilder/Pile Driver on the job shall be designated a Foreman.

SHIFT DIFFERENTIAL:
- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis and receive an additional 113% of the wage rate.
- When a three shift schedule is established, all three shifts shall be established on an 8 hour basis, but the second and third shifts shall receive an additional 113% of the wage rate.
- Benefits on shift work shall be paid at the straight-time rate.

OVERTIME:
Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Drywall Finisher **PREVAILING WAGE RATE**

	05/13/25
Foreman	W49.36 B31.65 T81.01
General Foreman	W51.60 B31.65 T83.25
Journeyman	W44.87 B31.65 T76.52

Craft: Drywall Finisher **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	22.44	29.17	35.90	40.38						
Benefits	17.98	17.98	17.98	17.98						

Ratio of Apprentices to Journeymen - 1:4

Craft: Drywall Finisher **COMMENTS/NOTES**

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.
- Shift work must run for a minimum of 5 consecutive workdays.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Electrician **PREVAILING WAGE RATE**

	06/02/25	06/01/26	05/31/27
Cable Splicer	W71.97 B47.29 T119.26	W74.71 B49.10 T123.81	W77.32 B50.81 T128.13
Foreman (11-20 Journeymen)	W76.55 B50.31 T126.86	W79.47 B52.21 T131.68	W82.24 B54.05 T136.29
Foreman (1-3 Journeymen)	W71.97 B47.29 T119.26	W74.71 B49.10 T123.81	W77.32 B50.81 T128.13
Foreman (4-10 Journeymen)	W75.24 B49.44 T124.68	W78.11 B51.33 T129.44	W80.83 B53.12 T133.95
General Foreman (21-30 Journeymen)	W78.52 B51.59 T130.11	W81.51 B53.56 T135.07	W84.35 B55.43 T139.78
General Foreman (31-60 Journeymen)	W85.06 B55.89 T140.95	W88.30 B58.02 T146.32	W91.38 B60.05 T151.43
General Foreman (61+ Journeymen)	W86.37 B56.75 T143.12	W89.65 B58.92 T148.57	W92.78 B60.97 T153.75
Journeyman	W65.43 B43.00 T108.43	W67.92 B44.64 T112.56	W70.29 B46.19 T116.48
Sub-Foreman	W74.59 B49.02 T123.61	W77.43 B50.88 T128.31	W80.13 B52.66 T132.79

Craft: Electrician **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
Yearly	40%	49%	58%	68%	80%		of Jour	neyman	Wage	Rate
Benefit	40%	49%	58%	68%	80%		of Jour	neyman	Benefit	Rate

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician **COMMENTS/NOTES**

THESE RATES ALSO APPLY TO THE FOLLOWING:
-All burglar and fire alarm work.
-All fiber optic work.
-Teledata work in new construction.
-Teledata work involving 16 Voice/Data Lines or more.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:
- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
-4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
-11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
-21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
-31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
-41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
-51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
-61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

SHIFT DIFFERENTIALS:
- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

OVERTIME:
Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, and all hours on Saturdays, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Electrician - Teledata (15 Voice/Data Lines & Less) **PREVAILING WAGE RATE**

	12/02/24
Journeyman Technician (1-2 Workers on Job)	W48.21 B28.45 T76.66
Master Tech/General Foreman (26 + Workers on Job)	W62.67 B36.99 T99.66
Senior Technician/Lead Foreman (16-25 Workers on Job)	W57.37 B33.86 T91.23
Technician A/Foreman (9-15 Workers on Job)	W54.96 B32.43 T87.39
Technician B/Working Foreman (4-8 Workers on Job)	W52.55 B31.01 T83.56
Technician C/Foreman (3 Workers on Job)	W50.14 B29.59 T79.73

Craft: Electrician - Teledata (15 Voice/Data Lines & Less) **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%
Benefits	7.45	7.45	8.51	9.15	10.22	11.49	12.98	14.26	15.76	17.24

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician - Teledata (15 Voice/Data Lines & Less) **COMMENTS/NOTES**

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 11-28-22:

NTERVAL PERIOD AND RATES
6 Months 35% 35% 40% 43% 48% 54% 61% 67% 74% 81%
Benefits 7.67 7.67 8.76 9.43 10.52 11.84 13.38 14.69 16.22 17.76

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 12-4-23:

NTERVAL PERIOD AND RATES
6 Months 35% 35% 40% 43% 48% 54% 61% 67% 74% 81%
Benefits 7.88 7.88 9.00 9.68 10.80 12.15 13.73 15.09 16.66 18.23

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 12-2-24:

NTERVAL	PERIOD AND RATES									
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%
Benefits	8.07	8.07	9.22	9.91	11.07	12.45	14.06	15.44	17.06	18.68

NOTES:
- These rates are for service, maintenance, moves, and/or changes affecting
15 Voice/Data (teledata) lines or less. These rates may NOT be used for any teledata work in new construction (including additions) or any fiber optic work.
- The number of Teledata workers on the jobsite is the determining factor for which Foreman category applies .

The regular workday shall be 8 hours, between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

OVERTIME:
Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 10 on Saturday and all hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked Monday through Friday, between the hours of 7:00 AM and 5:30 PM. A make-up day may be used for a day not being worked during the four 10-hour day schedule if a holiday occurs during the week or for any other conditions that prevent an employee from working the four 10-hour day schedule.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Saturday holidays will be observed the preceding Friday.

County - UNION

Craft: Electrician - Teledata (16 Instruments & More) **PREVAILING WAGE RATE**

See "Electrician" Rates

Craft: Electrician - Teledata (16 Instruments & More) **COMMENTS/NOTES**

See ELECTRICIAN Rates

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Electrician- Outside Commercial **PREVAILING WAGE RATE**

	06/03/25	06/01/26	05/31/27
Cable Splicer	W72.30 B46.96 T119.26	W75.05 B48.75 T123.80	W77.67 B50.45 T128.12
Certified Welder	W69.01 B44.83 T113.84	W71.65 B46.54 T118.19	W74.14 B48.16 T122.30
Equipment Operator	W65.73 B42.70 T108.43	W68.23 B44.32 T112.55	W70.61 B45.87 T116.48
Foreman (11-20 Journeymen workers on job)	W76.90 B49.95 T126.85	W79.83 B51.85 T131.68	W82.62 B53.67 T136.29
Foreman (1-3 Journeymen workers on job)	W72.30 B46.96 T119.26	W75.05 B48.75 T123.80	W77.67 B50.45 T128.12
Foreman (4-10 Journeymen workers on job)	W75.58 B49.09 T124.67	W78.47 B50.97 T129.44	W81.21 B52.75 T133.96
General Foreman (21-30 Journeymen workers on job)	W78.88 B51.24 T130.12	W81.88 B53.19 T135.07	W84.74 B55.04 T139.78
General Foreman (31-60 Journeymen workers on job)	W85.45 B55.50 T140.95	W88.70 B57.62 T146.32	W91.80 B59.63 T151.43
General Foreman (61+ Journeymen workers on job)	W86.76 B56.36 T143.12	W90.06 B58.50 T148.56	W93.21 B60.54 T153.75
Groundman	W39.44 B25.62 T65.06	W40.94 B26.60 T67.54	W42.37 B27.52 T69.89
Journeyman Lineman/Technician	W65.73 B42.70 T108.43	W68.23 B44.32 T112.55	W70.61 B45.87 T116.48
Sub-Foreman	W74.93 B48.67 T123.60	W77.79 B50.53 T128.32	W80.50 B52.29 T132.79

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Electrician- Outside Commercial **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
1000 Hours	60%	65%	70%	75%	80%	85%	90%			
Benefits	64.95% of	Journey	man	wage	+ $.01					

Craft: Electrician- Outside Commercial **COMMENTS/NOTES**

APPRENTICE RATE SCHEDULE AS OF 6-1-26:

Interval Period and Rates
1000 Hours 60% 65% 70% 75% 80% 85% 90%
Benefits 64.95% of the Journeyman wage + $.01

APPRENTICE RATE SCHEDULE AS OF 5-31-27:

Interval Period and Rates
1000 Hours 60% 65% 70% 75% 80% 85% 90%
Benefits 64.95% of the Journeyman wage + $.01

* FOR UTILITY WORK PLEASE SEE STATEWIDE RATES

The regular worday shall be 8 hours, between 8:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:
- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
-4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
-11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
-21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
-31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
-41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
-51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
-61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

SHIFT DIFFERENTIALS:
Shift work must run for a minimum of 5 consecutive workdays.
2nd Shift (4:30 PM to 12:30 AM): 8 hrs. pay for 7.5 hrs. work + an additional 10% of the regular rate, inclusive of benefits.
3rd Shift (12:30 AM to 8:00 AM): 8 hrs. pay for 7 hrs. work + an additional 15% of the regular rate per hour, inclusive benefits.

OVERTIME:
Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, and all hours on Saturdays, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS:
New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day,

Thanksgiving Day and Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Electrician-Utility Work (North) **PREVAILING WAGE RATE**

Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (North) **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
* 6 Months	60%	65%	70%	75%	80%	85%	90%			
Benefits	69% of	Appren	tice	Wage	Rate	for all	intervals			

Craft: Electrician-Utility Work (North) **COMMENTS/NOTES**

Electrician-Utility Work (North) rates are located in the "Statewide" rate package.

* The apprentice wage rate is paid at the percentage of the Journeyman Lineman wage rate located in the "Statewide" rate package.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Electrician-Utility Work (South) **PREVAILING WAGE RATE**

Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (South) **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
6 Months	33.69	36.50	39.31	42.11	44.92	47.73	50.54			
Benefits	29.97	31.72	33.46	35.21	36.96	38.71	40.45			

Craft: Electrician-Utility Work (South) **COMMENTS/NOTES**

Electrician-Utility Work (South) rates are located in the "Statewide" rate package.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Elevator Constructor **PREVAILING WAGE RATE**

	08/26/25	03/17/26	03/17/27	03/17/28
Journeyman	W83.27 B47.65 T130.92	W86.43 B48.96 T135.39	W89.76 B50.27 T140.03	W92.93 B51.92 T144.85

Craft: Elevator Constructor **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	35.73	45.80	54.13	62.45						
Benefits	36.90	37.99	39.70	41.40						

Ratio of Apprentices to Journeymen - 1:1

Craft: Elevator Constructor **COMMENTS/NOTES**

APPRENTICE RATE SCHEDULE AS OF 3-17-26:

INTERVAL	PERIOD AND RATES			
Yearly	37.10	47.54	56.18	64.82
Benefits	37.66	38.80	40.60	42.39

APPRENTICE RATE SCHEDULE AS OF 3-17-27:

INTERVAL	PERIOD AND RATES			
Yearly	38.54	49.37	58.34	67.32
Benefits	38.42	39.62	41.50	43.39

APPRENTICE RATE SCHEDULE AS OF 3-17-28:

INTERVAL	PERIOD AND RATES			
Yearly	39.90	51.11	60.41	69.70
Benefits	39.67	40.91	42.86	44.81

The regular workday shall consist of either 7 or 8 hours to be established at the beginning of the project, between 7:00 AM and 4:30 PM.

OVERTIME:
For all hours worked before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday , shall be paid at double the hourly rate. Holiday pay is one days wages (8 hours) plus double the hourly rate for all hours worked.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Elevator Modernization & Service **PREVAILING WAGE RATE**

	08/26/25	03/17/26	03/17/27	03/17/28
Journeyman	W65.54 B46.47 T112.01	W68.06 B47.73 T115.79	W70.72 B49.00 T119.72	W73.20 B50.61 T123.81

Craft: Elevator Modernization & Service **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
Yearly	35.73	36.05	42.60	49.16						
Benefits	36.88	37.58	39.20	40.83						

Ratio of Apprentices to Journeymen - 1:1

Craft: Elevator Modernization & Service **COMMENTS/NOTES**

APPRENTICE RATE SCHEDULE AS OF 3-17-26:

INTERVAL	PERIOD AND RATES			
Yearly	37.10	37.43	44.24	51.05
Benefits	37.63	38.37	40.09	41.81

APPRENTICE RATE SCHEDULE AS OF 3-17-27:

INTERVAL	PERIOD AND RATES			
Yearly	38.54	38.90	45.97	53.04
Benefits	38.39	39.17	40.98	42.79

APPRENTICE RATE SCHEDULE AS OF 3-17-28:

INTERVAL	PERIOD AND RATES			
Yearly	39.90	40.26	47.58	54.90
Benefits	39.65	40.45	42.32	44.18

MODERNIZATION (addition, replacement, refurbishing, relocation, or changes in design or appearance, of elevator equipment in existing buildings):

- The regular workday consists of 8 hours, between 7:00 AM and 4:30 PM.

- Overtime:
Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday shall be paid at time and one-half the hourly rate. Holiday pay is one days wages (8 hours) plus time and one-half the hourly rate for all hours worked.

SERVICE (repair or replacement of parts for the purpose of maintaining elevator equipment in good operating condition):

- The regular workday consists of 8 hours, between 6:00 AM and 6:00 PM.

- Overtime:
Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS (Modernization and Service): New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Glazier **PREVAILING WAGE RATE**

	05/01/25
* Leadman	W54.68 B33.23 T87.91
Foreman	W56.68 B33.47 T90.15
General Foreman	W58.68 B33.71 T92.39
Journeyman	W52.68 B32.99 T85.67

Craft: Glazier **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
6 Months	46%	46%	55%	55%	61%	61%	70%	70%		
Benefits	13.67	13.67	15.45	15.45	18.92	18.92	20.65	20.65		

Ratio of Apprentices to Journeymen - 1:4

Craft: Glazier **COMMENTS/NOTES**

Hazard/Height Pay: +$1.00 per hour

* When there are three (3) men working on a jobsite for three (3) days or longer, 1 Journeyman may be designated as a Leadman for the duration of the job, provided he has his OSHA certification.

FOREMAN REQUIREMENTS:
- When there are 4 or more Glaziers on a job, 1 must be designated a Foreman.
- When there are 15 or more Glaziers on a job, 1 must be designated a General Foreman.

The regular workday shall consist of 8 hours, between 7:00 AM and 5:30 PM, Monday to Friday.

SHIFT DIFFERENTIALS:
- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.

OVERTIME:
Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular

rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Heat & Frost Insulator **PREVAILING WAGE RATE**

	09/25/24
Foreman	W61.97 B39.22 T101.19
General Foreman	W64.31 B40.33 T104.64
Journeyman	W59.44 B38.66 T98.10

Craft: Heat & Frost Insulator **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	27.89	33.09	39.84	46.51						
Benefits	22.35	26.53	29.50	32.61						

Ratio of Apprentices to Journeymen - 1:3

Craft: Heat & Frost Insulator **COMMENTS/NOTES**

NOTE: These rates apply to the installing of insulation on hot and cold mechanical systems.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM. In addition, the regular workday may also be 8 hours between 6:00 AM and 2:30 PM.

SHIFT DIFFERENTIAL:
- Shift work must run for a minimum of 5 consecutive workdays.
- Second Shift shall work 7.5 hours and receive 8 hours pay, at the regular rate, plus 25% per hour.
- Third Shift shall work 7 hours and receive 8 hours pay, at the regular rate, plus 30% per hour.

OVERTIME:
The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day and Christmas Day. Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Heat & Frost Insulator - Asbestos Worker **PREVAILING WAGE RATE**

	09/25/24
Asbestos Helper Abatement	W36.89 B24.92 T61.81

Craft: Heat & Frost Insulator - Asbestos Worker **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
	SEE	HEAT &	FROST	INSULATOR						

Ratio of Apprentices to Journeymen - 1:3

Craft: Heat & Frost Insulator - Asbestos Worker **COMMENTS/NOTES**

NOTE: These rates apply only to the removal of insulation materials/asbestos from mechanical systems, including containment erection and demolition, and placing material in appropriate containers.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM. In addition, the regular workday may also be 8 hours between 6:00 AM and 2:30 PM.

SHIFT DIFFERENTIALS:
- Shift work must run for a minimum of 5 consecutive workdays.
- The second shift shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 25% per hour.
- The third shift shall work 7 hours and receive 8 hours pay at the regular rate, plus 30% per hour.

OVERTIME: The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day and Christmas Day. Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Industrial Painter- Bridges **PREVAILING WAGE RATE**

	02/07/25	02/01/26
Foreman	W64.80 B37.40 T102.20	W0.00 B0.00 T104.20
General Foreman	W67.30 B37.40 T104.70	W0.00 B0.00 T106.70
Journeyman	W59.80 B37.40 T97.20	W0.00 B0.00 T99.20

Craft: Industrial Painter- Bridges **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
6 Months	50%	70%	90%							
Benefits	14.62	21.61	28.11							

Ratio of Apprentices to Journeymen - 1:3

Craft: Industrial Painter- Bridges **COMMENTS/NOTES**

* Industrial Painters perform work on all industrial structures, such as bridges.

These rates apply to: All bridges that span waterways, roadways, railways and canyons. All tunnels, overpasses, viaducts and all appurtenances.

FOREMEN REQUIREMENTS:
- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except Veterans Day, which shall be paid at time and one-half the regular rate.
- During a regular work week schedule, Saturday may be used as a make-up day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Industrial Painter- Structural Steel **PREVAILING WAGE RATE**

	02/07/25	02/01/26
Foreman	W53.54 B35.05 T88.59	W0.00 B0.00 T90.59
General Foreman	W56.04 B35.05 T91.09	W0.00 B0.00 T93.09
Journeyman	W48.54 B35.05 T83.59	W0.00 B0.00 T85.59

Craft: Industrial Painter- Structural Steel **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
	SEE	INDUST	RIAL	PAINTER	BRIDGES					

Ratio of Apprentices to Journeymen - 1:3

Craft: Industrial Painter- Structural Steel **COMMENTS/NOTES**

* Industrial Painters perform work on all industrial structures, such as water tanks, waste water facilitites, refineries, any structural steel work, etc.

These rates apply to: All work in power plants (any aspect). On steeples, on dams, on hangers, transformers, substations, on all open steel, in refineries, tank farms, water/sewerage treatment facilities and on pipelines.

FOREMEN REQUIREMENTS:
- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except for Veterans Day, which shall be paid at time and one-half the regular rate.
- During the regular work week schedule, Saturday may be used to make-up a day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Industrial Painter- Water Tanks **PREVAILING WAGE RATE**

	02/07/25	02/01/26
Foreman	W54.59 B34.70 T89.29	W0.00 B0.00 T91.29
General Foreman	W57.09 B34.70 T91.79	W0.00 B0.00 T93.79
Journeyman	W49.59 B34.70 T84.29	W0.00 B0.00 T86.29

Craft: Industrial Painter- Water Tanks **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
6 Months	50%	70%	90%							
Benefits	14.62	21.61	28.11							

Ratio of Apprentices to Journeymen - 1:3

Craft: Industrial Painter- Water Tanks **COMMENTS/NOTES**

* Industrial Painters perform work on all industrial structures, such as water tanks, waste water facilitites, refineries, any structural steel work, etc.

These rates apply to: All new and repaint water tanks (interior and exterior).

FOREMEN REQUIREMENTS:
- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except Veterans Day, which shall be paid at time and one-half the regular rate.
- During a regular work week schedule, Saturday may be used to make-up a day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Ironworker **PREVAILING WAGE RATE**

	07/01/25
Rod /Fence Foreman	W54.94 B51.87 T106.81
Rod/Fence Journeyman	W49.94 B51.87 T101.81
Structural Foreman	W57.47 B51.87 T109.34
Structural Journeyman	W52.24 B51.87 T104.11

Craft: Ironworker **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
6 Months	50%	60%		Yearly	70%	80%	90%			
Benefits	same as	journeyman	amount							

Ratio of Apprentices to Journeymen - 1:4

Craft: Ironworker **COMMENTS/NOTES**

HAZARDOUS WASTE WORK: On hazardous waste removal work on a state or federally designated hazardous waste site where the Ironworker is required to wear Level A,B, or C personal protection: + $3.00 per hour

The regular workday consists of 8 hours between 6:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:
When there are 2 or more Ironworkers on a job, 1 shall be designated a Foreman.

SHIFT DIFFERENTIALS:
- When a 2 shift schedule is established, the first, or day shift , shall be established on an 8 hour basis .The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15%, and the third shift shall receive the regular rate plus 20%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis.
- When an irregular shift is established for the Ironworker (Structural) classification, the rate shall be paid at time and one-half the regular rate, inclusive of benefits. When an irregular shift is established for the Rod /Fence classification, the shift shall be established on an 8 hour basis and receive the regular rate, plus 20%.

OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits. Saturday may be used as a make-up day for a day lost to inclement weather. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Laborer - Asbestos & Hazardous Waste Removal **PREVAILING WAGE RATE**

	08/01/25
Foreman	W46.44 B26.21 T72.65
Journeyman (Handler)	W41.28 B26.21 T67.49

Craft: Laborer - Asbestos & Hazardous Waste Removal **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	22.47	28.55	32.62	36.70						
Benefits	22.31	for	all	intervals						

Ratio of Apprentices to Journeymen - *

* Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

Craft: Laborer - Asbestos & Hazardous Waste Removal **COMMENTS/NOTES**

NOTE: These rates apply to work in connection with Asbestos, Radiation, Hazardous Waste, Lead, Chemical, Biological, Mold Remediation and Abatement.

The regular workday shall be 8 hours.

OVERTIME:
- Hours in excess of 8 per day, Monday through Saturday, and all hours on Sunday and holidays shall be paid at time and one-half the regular rate.
- Benefits on ALL overtime hours shall be paid at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Easter, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. (Holidays start at 12:00 am).

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Laborer - Building **PREVAILING WAGE RATE**

	06/18/25
Class A Journeyman	W40.25 B33.87 T74.12
Class B Journeyman	W39.25 B33.87 T73.12
Class C Journeyman	W33.36 B33.87 T67.23
Foreman	W45.28 B33.87 T79.15
General Foreman	W50.31 B33.87 T84.18

Craft: Laborer - Building **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
6 Months	60%	70%	80%	90%	of Class B	wage rate				
Benefit	30.62	30.62	30.62	30.62						

Ratio of Apprentices to Journeymen - *

* Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

Craft: Laborer - Building **COMMENTS/NOTES**

CLASS A: Specialist laborer including mason tender or concrete pour crew; scaffold builder (scaffolds up to 14 feet in height); operator of forklifts, Bobcats (or equivalent machinery), jack hammers, tampers, motorized tampers and compactors, vibrators, street cleaning machines, hydro demolition equipment, riding motor buggies, conveyors, burners; and nozzlemen on gunite work.
CLASS B: Basic laborer - includes all laborer work not listed in Class A or Class C.
CLASS C: Janitorial-type light clean-up work associated with the TURNOVER of a project, or part of a project, to the owner. All other clean-up work is Class B.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

SHIFT DIFFERENTIALS:
- Shift work must run for a minimum of 5 consecutive workdays.
- When a 2-shift schedule is worked, including a day shift, both shifts shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%.
- When a 3-shift schedule is worked, the day shift shall be established on the basis of 8 hours pay for 8 hours worked, the second shift shall be established on the basis of 8 hours pay for 7.5 hours worked, and the third shift shall be established

on the basis of 8 hours pay for 7 hours worked. The day shift shall receive the regular rate, the second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.
- When a second or third shift is worked with no day shift, the second or third shift shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.
- When an irregular shift must be established this shift shall receive the regular rate plus an additional 10%.

OVERTIME:
- Hours in excess of 8 per day, or outside the regular workday that are not shift work, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. Saturday may be used as a make-up day (paid at straight time) for a day lost to inclement weather, or for a holiday that is observed during the work week, Monday through Friday. All hours on Sundays and holidays shall be paid at double the regular rate.
- Four 10-hour days may be worked Monday to Thursday, at straight time, with Friday used a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the regular rate.
- Benefits on ALL overtime hours shall be paid at time and one-half.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Laborer - Heavy & General **PREVAILING WAGE RATE**

Rates are located in the
"Statewide" rate package

Craft: Laborer - Heavy & General **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
1000 Hours	60%	70%	80%	90%						
Benefit	25.08	for	all	intervals						

Ratio of Apprentices to Journeymen - *

* No more than 1 apprentice for the first journeyman and no more than 1 apprentice for each additional 3 journeymen.

As of 3-1-25, benefits shall be 26.13.
As of 3-1-26, benefits shall be 27.13.

Craft: Laborer - Heavy & General **COMMENTS/NOTES**

Heavy & General Laborer rates are located in the "Statewide" rate package.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Laborer-Residential and Modular Construction **PREVAILING WAGE RATE**

	04/01/25	04/01/26	04/01/27
* Skilled Tradesman (only applies to Modular Construction)	W36.00 B5.45 T41.45	W36.50 B5.45 T41.95	W37.00 B5.45 T42.45
Foreman (person directing crew, regardless of his skill classification)	W38.00 B5.45 T43.45	W38.50 B5.45 T43.95	W39.00 B5.45 T44.45
Residential and Modular Construction Laborer	W32.00 B5.45 T37.45	W32.50 B5.45 T37.95	W33.00 B5.45 T38.45

Craft: Laborer-Residential and Modular Construction **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
As shown	800 hours	600 hours	600 hours							
wage & benefit	70%	80%	90%							

Ratio of Apprentices to Journeymen-

One (1) apprentice shall be allowed for the first journeyman on site and no more than one (1) additional apprentice for each additional three (3) journeymen on site.

Craft: Laborer-Residential and Modular Construction **COMMENTS/NOTES**

* SKILLED TRADESMAN-
any worker doing work not typically done by a Building Laborer. Some examples are installing interior doors, sheet rock, hooking up appliances, installing light fixtures, installing railing systems, etc. Please note where local building codes require that certain work be performed under the supervision of a licensed tradesman (i.e. Plumber, Electrician, etc.) Laborers shall work under such supervision.

RESIDENTIAL CONSTRUCTION- All residential construction (not commercial), single-family, stand-alone duplex houses, townhouses and multi-family buildings of not more than four (4) floors. Each housing unit must be fully and independently functional; each housing unit must have its own kitchen and bathroom. The definition includes all incidental items such as site work, parking areas, utilities, streets and sidewalks. Please note the construction must be Residential in nature. A First Floor at or below grade may contain commercial space not to exceed 50% square footage of the floor; at least 50% of the First Floor must contain living accommodations or related nonresidential uses (e.g. laundry space, recreation/hobby rooms, and/or corridor space). Basement stories below grade used for storage, parking, mechanical systems/equipment, etc., are considered basement stories which are not used in determining the building's height. An attic is an unfinished space located immediately below the roof. Such space is not used in determining a building's height even if used for storage purposes. In addition, barracks and dormitories are not considered residential projects.

MODULAR RESIDENTIAL CONSTRUCTION- all aspects of modular residential construction (not commercial) at the site of installation of structures of no more than four (4) stories, including all excavation and site preparation, footings and foundation systems whether poured on-site or prefabricated, all underground waterproofing, underground utilities, concrete slabs, sidewalks, driveways, paving, hardscape and landscaping. Please note the construction must be Residential as defined above. All work performed by the Set Crew (the crew of workers who set the modular boxes on the foundation), including the rigging, setting, attaching and assembly of all modules and structural members, preparation of the foundation

to accept modules, such as sill plates, connection of all in-module and under-module connections including, but not limited to, plumbing, electrical, HVAC, fire suppression, CAT5, telephone, television/internet, and fiber optic, the building or installation of any porches or decks regardless of material or method of construction, the on-site installation of, or completion of any roof system, doors, windows and fenestrations, including flashing, gutter and soffit systems, waterproofing, insulation and interior and exterior trim work, and painting. Please note that modular construction does not include on-site stick built construction, tip up construction or panel built construction.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

OVERTIME:
Hours worked in excess of 8 per day/40 per week, Monday through Saturday, and all hours worked on Sunday and holidays shall be paid at time and one-half the hourly rate.

RECOGNIZED HOILDAYS:
New Year's Day, Martin Luther King Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Millwright **PREVAILING WAGE RATE**

	05/01/25
Foreman	W67.67 B40.72 T108.39
Journeyman	W58.84 B35.49 T94.33

Craft: Millwright **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
6 Months	40%	55%	65%	80%	90%					
Benefits	59.25% of	Appren	tice	Wage	Rate	for all	intervals	+ $0.63		

Ratio of Apprentices to Journeymen - 1:3

Craft: Millwright **COMMENTS/NOTES**

FOREMAN REQUIREMENTS:
- When there are 2 or more Millwrights on a job, 1 shall be designated as a Foreman.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:
- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:
- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Operating Engineer **PREVAILING WAGE RATE**

Rates are located in the
"Statewide" rate package

Craft: Operating Engineer **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	60%	70%	80%	90%						

Ratio of Apprentices to Journeymen - *

* 1 apprentice for each piece of heavy equipment. At least 10 pieces of heavy equipment or a minimum of 5 Operating Engineers must be on site.

Craft: Operating Engineer **COMMENTS/NOTES**

Operating Engineer rates are located in the "Statewide" rate package.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Operating Engineer - Field Engineer **PREVAILING WAGE RATE**

Rates are located in the
"Statewide" rate package

Craft: Operating Engineer - Field Engineer **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	70%	75%	of Rod/	Chainman	Wage					
Yearly			80%	90%	Transit/	Instrument	man	Wage		

Ratio of Apprentices to Journeymen - *

* No more than 1 Field Engineer Apprentice per Survey Crew.

Craft: Operating Engineer - Field Engineer **COMMENTS/NOTES**

Operating Engineer - Field Engineer rates are located in the "Statewide" rate package.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Painter - Line Striping **PREVAILING WAGE RATE**

	12/03/24
Apprentice (1st year)	W31.33 B16.18 T47.51
Apprentice (2nd year)	W35.74 B27.13 T62.87
Foreman (Charge Person)	W45.12 B27.91 T73.03
Journeyman 1 (at least 1 year of working exp. as a journeyman)	W40.35 B27.91 T68.26
Journeyman 2 (at least 2 years of working exp. as a journeyman)	W44.12 B27.91 T72.03

Craft: Painter - Line Striping **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									

Ratio of Apprentices to Journeymen - 1:1

Craft: Painter - Line Striping **COMMENTS/NOTES**

OVERTIME:
Hours in excess of 8 per day, Monday through Saturday, and all hours on Sundays and holidays shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day and Christmas Day. Veterans Day may be substituted for the day after Thanksgiving.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Paperhanger **PREVAILING WAGE RATE**

	05/01/25
Foreman	W55.12 B31.61 T86.73
Journeyman	W50.11 B31.61 T81.72

Craft: Paperhanger **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
	SEE	COMMER	CIAL	PAINTER						

Craft: Paperhanger **COMMENTS/NOTES**

FOREMEN REQUIREMENTS:
- When there are 4 or more Paperhangers on a job, 1 shall be designated a Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans Day, Thanksgiving Day, Christmas Day

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Pipefitter **PREVAILING WAGE RATE**

	05/06/25
Foreman	W60.59 B54.63 T115.22
Journeyman	W56.34 B50.80 T107.14

Craft: Pipefitter **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	35%	45%	55%	65%	75%					
Benefit	28.73	32.11	35.49	38.87	42.25					

Ratio of Apprentices to Journeymen - 1:5

Craft: Pipefitter **COMMENTS/NOTES**

FOREMAN REQUIREMENTS:
- When there are 2 or more Journeyman Pipefitters on a job, 1 shall be designated a Foreman.
- There shall be a Foreman for every 8 Journeyman Pipefitters on a job.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM.

SHIFT DIFFERENTIAL:
- 2nd Shift (3:30 PM-11:30 PM) shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 10% per hour on the total rate.
- 3rd Shift (11:30 PM-7:00 AM) shall work 7 hours and receive 8 hours pay at the regular rate, plus 15% per hour on the total rate.

OVERTIME:
- All hours worked in excess of 8 per day, Monday through Friday, and all hours worked on Saturday, shall be paid at time and one-half, inclusive of benefits. All hours on Sunday and holidays shall be paid at double time, inclusive of benefits.
- By mutual agreement, employees may work four 10-hour days, Monday to Thursday, at straight time rate. Friday may be used as a make-up day for a day lost to inclement weather, and may be paid at straight time. If Friday is not a make-up day, the first 8 hours shall be paid at time and one-half, inclusive of benefits; hours in excess of 8 shall be paid at double time, inclusive of benefits.

SHIFT DIFFERENTIAL (Maintenance Work Only):
- 2nd Shift (3:30 PM-11:30 PM) shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 10% per hour on the total rate.
- 3rd Shift (11:30 PM-7:00 AM) shall work 7 hours and receive 8 hours pay at the regular rate, plus 15% per hour on the total rate.

OVERTIME (Maintenance Work Only):
- All hours in excess of 8 per day, Monday through Saturday, shall be paid at time and one-half, inclusive of benefits. All

hours on Sundays and holidays shall be paid at double time, inclusive of benefits.

NOTE: Maintenance work is work to repair, restore, or improve the efficiency of existing facilities. This does NOT apply to ANY new construction.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays are observed the following Monday.

County - UNION

Craft: Plasterer **PREVAILING WAGE RATE**

See Bricklayer, Stone Mason Rates

Craft: Plasterer **COMMENTS/NOTES**

See BRICKLAYER, STONE MASON Rates

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Plumber **PREVAILING WAGE RATE**

	05/01/25
Foreman	W67.06 B45.40 T112.46
General Foreman	W71.40 B45.40 T116.80
Journeyman	W62.09 B45.40 T107.49

Craft: Plumber **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	35%	45%	55%	65%	75%					
Benefits	19.23	25.20	27.57	29.95	32.32					

Ratio of Apprentices to Journeymen - *

* Employers may employ 1 apprentice on any job where 1 or 2 journeymen are employed. Thereafter, 1 apprentice may be employed for every 4 journeymen.

Craft: Plumber **COMMENTS/NOTES**

FOREMAN REQUIREMENTS:
- On any job having 2 or more Plumbers, 1 must be designated a Foreman.
- On any job having 9 or more Plumbers, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours between 7:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:
- Shift work must continue for a minimum of 5 consecutive workdays.
- When two shifts are worked, the second shift shall work 7.5 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 10%, inclusive of benefits.
- When a third shift is worked, the third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 15%, inclusive of benefits.

OVERTIME:
- All hours in excess of 8 per day, or before of after the regular workday that are not shift work, Monday through Friday , and all hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays, shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Roofer **PREVAILING WAGE RATE**

	06/01/25
Foreman	W48.77 B33.34 T82.11
Journeyman	W45.77 B33.34 T79.11

Craft: Roofer **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
6 Months	17.80	22.26	26.71	28.94	31.16	33.39	35.62	40.07		
Benefits	2.19	2.19	28.34	28.34	28.34	28.34	28.34	28.34		

Ratio of Apprentices to Journeymen - *

* A) For roofing jobs that are of the 1 or single ply nature: 1:2 or fraction thereof
B) For roofing jobs on new built up roofs: 1:3 or fraction thereof
C) For roofing jobs that are of a tear-off nature: 1:2 or fraction thereof
D) For roofing jobs {not requiring complete removal of existing systems, installation done over existing roof}: 1:3 or fraction thereof

Craft: Roofer **COMMENTS/NOTES**

APPRENTICE RATE SCHEDULE AS OF 6-1-25:

INTERVAL	PERIOD AND RATES							
6 Months	18.30	22.88	27.46	29.75	32.03	34.33	36.62	41.19
Benefits	2.44	2.44	29.09	29.09	29.09	29.09	29.09	29.09

Pitch: +.50 per hour

Mop Man: +.30 per hour

The regular workday consists of 8 hours between 8:00 AM and 4:30 PM.

OVERTIME:
Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays, Sundays, and holidays shall be paid at time and one-half the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Sheet Metal Sign Installation **PREVAILING WAGE RATE**

	04/03/25
Foreman	W46.50 B46.30 T92.80
Journeyman	W43.50 B46.30 T89.80

Craft: Sheet Metal Sign Installation **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
1000 hours	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
Benefits	15.35	17.52	19.67	21.83	24.51	26.71	28.93	31.12	33.34	35.53

Ratio of Apprentices to Journeymen - 1:3

Craft: Sheet Metal Sign Installation **COMMENTS/NOTES**

FOREMAN REQUIREMENT:
When there are 6 or more Sheet Metal Sign Installers on a job, 1 shall be designated a Foreman.

The regular workday consists of 8 hours, between 7:00 AM and 3:30 PM.

OVERTIME:
Hours before or after the regular workday, Monday though Friday, and all hours worked on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

Four(4) 10 hour days may be worked, Monday through Friday, at straight time, for projects lasting at least one week in duration. The fifth day may be used as a make-up day at straight time for a day lost due to inclement weather. However, if the fifth day is not a make-up day, all hours worked will be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays observed the preceding Friday, Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Sheet Metal Worker **PREVAILING WAGE RATE**

	07/02/25
Foreman	W63.84 B51.93 T115.77
General Foreman	W64.84 B51.93 T116.77
Journeyman	W59.84 B51.93 T111.77

Craft: Sheet Metal Worker **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
Yearly	45%	48%	52%	65%	of	Journey	man	Wage	Rate	
Benefit	45%	48%	52%	65%	of	Journey	man	Benefit	Rate	

Ratio of Apprentices to Journeymen - 1:4

Craft: Sheet Metal Worker **COMMENTS/NOTES**

FOREMAN REQUIREMENTS:
- When there are 2 or more Sheet Metal Workers on a project, 1 must be designated a Foreman.
- When there are 17 or more Sheet Metal Workers on a project, 1 must be designated a General Foreman.
- When there is only 1 Sheet Metal Worker (1 Journeyman) on a project, he/she shall receive $1.00 more than the regular Journeyman's rate.

The regular workday is 8 hours between 7:00 AM and 4:30 PM.

SHIFT DIFFERENTIAL:
- 2nd Shift (3:30 PM - 12:00 AM) : +17% of regular hourly rate
- Shift work must run for a minimum of 5 consecutive workdays.

OVERTIME:
- Hours in excess of 8 per day, or before or after the regular workday, that are not shift work, and the first 10 hours on Saturdays shall be paid at time and one-half of the regular rate, inclusive of benefits. Hours in excess of 10 per day on Saturday, and all hours on Sundays and holidays shall be at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Friday, at straight time, with hours in excess of 10 per day, and hours in excess of 40 per week paid at the overtime rates listed above.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Sprinkler Fitter **PREVAILING WAGE RATE**

	07/01/25
Foreman	W74.77 B42.30 T117.07
General Foreman	W78.36 B42.30 T120.66
Journeyman	W69.97 B42.30 T112.27

Craft: Sprinkler Fitter **APPRENTICE RATE SCHEDULE**

INTERVAL	**PERIOD AND RATES**									
1000 Hours									80%	85%
Benefits							Intervals	9 to 10	Jourymn	Ben.

Craft: Sprinkler Fitter **COMMENTS/NOTES**

Apprentice rate schedule for those apprentices registered as of 7-1-13:

Interval Period and Rates
1000 Hrs. 25% 30% 40% 45% 55% 60% 70% 75% 85% 90%
Ben. 14.90 14.90 32.30 32.30 32.30 32.30 Intervals 7-10 Journy. Ben.

Apprentice rate schedule for those apprentices registered as of 7-1-22:

Interval Period and Rates
1000 Hrs. 30% 35% 40% 45% 50% 55% 60% 70% 85% 95%
Ben. 14.90 14.90 32.30 32.30 32.30 32.30 Intervals 7-10 Journy. Ben.

The regular workday consists of 8 consecutive hours between 6:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:
- The first Sprinkler Fitter on the job must be designated a Foreman.
- On any job having 12 or more Sprinkler Fitters, one must be designated a General Foreman.

SHIFT DIFFERENTIALS:
- Shift work must run for a minimum of 2 consecutive workdays.
- 2nd and 3rd shift shall receive an additional 15% of the regular rate, per hour.
- Any "off hours" shift starting at 8:00 PM or later shall receive an additional 25% of the regular rate, per hour.

OVERTIME:
The first 2 hours in excess of 8 per day, after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate. Hours worked in excess of 10 per day, Monday through Friday, and all hours on Saturday, Sunday and holidays, shall be paid double the regular rate.
Four 10 hour days may be worked, Monday through Friday, at straight-time.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Tile Finisher-Marble **PREVAILING WAGE RATE**

	07/08/25
Finisher	W50.44 B38.15 T88.59

Craft: Tile Finisher-Marble **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
750 Hours	27.60	41.50	44.98	48.45	51.94	54.81	64.66			
Benefits	27.01	30.11	30.88	31.66	32.43	38.66	40.97			

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Finisher-Marble **COMMENTS/NOTES**

OVERTIME:
Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Tile Setter - Ceramic **PREVAILING WAGE RATE**

	06/19/25
Finisher	W50.05 B33.90 T83.95
Setter	W64.90 B37.28 T102.18

Craft: Tile Setter - Ceramic **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
750 Hours	35%	40%	50%	55%	60%	65%	70%	75%	80%	90%

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Ceramic **COMMENTS/NOTES**

OVERTIME:
Hours in excess of 7 per day, and the first 10 hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Saturdays after 10 hours shall be paid double the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Tile Setter - Marble **PREVAILING WAGE RATE**

	07/08/25
Tile Setter	W64.66 B40.97 T105.63

Craft: Tile Setter - Marble **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
750 Hours	27.60	41.50	44.98	48.45	51.94	54.81	64.66			
Benefits	27.01	30.11	30.88	31.66	32.43	38.66	40.97			

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Marble **COMMENTS/NOTES**

OVERTIME:
Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays, and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Tile Setter - Mosaic & Terrazzo **PREVAILING WAGE RATE**

	07/01/25
Grinder or Assistant	W60.17 B42.80 T102.97
Mechanic	W61.77 B42.82 T104.59
Terrazzo Resinous Worker	W51.28 B35.12 T86.40

Craft: Tile Setter - Mosaic & Terrazzo **APPRENTICE RATE SCHEDULE**

INTERVAL	PERIOD AND RATES									
1500 Hours	35%	45%	60%	70%	80%	90%				

Ratio of Apprentices to Journeymen - 1:5

Craft: Tile Setter - Mosaic & Terrazzo **COMMENTS/NOTES**

The regular workday consists of 7 hours, between 8:00 AM and 3:30 PM.

OVERTIME:
- Hours in excess of 7 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Monday after Easter, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Truck Driver **PREVAILING WAGE RATE**

	05/16/25	05/01/26	05/01/27
Bucket, Utility, Pick-up, Fuel Delivery trucks	W46.41 B45.28 T91.69	W47.41 B47.28 T94.69	W48.41 B49.03 T97.44
Dump truck, Asphalt Distributor, Tack Spreader	W46.41 B45.28 T91.69	W47.41 B47.28 T94.69	W48.41 B49.03 T97.44
Euclid-type vehicles (large, off-road equipment)	W46.51 B45.28 T91.79	W47.51 B47.28 T94.79	W48.51 B49.03 T97.54
Helper on Asphalt Distributor truck	W46.41 B45.28 T91.69	W47.41 B47.28 T94.69	W48.41 B49.03 T97.44
Low Boy Driver	W48.51 B45.28 T93.79	W49.51 B47.28 T96.79	W50.51 B49.03 T99.54
Slurry Seal, Seeding/Fertilizing/ Mulching truck	W46.41 B45.28 T91.69	W47.41 B47.28 T94.69	W48.41 B49.03 T97.44
Straight 3-axle truck	W46.41 B45.28 T91.69	W47.41 B47.28 T94.69	W48.41 B49.03 T97.44
Tractor Trailer (all types)	W46.51 B45.28 T91.79	W47.51 B47.28 T94.79	W48.51 B49.03 T97.54
Vacuum or Vac-All truck (entire unit)	W46.41 B45.28 T91.69	W47.41 B47.28 T94.69	W48.41 B49.03 T97.44
Winch Trailer	W46.61 B45.28 T91.89	W47.61 B47.28 T94.89	W48.61 B49.03 T97.64

Craft: Truck Driver **COMMENTS/NOTES**

BLENDED RATE:
When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate" which shall be 80% of the above-listed wage rates, plus the full benefit rate. This rate shall be used when the driver "round robins" for a minimum of 6 hours during the work day.

HAZARDOUS WASTE REMOVAL:
- On hazardous waste removal work on a State designated hazardous waste site where the driver is in direct contact with hazardous materials and when personal protective equipment is required for respiratory, skin, and eye protection, the driver shall receive an additional $3.00 per hour (with or without protective gear).
- A hazardous waste related certified worker at a designated hazardous waste site who is not working in a zone requiring level A, B or C personal protection shall receive an additional $1.00 per hour.

TRUCK FOREMAN: $1.00 per hour above regular rate. Overtime shall be increased accordingly.

The regular workday shall be 8 hours, starting between 6:00 AM and 8:00 AM.

SHIFT DIFFERENTIAL:
- Shifts starting at 4:00 PM (2nd Shift): + $5.00 per hour.
- Shifts starting at 12:00 AM (midnight/3rd Shift): time and one-half the hourly rate.
- Shifts starting at a time other than from 6:00 AM to 8:00 AM, when such hours are mandated by the project owner: + $5.00 per hour.

OVERTIME:
- Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Employees may work four 10-hour days at straight time, Monday through Thursday, with Friday used as a make-up day for a lost day. If Friday is not a make-up day, then all hours on Friday shall be paid at time and one-half the hourly rate.
-Benefits on overtime shall be $45.03.
-Benefits on overtime on 5-1-26 shall be $47.03.
-Benefits on overtime on 5-1-27 shall be $48.78.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veteran's Day.

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

County - UNION

Craft: Truck Driver-Material Delivery Driver **PREVAILING WAGE RATE**

	05/16/25	05/01/26	05/01/27
Driver	W37.12 B45.28 T82.40	W37.82 B47.28 T85.10	W38.72 B49.03 T87.75

Craft: Truck Driver-Material Delivery Driver **COMMENTS/NOTES**

BLENDED RATE:
When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate". See the "Truck Driver" craft for the blended rates.

Truck Foreman/Shop Steward: +$0.25 per hour

SHIFT DIFFERENTIALS:
- 2nd Shift shall receive an additional $0.50 per hour
- 3rd Shift shall receive time and one-half the hourly rate.

OVERTIME:
- Hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veterans Day.

Craft: Welder **PREVAILING WAGE RATE**

Welder

Craft: Welder **COMMENTS/NOTES**

Welders rate is the same as the craft to which the welding is incidental.

STATEWIDE RATES

TERRITORY

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS **Rates Expiration Date :**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for * tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- * FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

OVERTIME:
- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus $5.00 per hour.
- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus $1.00 per hour.

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
60.13	40.40	100.53

CLASSIFICATIONS:

A-Frame

Backhoe (combination)

Boom Attachment on loaders (Except pipehook)

Boring & Drilling Machine

Brush Chopper, Brush Shredder, Tree Shredder, Tree Shearer

Bulldozer, finish grade

Cableway

Carryall

Concrete Pump

Concrete Pumping System (Pumpcrete & similar types)

Conveyor, 125 feet or longer

Drill Doctor (Duties include dust collector and maintenance)

Front End Loader (2 cu. yds. but less than 5 cu. yds.)

Grader, finish

Groove Cutting Machine (ride-on type)

Heater Planer

Hoist: Outside Material Tower Hoist (all types including steam, gas, diesel, electric, air hydraulic, single and double drum, concrete, brick shaft caisson, snorkle roof, and other similar types, Except Chicago-boom type) * receives an addtional $1.00 per hour on 100 ft. up to 199 ft. total height, and an additional $2.00 per hour on 200 ft. and over total height.

Hydraulic Crane (10 tons & under)

Hydraulic Dredge

Hydro-Axe

Hydro-Blaster

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
60.13	40.40	100.53

CLASSIFICATIONS:

Jack (screw, air hydraulic, power-operated unit, or console type, Except hand jack or pile load test type)

Log Skidder

Pan

Paver, concrete

Plate & Frame Filter Press

Pumpcrete (unit type)

Pumpcrete, Squeezecrete, or Concrete Pumping machine (regardless of size)

Scraper

Side Boom

Straddle Carrier (Ross and similar types)

Whiphammer

Winch Truck (hoisting)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
58.22	40.40	98.62

CLASSIFICATIONS:

Asphalt Curbing Machine

Asphalt Plant Engineer

Asphalt Spreader

Autograde Curb Trimmer & Sidewalk Shoulder Slipform (CMI & similar types)

Autograde Curecrete Machine (CMI & similar types)

Autograde Tube Finisher & Texturing Machine (CMI & similar types)

Bar Bending Machines (Power)

Batcher, Batching Plant, & Crusher [On Site]

Belt Conveyor System

Boom-Type Skimmer Machine

Bridge Deck Finisher

Bulldozer (all sizes)

Captain (Power Boats)

Car Dumper (railroad)

Compressor & Blower unit for loading/unloading of concrete, cement, fly ash, or similar type materials (used independently or truck-mounted)

Compressor (2 or 3 battery)

Concrete Breaking Machine

Concrete Cleaning/Decontamination Machine

Concrete Finishing Machine

Concrete Saw or Cutter (ride-on type)

Concrete Spreader (Hetzel, Rexomatic & similar types)

Concrete Vibrator

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
58.22	40.40	98.62

CLASSIFICATIONS:

Conveyors - under 125 feet

Crane Signalman

Crushing Machine

Directional Boring Machine

Ditching Machine - Small (Ditchwitch, Vermeer or similar types)

Dope Pot - Mechanical (with or without pump)

Dumpster

Elevator

Fireman

Fork Lift (Economobile, Lull & similar types)

Front End Loader (1 cu. yd. and over but less than 2 cu. yds.)

Generator (2 or 3 battery)

Giraffe Grinder

Goldhofer/Hydraulic Jacking Trailer

Grader & Motor Patrols

Grout Pump

Gunnite Machine (Excluding nozzle)

Hammer - Vibratory (in conjunction with generator)

Heavy Equipment Robotics - Operator/Technician

Hoist (roof, tugger, aerial platform hoist, house car)

Hopper

Hopper Doors (power operated)

Ladder (motorized)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
58.22	40.40	98.62

CLASSIFICATIONS:

Laddervator

Locomotive (Dinky-type)

Maintenance Utility Man

Master Environmental Maintenance Technician

Mechanic

Mixer (Except paving mixers)

Pavement Breaker (truck-mounted or small self-propelled ride-on type)

Pavement Breaker - maintenance of compressor or hydraulic unit

Pipe Bending Machine (power)

Pitch Pump

Plaster Pump (regardless of size)

Post Hole Digger (post pounder, auger)

Rod Bending Machines

Roller (black top)

Scale (power)

Seamen Pulverizing Mixer

Shoulder Widener

Silo

Skimmmer Machine (boom type)

Steel Cutting Machine (service & maintenance)

Tamrock Drill

Tractor

Transfer Machines

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
58.22	40.40	98.62

CLASSIFICATIONS:

Tug Captains

Tug Master (Power Boats)

Ultra High Pressure Waterjet Cutting Tool System - Operator/Maintenance Technician

Vacuum Blasting Machine - Operator/Maintenance Technician

Vibrating Plant (used with unloading)

Welder & Repair Mechanic

Effective Dates:

07/01/2025

Rate	Fringe	Total
52.88	40.40	93.28

CLASSIFICATIONS:

Assistant Engineer/Oiler

Driller's Helper

Field Engineer - Transit man or Instrument man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Mechanic's Helper

Off Road Back Dump

Tire Repair & Maintenance

Effective Dates:

07/01/2025

Rate	Fringe	Total
50.30	40.40	90.70

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
60.46	40.40	100.86

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
61.72	40.40	102.12

CLASSIFICATIONS:

Autograde Pavement Profiler (CMI & similar types)

Autograde Pavement Profiler - Recycle Type (CMI & similar types)

Autograde Placer/Trimmer/Spreader Combination (CMI & similar types)

Autograde Slipform Paver (CMI & similar types)

Backhoe (Excavator)

Central Power Plant

Concrete Paving Machine

Cranes, Derricks, Pile Drivers (all types), under 100 tons with a boom (including jib and/or leads) under 100 ft.

Draglines

Drill, Bauer, AMI and similar types

Drillmaster, Quarrymaster

Drillmaster/Quarrymaster (down-the-hole drill), rotary drill, self-propelled hydraulic drill, self-powered drill

Elevator Grader

Field Engineer-Chief of Party

Front End Loader (5 cu. yards or larger)

Gradall

Grader, Rago

Helicoptor Co-Pilot

Helicoptor Communications Engineer

Juntann Pile Driver

Locomotive (large)

Mucking Machine

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
61.72	40.40	102.12

CLASSIFICATIONS:

Pavement & Concrete Breaker (Superhammer & Hoe Ram)

Pile Driver

Prentice Truck

Roadway Surface Grinder

Scooper (loader & shovel)

Shovel (Excavator)

Trackhoe (Excavator)

Tree Chopper with boom

Trenching Machine (cable plow)

Tunnel Boring Machine

Vacuum Truck

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
56.59	40.40	96.99

CLASSIFICATIONS:

Chipper

Compressor (single)

Concrete Spreader (small type)

Conveyor Loader (Except elevator graders)

Engines, Large Diesel (1620 HP) & Staging Pump

Farm Tractor

Fertilizing Equipment (operation & maintenance)

Fine Grade Machine (small type)

Form Line Grader (small type)

Front End Loader (under 1 cubic yard)

Generator (single)

Grease, Gas, Fuel, & Oil Supply Trucks

Heaters (Nelson or other type)

Lights - portable generating light plant

Mixer, Concrete (small)

Mulching Equipment (operation & maintenance)

Power Broom or Sweeper

Pump (diesel engine & hydraulic - regardless of power)

Pump (larger than 2 inch suction, including submersible pumps)

Road Finishing Machine (small type)

Roller - grade, fill, or stone base

Seeding Equipment (operation & maintenance)

Sprinkler & Water Pump Trucks

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
56.59	40.40	96.99

CLASSIFICATIONS:

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including proprane, natural gas, and flow-type units)

Water or Sprinkler Truck

Welding Machine (gas, diesel, or electric convertor, of any type)

Welding System - Multiple (rectifier transformer type)

Wellpoint Systems (including installation by bull gang and maintenance)

Effective Dates:

07/01/2025

Rate	Fringe	Total
63.54	40.40	103.94

CLASSIFICATIONS:

Helicoptor Pilot/Engineer

Effective Dates:

07/01/2025

Rate	Fringe	Total
68.22	40.40	108.62

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2025

Rate	Fringe	Total
67.22	40.40	107.62

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) from 100 ft. to 139 ft.

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
63.72	40.40	104.12

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types) , under 100 tons with a boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2025

Rate	Fringe	Total
66.22	40.40	106.62

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with a boom (including jib and/or leads) under 100 ft.

Effective Dates:

07/01/2025

Rate	Fringe	Total
62.72	40.40	103.12

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) from 100 ft. to 139 ft.

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for * tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- * FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

OVERTIME:
- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus $5.00 per hour.
- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus $1.00 per hour.

Effective Dates:

07/01/2025

Rate	Fringe	Total
65.35	40.40	105.75

CLASSIFICATIONS:

Helicopter Co-Pilot & Communications Engineer

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
61.29	40.40	101.69

CLASSIFICATIONS:

A-Frame

Cherry Picker -10 tons or less (Over 10 tons use crane rate)

Hoist (all types Except Chicago-boom)

Jack (screw, air hydraulic, power-operated unit or console type, Except hand jack or pile load test type)

Side Boom

Straddle Carrier

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
58.63	40.40	99.03

CLASSIFICATIONS:

Aerial Platform Used On Hoists

Apprentice Engineer/Oiler with Compressor or Welding Machine

Captain (Power Boats)

Compressor (2 or 3 in battery)

Concrete Cleaning/Decontamination Machine Operator

Conveyor or Tugger Hoist

Directional Boring Machine

Elevator or House Car

Fireman

Forklift

Generator (2 or 3)

Heavy Equipment Robotics, Operator/Technician

Maintenance Utility Man

Master Environmental Maintenance Technician

Tug Master (Power Boats)

Ultra High Pressure Waterjet Cutting Tool System Operator/Maintenance Technician

Vacuum Blasting Machine Operator/Maintenance Technician

Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
57.10	40.40	97.50

CLASSIFICATIONS:

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

Effective Dates:

07/01/2025

Rate	Fringe	Total
53.34	40.40	93.74

CLASSIFICATIONS:

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Off Road Back Dump

Effective Dates:

07/01/2025

Rate	Fringe	Total
60.91	40.40	101.31

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

Effective Dates:

07/01/2025

Rate	Fringe	Total
50.30	40.40	90.70

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
62.05	40.40	102.45

CLASSIFICATIONS:

Field Engineer-Chief of Party

Vacuum Truck

Effective Dates:

07/01/2025

Rate	Fringe	Total
70.24	40.40	110.64

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms, including jib, 140 ft. and over, above ground). Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), and Pile Drivers (all types) 100 tons and over and Tower Cranes.

Effective Dates:

07/01/2025

Rate	Fringe	Total
68.58	40.40	108.98

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. abovr ground), Derricks (all derricks. land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), 100 tons and over and Tower Crane.

Effective Dates:

07/01/2025

Rate	Fringe	Total
65.74	40.40	106.14

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, 140 ft. and over, above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), Pile Drivers (all types), under 100 tons.

Effective Dates:

07/01/2025

Rate	Fringe	Total
64.08	40.40	104.48

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), under 100 tons.

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2025

Rate	Fringe	Total
65.74	40.40	106.14

CLASSIFICATIONS:

Helicopter Pilot & Engineer

TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Monmouth, Ocean, Salem, Sussex, Warren

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:
- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for * tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- * FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

OVERTIME:
- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus $5.00 per hour.
- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus $1.00 per hour.

Effective Dates:

07/01/2025

Rate	Fringe	Total
61.72	40.40	102.12

CLASSIFICATIONS:

Driller

Effective Dates:

07/01/2025

Rate	Fringe	Total
54.88	40.40	95.28

CLASSIFICATIONS:

Driller's Helper

FREE AIR TUNNEL JOBS **Rates Expiration Date :**

{For apprentice rates refer to "Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:
- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional $3.00 per hour.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:
-where Level A, B, or C protection is required: + $5.00/hr
-other Hazardous Waste site: + $1.00/hr

Traffic Control Coordinator: When either of the work classifications found below are working as a Traffic Control Coordinator they are to receive $.75 above their current rate of pay.

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
67.13	39.13	106.26	109.94

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
66.75	39.13	105.88	109.57

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

FREE AIR TUNNEL JOBS **Rates Expiration Date :**

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
66.13	39.13	105.26	108.94

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
69.25	39.13	108.38	112.07

CLASSIFICATIONS:

Blaster

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
65.44	39.13	104.57	108.26

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
65.00	39.13	104.13	107.82

CLASSIFICATIONS:

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Manitenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Tod Man)

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
64.81	39.13	103.94	107.63

CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man Top or Bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

FREE AIR TUNNEL JOBS **Rates Expiration Date :**

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
64.31	39.13	103.44	107.13

CLASSIFICATIONS:

All Others (including Powder Watchman, Change House Attendant, Top Laborer)

DRILL FOR GROUND WATER SUPPLY **Rates Expiration Date :**

The well driller and/or helper may perform all work relative to the construction, finishing, and servicing of wells, pumps and borings for ground water supply. The present methods of well drilling entailing as they do, many diverse job operations calling for drilling, pump discharge, piping, and the operation of various types of related power equipment, shall all be within the job duties and functions of the well driller and/or helper. In the event that an extension of work should occur beyond water well drilling functions, into the field of general construction work, such extension of work would come under the appropriate rates listed elsewhere in this wage determination.

- For Work Hours, Shift Differentials, Overtime Rates, and Recognized Holidays see the "Operating Engineers" section of this wage determination.

Effective Dates:

07/01/2025

Rate	Fringe	Total
60.47	40.40	100.87

CLASSIFICATIONS:

Driller

Effective Dates:

07/01/2025

Rate	Fringe	Total
53.63	40.40	94.03

CLASSIFICATIONS:

Driller's Helper

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date :**

NOTE: These wage rates only apply to dredging and other marine construction activities occurring in navigable waters and their tributaries.
Boat crews carrying explosive material (dynamite, pourfex, and other similar materials) shall be paid at 120% of the hourly wage rate for hours engaged in handling of said materials. Employees required to possess a Hazardous Material Certification as a condition of employment shall be compensated at 120% of the hourly wage rate.
OVERTIME:
Hours in excess of 40 per week, and all hours on Saturdays and Sundays, shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.
RECOGNIZED HOLIDAYS: New Year's Day, Martin Luther King Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

10/03/2024			10/01/2025	10/01/2026
Rate	Fringe	Total	Total	Total
47.07	15.34	62.41	63.92	65.74

CLASSIFICATIONS:

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator with MOTV, Deck Captain

Effective Dates:

10/03/2024			10/01/2025	10/01/2026
Rate	Fringe	Total	Total	Total
40.71	14.90	55.61	56.92	58.47

CLASSIFICATIONS:

Derrick Operator, Spider/Spill Barge Operator

Engineer, Electrician, Chief Welder, Chief Mate

Fill Placer, Operator II

Licensed Boat Operator

Maintenance Engineer

Effective Dates:

10/03/2024			10/01/2025	10/01/2026
Rate	Fringe	Total	Total	Total
38.31	14.73	53.04	54.27	55.75

CLASSIFICATIONS:

Certified Welder

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date :**

Effective Dates:

10/03/2024			10/01/2025	10/01/2026
Rate	Fringe	Total	Total	Total
37.26	14.66	51.92	53.12	54.54

CLASSIFICATIONS:

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

Effective Dates:

10/03/2024			10/01/2025	10/01/2026
Rate	Fringe	Total	Total	Total
36.07	14.57	50.64	51.80	53.18

CLASSIFICATIONS:

Boat Operator

Effective Dates:

10/03/2024			10/01/2025	10/01/2026
Rate	Fringe	Total	Total	Total
29.96	14.15	44.11	45.07	46.22

CLASSIFICATIONS:

Shoreman, Deckhand, Rodman, Scowman

Effective Dates:

10/03/2024			10/01/2025	10/01/2026
Rate	Fringe	Total	Total	Total
41.94	14.99	56.93	58.27	59.89

CLASSIFICATIONS:

Crane Operator

MICROSURFACING/SLURRY SEAL **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem
IN ALL OTHER COUNTIES use the Heavy and General Laborers - North "Slurry Seal Laborer" rates.

SHIFT DIFFERENTIALS:
Any shift starting at 3:30 PM or later shall receive an additional $0.35/hr

OVERTIME:
Hours in excess of 8 per day or 40 per week shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

Effective Dates:

08/26/2025			03/01/2026
Rate	Fringe	Total	Total
52.05	28.95	81.00	83.75

CLASSIFICATIONS:

Foreman

Effective Dates:

08/26/2025			03/01/2026
Rate	Fringe	Total	Total
50.10	28.95	79.05	81.80

CLASSIFICATIONS:

Box man, Hopper, CM Controller

Effective Dates:

08/26/2025			03/01/2026
Rate	Fringe	Total	Total
48.40	28.95	77.35	80.10

CLASSIFICATIONS:

Microsurface/Slurry Preparation

Effective Dates:

08/26/2025			03/01/2026
Rate	Fringe	Total	Total
49.05	28.95	78.00	80.75

CLASSIFICATIONS:

Squeegee man

MICROSURFACING/SLURRY SEAL **Rates Expiration Date :**

Effective Dates:

08/26/2025			03/01/2026
Rate	Fringe	Total	Total
46.95	28.95	75.90	78.65

CLASSIFICATIONS:

Cleaner, Taper

ASPHALT LABORERS - SOUTH **Rates Expiration Date :**

"THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem
{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}
The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.
SHIFT DIFFERENTIALS:
- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional $3.00 per hour.
OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.
RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.
Hazardous Waste Work:
-where Level A, B, or C protection is required: + $5.00/hr
-other Hazardous Waste site: + $1.00/hr
FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
55.20	39.13	94.33	97.58

CLASSIFICATIONS:

Paving Foreman

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
51.75	39.13	90.88	94.13

CLASSIFICATIONS:

Head Raker

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
51.90	39.13	91.03	94.28

CLASSIFICATIONS:

Screedman

ASPHALT LABORERS - SOUTH **Rates Expiration Date :**

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
51.35	39.13	90.48	93.73

CLASSIFICATIONS:

Tampers, Smoothers, Kettlemen, Painters, Shovelers, Roller Boys

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
51.45	39.13	90.58	93.83

CLASSIFICATIONS:

Milling Controller

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
51.65	39.13	90.78	94.03

CLASSIFICATIONS:

Traffic Control Coordinator

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
51.60	39.13	90.73	93.98

CLASSIFICATIONS:

Raker, Luteman

Effective Dates:

Rate	Fringe	Total

CLASSIFICATIONS:

Certified Paving Foreman

TEST BORING PRELIMINARY TO CONSTRUCTION-NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, Union

SHIFT DIFFERENTIAL:
Employees on a shift other than between the hours of 8:00 AM and 5:00 PM shall receive an additional $2.00 per hour.

OVERTIME:
Hours in excess of 8 per day, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Hazardous Waste Pay (for Levels A, B, and C): an additional 15% of the hourly rate, per hour.

A newly hired Helper with no experience in the industry shall be paid as follows:
1st year on the job - 70% of Helper wage rate
2nd year on the job - 80% of Helper wage rate
3rd year on the job - 90% of Helper wage rate
All helpers receive full fringe benefit rate.

Effective Dates:

10/18/2024

Rate	Fringe	Total
37.58	34.49	72.07

CLASSIFICATIONS:

Helper (4th year helper)

Effective Dates:

10/18/2024

Rate	Fringe	Total
47.88	34.49	82.37

CLASSIFICATIONS:

Driller

Effective Dates:

10/18/2024

Rate	Fringe	Total
54.50	34.49	88.99

CLASSIFICATIONS:

Foreman

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:
- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional $3.00 per hour.
FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:
-where Level A, B, or C protection is required: + $5.00/hr
-other Hazardous Waste site: + $1.00/hr

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
50.95	39.13	90.08	93.33

CLASSIFICATIONS:

"D" Rate:
basic, landscape, asphalt, slurry seal, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofer; timberman; wagon drill or drill master helper; powder carrier; magazine tender; signal man; power buggy operator; tree cutter; operator of basic power tools

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
51.65	39.13	90.78	94.03

CLASSIFICATIONS:

"C" Rate:
pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning; wagon drill, directional drill, or hydraulic drill operator; drill master; core driller; asphalt raker or lute man

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date :**

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
51.90	39.13	91.03	94.28

CLASSIFICATIONS:

"B" Rate:
concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; asphalt screedman; rammer; hardscaping; gunite nozzle man

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
55.45	39.13	94.58	97.83

CLASSIFICATIONS:

"A" Rate:
blaster

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
55.20	39.13	94.33	97.58

CLASSIFICATIONS:

"FOREMAN" Rate:
labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
56.20	39.13	95.33	98.58

CLASSIFICATIONS:

"GENERAL FOREMAN" Rate

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
52.40	39.13	91.53	94.78

CLASSIFICATIONS:

TRAFFIC CONTROL COORDINATOR Rate

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date :**

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
56.70	39.13	95.83	100.08

CLASSIFICATIONS:

" CERTIFIED FOREMAN Rate" :

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
57.70	39.13	96.83	101.08

CLASSIFICATIONS:

" CERTIFIED GENERAL FOREMAN Rate" :

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:
- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional $3.00 per hour.

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:
-where Level A, B, or C protection is required: + $5.00/hr
-other Hazardous Waste site: + $1.00/hr

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
50.95	39.13	90.08	93.33

CLASSIFICATIONS:

"D" Rate:
basic, landscape, asphalt, slurry seal, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofer; timberman; wagon drill or drill master helper; powder carrier; magazine tender; signal man; power buggy operator; tree cutter; operator of basic power tools

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
51.65	39.13	90.78	94.03

CLASSIFICATIONS:

"C" Rate:
pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning; wagon drill, directional drill, or hydraulic drill operator; drill master; core driller; asphalt raker or lute man

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date :**

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
55.45	39.13	94.58	97.83

CLASSIFICATIONS:

"A" Rate:
blaster

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
55.20	39.13	94.33	97.58

CLASSIFICATIONS:

"FOREMAN" Rate:
labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
56.20	39.13	95.33	98.58

CLASSIFICATIONS:

"GENERAL FOREMAN" Rate

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
52.40	39.13	91.53	94.78

CLASSIFICATIONS:

TRAFFIC CONTROL COORDINATOR Rate

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
57.70	39.13	96.83	101.08

CLASSIFICATIONS:

" CERTIFIED GENERAL FOREMAN Rate" :

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date :**

Effective Dates:

	03/01/2025		**03/03/2026**
Rate	Fringe	Total	Total
56.70	39.13	95.83	100.08

CLASSIFICATIONS:

" CERTIFIED FOREMAN Rate" :

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
51.90	39.13	91.03	94.28

CLASSIFICATIONS:

"B" Rate:
concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; asphalt screedman; rammer; hardscaping; gunite nozzle man

PIPELINE - MAINLINE TRANSMISSION **Rates Expiration Date :**

These rates apply to the following: welding on Transportation Mainline pipe lines (cross-country pipe lines, or any segments thereof, transporting coal, gas, oil, water or other transportable materials, vapors or liquids, including portions of such pipe lines within private property boundaries up to the final metering station or connection - the point where a valve, consumer connection, or town border station divides mainline transmission lines or higher pressure lateral and branch lines from lower pressure distribution systems).

PER DIEM PAYMENT:
In addition to the total wage rate paid for each craft, the following per diem (per day) amounts must also be paid - Pipeline Journeyman: $80.50; Pipeline Journeyman Welder: $140.50; and Pipeline Helper: $64.50. Note: in order to receive the per diem payment an employee must work a minimum of 8 hours in a 24 hour period.

NOTES:
- Journeymen employed as "stringer bead" welders and journeymen who are regularly employed as "hot-pass" welders shall receive $1.00 per hour more than other journeymen.
- Welders running "stringer bead" or "hot-pass" on "cutouts" or "tie-ins" on a production basis shall be paid $1.00 per hour above the journeymen rate.
- Whenever a welder helper is employed using a power buffer or power grinder immediately behind the stringer bead and /or hot-pass welders, and the pipe gang is set on a production basis, the helper shall be paid $2.00 per hour above the helper rate.
- If back welding is performed inside a pipe under either or both of the following conditions, the welder engaged in the welding will receive $3.00 per hour above the regular rate for the job only for the days on which such back welding is performed:
  - The employer elects, as a regular procedure, to back weld each line-up. This condition is not intended to apply to occasional back welding performed by the pipe gang to repair a bead, to rectify a "high-lo" condition or wall thickness, etc.
  - A welder is required to back weld a completed weld behind the firing line.
- If the welder helper is required to go inside the pipe for the purpose of brushing, buffing and grinding the weld, they shall receive a wage rate $1.00 per hour above the regular helper rate for the days involved.
- Welders working on "hot work" shall be paid $2.00 per hour above the regular rate for each day engaged in such work. "Hot work' is defined as work on lines in service where there is the danger of fire or explosion.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

OVERTIME:
Hours in excess of 8 per day, and all hours on Sundays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

06/18/2025

Rate	Fringe	Total
58.89	36.35	95.24

CLASSIFICATIONS:

Pipeline Journeyman Welder

Effective Dates:

06/18/2025

Rate	Fringe	Total
58.89	36.35	95.24

CLASSIFICATIONS:

Pipeline Journeyman

PIPELINE - MAINLINE TRANSMISSION **Rates Expiration Date :**

Effective Dates:

06/18/2025

Rate	Fringe	Total
33.84	25.47	59.31

CLASSIFICATIONS:

Pipeline Helper

PIPELINE - GAS DISTRIBUTION **Rates Expiration Date :**

These rates apply to the following: welding on gas line distribution systems (that portion of the gas distribution system placed in streets, roads, subways, tunnels, viaducts, highways and easements which serves the users of gas).

SHIFT DIFFERENTIALS:
An "irregular" shift may start any time from 5:00 PM to 12:00 AM, Monday through Friday, and shall receive an additional 15% of the regular rate per hour, inclusive of benefits.

OVERTIME:
Hours in excess of forty per week, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

11/04/2024

Rate	Fringe	Total
64.70	34.74	99.44

CLASSIFICATIONS:

Pipeline Journeyman Welder

Effective Dates:

11/04/2024

Rate	Fringe	Total
64.70	34.74	99.44

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

11/04/2024

Rate	Fringe	Total
41.73	24.77	66.50

CLASSIFICATIONS:

Pipeline Helper

ASPHALT LABORERS- NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren
{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}
The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.
SHIFT DIFFERENTIALS:
- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional $3.00 per hour.
OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.
RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.
Hazardous Waste Work:
-where Level A, B, or C protection is required: + $5.00/hr
-other Hazardous Waste site: + $1.00/hr
FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
55.20	39.13	94.33	97.58

CLASSIFICATIONS:

Asphalt Foreman

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
51.90	39.13	91.03	94.28

CLASSIFICATIONS:

Asphalt Screedman

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
51.65	39.13	90.78	94.03

CLASSIFICATIONS:

Asphalt Raker or Lute Man

ASPHALT LABORERS- NORTH **Rates Expiration Date :**

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
50.95	39.13	90.08	93.33

CLASSIFICATIONS:

Asphalt Laborer

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
56.70	39.13	95.83	100.08

CLASSIFICATIONS:

Certified Asphalt Foreman

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Electrician-Utility Work (North)
(For apprentice rates refer to Electrician-Utility Work (North) in any county rate package).
These rates apply to work contracted for by the following utility companies:
Public Service Electric & Gas Co. of NJ, GPU Energy, Borough of Madison Electric Department, Sussex Rural Electric Cooperative, Rockland Utilities, and Butler Municipal Electric Co.
These rates do not apply to work on substations or switching stations.
For Utility work contracted for by a utility company other than those listed above or those listed under "Electrician-Utility Work (South), see the "Outside Commercial Rates" for the county in which the jobsite is located.

* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 6:00 AM and 6:00 PM.
FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)-all hours of work shall be paid at double the hourly rate.
SHIFT DIFFERENTIALS:
Shift work must run for a minimum of 5 consecutive workdays.
2nd shift (between the hours of 4:30 PM and 1:00 AM): 8 hours of work + 17.3% of the regular rate, inclusive of benefits.
3rd shift (between the hours of 12:30 AM and 9:00 AM): 8 hours of work + 31.4% of the regular rate per hour, inclusive of benefits.

OVERTIME:
Hours in excess of 8 per day, or before or after the regular wokday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
Four 10-hour days may worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday.

RECOGNIZED HOLIDAYS:
New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day and Christmas Day, or day on which they are legally observed.

Effective Dates:

12/01/2024

Rate	Fringe	Total
64.83	44.73	109.56

CLASSIFICATIONS:

Chief Lineman

Effective Dates:

12/01/2024

Rate	Fringe	Total
61.16	42.20	103.36

CLASSIFICATIONS:

Journeyman Lineman

Effective Dates:

12/01/2024

Rate	Fringe	Total
61.16	42.20	103.36

CLASSIFICATIONS:

Special License Operator

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

12/01/2024

Rate	Fringe	Total
60.55	41.77	102.32

CLASSIFICATIONS:

Transit Man

Effective Dates:

12/01/2024

Rate	Fringe	Total
58.71	40.50	99.21

CLASSIFICATIONS:

Line Equipment Operator

Effective Dates:

12/01/2024

Rate	Fringe	Total
51.37	35.44	86.81

CLASSIFICATIONS:

Dynamite Man

Effective Dates:

12/01/2024

Rate	Fringe	Total
76.45	52.75	129.20

CLASSIFICATIONS:

General Foreman

Effective Dates:

12/01/2024

Rate	Fringe	Total
70.33	48.52	118.85

CLASSIFICATIONS:

Assistant General Foreman

Effective Dates:

12/01/2024

Rate	Fringe	Total
68.50	47.26	115.76

CLASSIFICATIONS:

Line Foreman

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

12/01/2024

Rate	Fringe	Total
49.54	34.18	83.72

CLASSIFICATIONS:

Street Light Mechanical Leader

Effective Dates:

12/01/2024

Rate	Fringe	Total
47.09	32.49	79.58

CLASSIFICATIONS:

Groundman Winch Operator

Effective Dates:

12/01/2024

Rate	Fringe	Total
47.09	32.49	79.58

CLASSIFICATIONS:

Groundman Truck Operator

Effective Dates:

12/01/2024

Rate	Fringe	Total
46.48	32.07	78.55

CLASSIFICATIONS:

Street Light Mechanic

Effective Dates:

12/01/2024

Rate	Fringe	Total
46.48	32.07	78.55

CLASSIFICATIONS:

Line Equipment Mechanic

Effective Dates:

12/01/2024

Rate	Fringe	Total
39.75	27.42	67.17

CLASSIFICATIONS:

Groundman 2nd Year

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

12/01/2024

Rate	Fringe	Total
36.70	25.32	62.02

CLASSIFICATIONS:

Groundman 1st Year

Effective Dates:

12/01/2024

Rate	Fringe	Total
60.55	41.77	102.32

CLASSIFICATIONS:

Line Equipment Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Electrician-Utility Work (South)
(For apprentice rates refer to Electrician-Utility Work (South) in any county rate package).
These rates apply to work contracted for by the following utility company:
Atlantic City Electric.
These rates do not apply to work on substations or switching stations.
For utility work contracted for by a utility company other than the one listed above or those listed under "Electrician-Utility Work (North), see the "Outside Commercial Rates" for the county in which the jobsite is located.

* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 7:00 AM and 4:30 PM.
FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)- all hours of work shall be paid at double the hourly rate.
SHIFT DIFFERENTIALS:
Shift work must run for a minimum of 5 consecutive workdays.
When two (2) or three (3) shifts are worked the following shall apply:
1st shift (between the hours of 8:00 AM and 4:30 PM)
2nd shift (between the hours of 4:30 PM and 12:30 AM): 8 hours of work + 10% of the regular rate of pay for 7.5 hours worked.

3rd shift (between the hours of 12:30 AM and 8:00 AM): 8 hours of work + 15% of the regular rate of pay for 7 hours worked.

OVERTIME:
Hours in excess of 8 per day, or before or after the regular wokday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and Holidays shall be paid double the hourly rate.

Four 10-hour days may be worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday with Friday used as a make-up day.

RECOGNIZED HOLIDAYS:
New Year's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day or on days celebrated.

WORKING RULES:
There shall be a Foreman in charge of each work crew. No crews are to exceed twelve (12) men, including Foremen.

There shall be a General Foreman designated for transmission work when three (3) or more crews are on the same job and for distribution work where there are are more than twenty (20) employees on site.

A small job crew shall consist of five (5) or less employees, one (1) of the Journeyman Linemen in the crew shall be designated as a Small Job Foreman.
Work performed from ladders and/or mechanical lift equipment shall be the work of Linemen and/or Apprentices.
On new construction, fitting and framing poles, towers or structures may be done by Journeymen and/or Apprentices.
Groundmen may assist, but may not perform any work which would be performed by Linemen if assembled in the air.

There shall be a Journeyman Lineman in each pole setting, erection, grounding, wire and cable-pulling crew of more than three (3) men.

Effective Dates:

12/01/2024

Rate	Fringe	Total
71.87	59.12	130.99

CLASSIFICATIONS:

General Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Effective Dates:

12/01/2024

Rate	Fringe	Total
64.01	54.22	118.23

CLASSIFICATIONS:

Foreman

Effective Dates:

12/01/2024

Rate	Fringe	Total
60.64	52.12	112.76

CLASSIFICATIONS:

Small Job Foreman

Effective Dates:

12/01/2024

Rate	Fringe	Total
56.15	49.33	105.48

CLASSIFICATIONS:

Heavy Equipment Operator

Effective Dates:

12/01/2024

Rate	Fringe	Total
56.15	49.33	105.48

CLASSIFICATIONS:

Cable Splicer

Effective Dates:

12/01/2024

Rate	Fringe	Total
56.15	49.33	105.48

CLASSIFICATIONS:

Journeyman Lineman

Effective Dates:

12/01/2024

Rate	Fringe	Total
56.15	49.33	105.48

CLASSIFICATIONS:

Journeyman Welder

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Effective Dates:

12/01/2024

Rate	Fringe	Total
56.15	49.33	105.48

CLASSIFICATIONS:

Journeyman Painter

Effective Dates:

12/01/2024

Rate	Fringe	Total
44.92	42.36	87.28

CLASSIFICATIONS:

Light Equipment Operator

Effective Dates:

12/01/2024

Rate	Fringe	Total
39.31	38.86	78.17

CLASSIFICATIONS:

Groundman Truck Driver

Effective Dates:

12/01/2024

Rate	Fringe	Total
36.50	37.12	73.62

CLASSIFICATIONS:

Groundman 3rd Year

Effective Dates:

12/01/2024

Rate	Fringe	Total
33.69	35.37	69.06

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/01/2024

Rate	Fringe	Total
30.88	33.62	64.50

CLASSIFICATIONS:

Groundman 1st Year

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Effective Dates:

12/01/2024

Rate	Fringe	Total
24.71	29.80	54.51

CLASSIFICATIONS:

Flagman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS **Rates Expiration Date :**

THESE RATES APPLY TO CONSTRUCTION ON NEW TRANS HUDSON TUNNELS ONLY

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:
- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional $3.00 per hour.

OVERTIME:
- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:
-where Level A, B, or C protection is required: + $5.00/hr
-other Hazardous Waste site: + $1.00/hr

Traffic Control Coordinator: When either of the work classifications found below are working as a Traffic Control Coordinator they are to receive $.75 above their current rate of pay.

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
80.55	39.13	119.68	123.81

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

	03/01/2025		03/01/2026
Rate	Fringe	Total	Total
80.10	39.13	119.23	123.36

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS **Rates Expiration Date :**

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
79.35	39.13	118.48	122.61

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
83.10	39.13	122.23	126.36

CLASSIFICATIONS:

Blaster

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
78.53	39.13	117.66	121.78

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
78.00	39.13	117.13	121.26

CLASSIFICATIONS:

Skilled Men (including Caulker, Powder Carrier, all other skilled men)
Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Maintenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Rod Man)

Effective Dates:

03/01/2025			03/01/2026
Rate	Fringe	Total	Total
77.78	39.13	116.91	121.03

CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man top or bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)
Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man,
Gravel Man, Form Man)

TERRITORY

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

PREVAILING WAGE RATE DETERMINATION

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS **Rates Expiration Date :**

Effective Dates:

	03/01/2025		**03/01/2026**
Rate	Fringe	Total	Total
77.18	39.13	116.31	120.43

CLASSIFICATIONS:

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)

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SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work performed by Owner.
5. Owner-furnished/Contractor-installed (OFCI) products.
6. Contractor's use of site and premises.
7. Coordination with occupants.
8. Work restrictions.
9. Specification and Drawing conventions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
2. Section 017300 "Execution" for coordination of Owner-installed products.

1.3 DEFINITIONS

A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

1.4 PROJECT INFORMATION

A. Project Identification: Roof Replacement- Houses 5, 10, & 11-
PS&S # 039400001

1. Project Location: Deserted Village/Glenside Park, Cataract Hollow Berkeley Heights, NJ.

B. Owner: Union County Improvement Authority

C. Owner’s Representative: RSC Architects, LLC.- Timothy Hennesy, 3 University Plaza, Hackensack, NJ 07601- Telephone: 201.941.3040.

D. Architect: Paulus Sokolowski and Sartor Engineering, PC, 3 Mountainview Road, Warren, NJ

E. Review Authority:

1. The New Jersey Historic Preservation Office (NJ Department of Environmental Protection, P.O. Box 420, Trenton, NJ 08625) in accordance with 36 CFR Part 8002 Protection of Historic Properties, as published in the Federal Register on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (643 FR 40553-40555).

2. Please note that NJHPO review will be required for any deviations from these plans which may affect the appearance of the buildings. In the event that NJHPO review is required to allow a change, the contractor may be required to prepare mockups, product specifications and/or illustrations as well as written justifications.

1.5 HISTORIC AND ARCHITECTURAL SIGNIFICANCE AND STATUS

1. The site is listed on the New Jersey and National Registers of Historic Places (Feltville Historic District) and as such shall comply and adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings.

1.6 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

1. Roof Replacement- Main Roofs only (no porches) to Houses 5, 10, & 11- Refer to work as defined on the contract documents. Work includes new roofing and associated flashing, structural roof members repair, restoration of existing built-in gutters, new downspouts, raking and repointing of existing brick chimneys exposed to the weather, and other Work indicated in the Contract Documents.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.7 PHASED CONSTRUCTION

A. Construct the Work in as directed by Union County, with each phase substantially complete as indicated on Drawings or as defined the contract with the owner.

1. Phase 1 includes work associated with Buildings 5, 10, & 11.
2. Subsequent phases shall be bid under separate contract.

a. Commencement of Construction:

1) Notice to Proceed: Work of this phase shall commence within the number of days as defined by the contract and/or the Notice to Proceed.

b. Substantial Completion:

1) Within the number of days as defined by the contract and/or the Notice to Proceed.

B. Before commencing Work of each phase, submit an updated copy of Contractor's (COM) construction schedule, showing the sequence, commencement, and completion dates, and move-out and -in dates of Owner's personnel for all phases of the Work.

1.8 WORK PERFORMED BY OWNER

A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.9 OWNER-FURNISHED/CONTRACTOR-INSTALLED (OFCI) PRODUCTS

A. Owner's Responsibilities: Owner will furnish products indicated and perform the following, as applicable:

1. Provide to Contractor Owner-reviewed Product Data, Shop Drawings, and Samples.
2. Provide for delivery of Owner-furnished products to Project site.
3. Upon delivery, inspect, with Contractor present, delivered items.

a. If Owner-furnished products are damaged, defective, or missing, arrange for replacement.

4. Obtain manufacturer's inspections, service, and warranties.
5. Inform Contractor of earliest available delivery date for Owner-furnished products.

B. Contractor's Responsibilities: The Work includes the following, as applicable:

1. Designate delivery dates of Owner-furnished products in Contractor's construction schedule, utilizing Owner-furnished earliest available delivery dates.
2. Review Owner-reviewed Product Data, Shop Drawings, and Samples, noting discrepancies and other issues in providing for Owner-furnished products in the Work.
3. Receive, unload, handle, store, protect, and install Owner-furnished products.
4. Make building services connections for Owner-furnished products.
5. Protect Owner-furnished products from damage during storage, handling, and installation and prior to Substantial Completion.
6. Repair or replace Owner-furnished products damaged following receipt.

C. Owner-Furnished/Contractor-Installed (OFCI) Products:

1. Electronic Display devices
2. Other items as defined by the Owner or as defined on the contract documents.

D. Owner-Responsibility/Contractor Installed (ORCI) Products:

1. Owners' vendor will install card access devices and wiring; General Contractor is responsible for providing and installing conduit and back-box in walls for card access devices.

1.10 CONTRACTOR'S USE OF SITE AND PREMISES

A. Restricted Use of Site: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits on Use of Site: Confine construction operations to areas where work is defined or permitted. Review limits of work with Owner and Owners representative to minimize disruption to the site and Owners daily activities.
2. Limits: Limit site disturbance, including earthwork and clearing of vegetation, to 40 feet beyond building perimeter; 15 feet beyond surface walkways, patios, surface parking, and utilities; and 25 feet beyond constructed areas with permeable surfaces that require additional staging areas to limit compaction in the constructed areas.
3. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

    a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.11 COORDINATION WITH OCCUPANTS

A. Full Owner Occupancy: Owner will occupy Project site and existing adjacent building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

B. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.

1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
2. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
3. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.12 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 4:00 p.m., Monday through Friday, unless otherwise indicated.

1. Weekend Hours: Per Owner’s Approval.
2. Early Morning Hours: Per Owner’s Approval
3. Late Evening Hours: Per Owner’s Approval
4. Hours for Utility Shutdowns and Equipment Rigging: Weekend Hours.
5. Hours for core drilling and other noisy work: Weekday Hours of 7:00 a.m. to 8:00 a.m. and 6:00 p.m. to 10:00 p.m. where compliant with the County of Union.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

1. Notify Owner not less than ten (7) days in advance of proposed utility interruptions.
2. Obtain Owner's written permission before proceeding with utility interruptions.

D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner not less than five (3) days in advance of proposed disruptive operations.
2. Obtain Owner's written permission before proceeding with disruptive operations.

E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

F. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances within the existing building on Project site on Owner's property is not permitted.

G. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Always require personnel to use identification tags.

H. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.

1.13 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Owners General Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.

C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 011100 - PROJECT SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes, but is not limited to, the following:
   1. Work Sequence.
   2. Contractor’s Construction Schedule Submittal.
   3. Contractor’s use of premises.
   4. Owner Occupancy.

1.2 WORK SEQUENCE

A. Project Start: Commence construction activity at the site as soon after contract award as required to comply with specified Construction Schedule, unless otherwise specified in Construction Schedule below.
   1. Schedule material deliveries to correspond with starting dates so that materials are on site on required start date.
   2. The ordering of equipment and the expediting of delivery of such is the responsibility of the Contractor.
   3. As soon as possible after signing this contract, the Contractor shall place orders for materials and equipment necessary to complete this contract after submittals have been reviewed and approved by the Architect or Engineer, and construction manager.
   4. Color Selection: Within 30 days after contract award max, submit complete list of proposed manufacturers and complete product designations (i.e. model, grade, series, product line, etc.) for each item requiring color selection by Architect.

B. Contractor shall coordinate his work scheduling with other sub-contractors, utility companies and shall be responsible for maintaining work continuity. No claims for delay will be considered when said claims are based on physical or schedule interferences with sub-contractors, or when Owner caused interferences require this Contractor to temporarily relocate his working area to another portion of the contract space.

C. Provide a workforce adequate in number to complete the project in the proper time and in the proper sequence to allow all other work to proceed without delay.

D. If the completion of the job is unnecessarily delayed because of the failure of the Contractor to properly execute the work or ordering of material, he shall be required to install, at his own expense, any temporary work required by the Owner to maintain the project completion schedule.

E. Coordination:
   1. Schedule all construction activities at Site with Architect and Owner’s Representative, to avoid, to maximum extent, interference with Owner's operations and to meet specified completion dates. It is responsibility of the Contractor to meet the Construction Schedule within Owner's Schedule.
      a. Coordinate construction activities through the Architect and Owner’s Representative with the Owner’s calendar issued by Owner to the Contractor to avoid interference with Owner's schedule / process and operations within building.
      b. Review Contract Document requirements in relationship to requirements for other Contractors and Owner's Schedule.

2. Coordinate all interruptions of building services, shut-down of building systems or testing of building systems, through the Construction Manager, Architect and Owner's Representative, and obtain, through the Construction Manager, Architect and Owner's Representative, written approval of proposed schedule for interruptions, shut-down or testing from Construction Manager, Architect and Owner. 72 - hour advanced notice from the contractor to the Construction Manager and owner is required for all service turn overs and shutdowns. Contractor shall provide temporary services for all services to avoid shutdowns. Owner will approve or disapprove request with comments as required.

    a. If, in Owner's opinion, any such interruption or shut-down will affect life safety of building occupants or operations, the scheduled interruption or shut-down shall be adjusted to a time acceptable to Owner, at time when operations are not in session, or after normal working hours. Coordinate all changes through the Construction Manager, Architect and Owner's Representative.
    b. Owner will not make extra payment for overtime outside normal working hours required by any such interruption or shutdown. If the Contractor requires overtime, they shall do so at their cost and shall be responsible for extra costs incurred by their Subcontractors as a result.
    c. Ensure all equipment, fittings, pipe, and similar items required are available before temporary service tie-ins are turned over and interrupting or shutting-down existing systems.
    d. Notify all inspectors and representatives of utility companies, township, county, etc. officials, Owner's Representative, Architect, Owner, and similar parties by letter in advance of required changeovers, tie-ins, removals, and similar operations.

F. Construction Schedule:
1. Refer to "Project Milestone Schedule" Attachment #1
2. Provide Schedule as required by Construction Manager, Architect, and Owner. Format may be in a bar graph schedule or CPM schedule as approved by Construction Manager, Architect, and Owner.
3. Provide Submittal Schedule with anticipated dates for Product Submission and coordinate dates with Construction Schedule. Refer to Division 01 – Submittals for more information.

1.3 CONTRACTOR'S CONSTRUCTION SCHEDULE SUBMITTAL

A. Contractor shall prepare a Construction Schedule submittal in accordance with the General Conditions and contract documents for the entire amount of Work in the Prime Contract in accordance with the following requirements:

1. The Contractor shall prepare a Project Progress Schedule in the form of a graphic Planning System Software package (CPM schedule), for coordinating and controlling the Project Work. (Similar to Microsoft Projects, Primavera, or approved equal). The contractor shall be responsible for the overall coordination of the Project Work and updating of the schedule to illustrate the current rate of Project Progress.
2. Submit (4) copies of the initial schedule and each revision to the Construction Manager, Architect, Owner, Owner's Representative for their use.

1.4 CONTRACTOR USE OF PREMISES

A. Access to Building - Contractor: Schedule all construction activities with Owner through the Construction Manager / Owner's Representative to allow Owner's full use of building areas and systems for normal operation and occupancy process.

1. Owner acknowledges Contractors will require access to Owner-occupied spaces, areas, rooms, and systems, and intends to cooperate where practical in making rooms and systems available for construction activities.
2. Notify Owner's Representative in advance of any requirements for access to the existing building while the space is occupied or outside normal working hours and days.
3. All contractors' personnel must fulfill required background check requirements noted in Section 013100. All contractors to produce and wear ID Badges at all times while on site. Badges must have Company Name, Photo ID, and individuals Name as required by the Owner.

B. Building Security: Owner will maintain building security at all times for their sole benefit. The Contractor retains full responsibility for security and protection of Work and equipment of his Contract until final acceptance by Owner.

C. Maintenance of Building Circulation and Exits: Maintain circulation corridors, exits, and exit stairs unobstructed from equipment and materials, except in areas of construction activity enclosed by temporary partitions. Egress plans must meet the approval of the local code official.

D. "Noise" shall be defined as the noise generated from any power equipment, any power machine, or the noise created by providing blunt force to an object from another object. Contractor shall keep "Noise" to a minimum during testing or other occupancy times that may be disruptive to the Owner use of the building.

1.5 OWNER OCCUPANCY

A. Normal Year - Owner intends to maintain full operational program during the normal year throughout duration of Project, and will make full use of buildings and sites, unless otherwise specified.

1. School and special activities will be conducted within buildings and on site after regular hours and on weekends during the normal year.
2. The buildings will be used for day and evening functions during the year.
3. The Contractor shall maintain free access for Owner's personnel to building and site areas not scheduled for alteration or dimensional change. Refer to "Project Milestone Schedule".
4. Owner's personnel will perform normal custodial and maintenance services for building areas and systems not involved in construction activities, unless otherwise indicated. Safe access and egress to and from the building will be provided.
5. The contractor is required to provide a clear, free and accessible route to access and exit the spaces affected by the work activities and identified by the Owner, Architect, Construction Manager, and Code official. Contractor is to keep all exit access paths and exit doors in the building clear of any obstructions. This will include all temporary measures, including but not limited to, temporary partitions, ramps, walks, guards, hardware, doors, and lighting / electrical systems.

6. The Contractor shall coordinate work activities around the Owner's occupancy dates to prevent noise and disruption to the Owners activities. The Contractor shall always maintain clear access and egress for buildings involved in this Project.
7. Building work hours:
   a. Building Work hours: Owner will occupy building Monday thru Friday; Saturday and Sunday. Weekend, before hours and afterhours access will be provided on a limited basis upon request in writing and approval of Owner and Construction Manager.
      1) Normal business hours - 7:00AM thru 4:00PM
      2) Duration of work hours may be adjusted for outdoor work to meet the local zoning ordinance restrictions including noise.
      3) Contractor will propose adjustments to this schedule which will be considered, approved, or denied by the Owner and Construction Manager upon written request.

8. The Owner will not pay for overtime to the contractor for any work performed beyond normal business hours during the calendar year.
9. If work progress is delayed or behind to complete the project within the projected time / schedule, the contractor will be required to work during afterhours (Monday thru Friday after 4:00PM; work performed during the weekday will be performed at no additional cost to the Owner. Weekends (Sat and Sun) can be scheduled for work with 72-hour advanced written notice to the Owner. Weekend hours will be performed at no additional cost to the Owner. The Owner will not pay for overtime to the contractor for work performed after school hours.

1.6 TIME OF COMPLETION – MILESTONE DATES:

A. Refer to ATTACHMENTS in this specification section for a list of interim milestone events and associated completion dates of each portion of the work. The Contractor is responsible for meeting these milestone dates and is responsible to maintain the schedule as established as part of the contract. The Contractor will provide progress updates to the project schedule as specified; monthly (1 week in advance of the progress payments unless otherwise agreed upon with the Construction Manager and Owner).

PART 2 – PRODUCTS - NOT USED.

PART 3 – EXECUTION - NOT USED.

END OF SECTION 011100

ATTACHMENT #1
PROJECT MILESTONE SCHEDULE

TASK	ESTIMATED MILESTONE DATE
BIDDING	
Start of Bidding	
Pre-Bid Meeting	
Bid Opening – Virtual	
Award - Estimated	
Estimated Award / Notice to Proceed (NTP)	
Final Construction Completion (phase 1 & phase 2)	
Final Construction Completion (Phase 1owner occupied)	
Upon completion of Phase 1, Phase 2 work shall commence. Final Construction Completion (Phase 2 owner occupied)	

Notes:

1. Work is to be coordinated with the Owner's Schedule.
2. The dates and sequences noted are estimated dates and need to be coordinated with the Owner's final Occupancy Calendar once published. The contractor is required to submit and provide a schedule with milestone dates for major portions of the work to meet the completion date of the project.
3. Contractor will coordinate all work activities, sequence work including start and finish dates to meet the completion date of the project by phase.
4. Contractor is to adjust their manpower requirements as required to meet the substantial completion dates noted.
5. A single substantial completion / punch list will be performed in one visit for each phase by the design professional once they are notified in writing by the contractor that work is complete and ready for punch list in accordance with the specified requirements noted in Division 01 - Contract Closeout.

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SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Lump-sum allowances.

C. Related Requirements:

1. Section 012200 "Unit Prices" for procedures for using unit prices, including adjustment of quantity allowances when applicable.
2. Section 014000 "Quality Requirements" for procedures governing the use of allowances for field testing by an independent testing agency.
3. Refer to Bid Form B-4 to formalize allowance figures as part of the bid.

1.3 DEFINITIONS

A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, insurance, equipment rental, and similar costs.

C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.

D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. Allowance No. 1: Contingency Allowance: Include a Bid contingency allowance of $30,000.00 within the base bid contractor amount for use according to Owner's written instructions.

1. This allowance includes material cost receiving, handling, and installation and Contractor overhead and profit.

END OF SECTION 012100

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Section 012100 "Allowances" for products selected under an allowance.
2. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use form acceptable to Architect.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication, or installation method cannot be provided, if applicable.
b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.

c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from code organizations noted in the contract documents.
j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, cost comparison to the product specified, including a proposal of change and the cost benefit to the Owner, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
n. Contractor will be responsible for the cost of fees / design changes required to be performed by the design professional to accommodate the proposed substitution into the scope of the work.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Requested substitution provides sustainable design characteristics that specified product provided for compliance with project sustainability requirements.
c. Substitution request is fully documented and properly submitted.
d. Requested substitution will not adversely affect Contractor's construction schedule.
e. Requested substitution has received necessary approvals of authorities having jurisdiction.
f. Requested substitution is compatible with other portions of the Work.
g. Requested substitution has been coordinated with other portions of the Work and does not impact other scope of work items.
h. Requested substitution provides specified warranty.
i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Consultant will consider requests for substitution if received within 15 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Consultant.

1. Conditions: Consultant will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect’s / Engineer’s Consultant will return requests without action, except to record noncompliance with these requirements:
a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect’s /Engineer’s Consultant for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
b. Requested substitution does not require extensive revisions to the Contract Documents.
c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
d. Substitution request is fully documented and properly submitted.
e. Requested substitution will not adversely affect Contractor's construction schedule.
f. Requested substitution has received necessary approvals of authorities having jurisdiction.

g. Requested substitution is compatible with other portions of the Work.
h. Requested substitution has been coordinated with other portions of the Work.
i. Requested substitution provides specified warranty.
j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. Related Requirements:

1. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
2. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
2. Submit the schedule of values to Architect at earliest possible date, but no later than ten days before the date scheduled for submittal of initial Applications for Payment.
3. Sub-schedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values coordinated with each phase of payment.

B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:

a. Project name and location.

b. Owner's name.
c. Owner's Project number.
d. Name of Architect.
e. Architect's Project number.
f. Contractor's name and address.
g. Date of submittal.

2. Arrange schedule of values consistent with format of AIA Document G703.
3. Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:

a. Related Specification Section or division.
b. Description of the Work.
c. Change Orders (numbers) that affect value.
d. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.

1) Labor.
2) Materials.

4. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
5. Overhead Costs, Separate Line Items: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
6. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
7. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

1.5 APPLICATIONS FOR PAYMENT

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

B. Payment Application Times: Submit Application for Payment to Architect by the 21st day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.

1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.

C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.

1. Other Application for Payment forms proposed by the Contractor may be acceptable to Architect Construction Manager and Owner. Submit forms for approval with initial submittal of schedule of values.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect Construction Manager will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
3. Provide summary documentation for stored materials indicating the following:

    a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect Construction Manager by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.

1. Owner reserves the right to designate which entities involved in the Work must submit waivers.
2. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

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

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
5. Products list (preliminary if not final).
6. Sustainable design action plans, including preliminary project materials cost data.
7. Schedule of unit prices.
8. Submittal schedule (preliminary if not final).
9. List of Contractor's staff assignments.
10. List of Contractor's principal consultants.
11. Copies of building permits.
12. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
13. Initial progress report.
14. Report of preconstruction conference.
15. Certificates of insurance and insurance policies.
16. Performance and payment bonds.
17. Data needed to acquire Owner's insurance.

I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

    a. Complete administrative actions, submittals, and Work preceding this application, as described in Section 017700 "Closeout Procedures."

2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Certification of completion of final punch list items.
3. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
4. Maintenance Bond if applicable with general & supplementary conditions of the contract.
5. Updated final statement, accounting for final changes to the Contract Sum.
6. AIA Document G706.
7. AIA Document G706A.
8. AIA Document G707.
9. Evidence that claims have been settled.
10. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
11. Final liquidated damages settlement statement if applicable.
12. Proof that taxes, fees, and similar obligations are paid.
13. Waivers and releases.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

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SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project, including, but not limited to, the following:

1. General coordination procedures.
2. Background check requirements for all contractors.
3. Coordination drawings.
4. RFIs.
5. Digital project management procedures.
6. Web-based Project management software package.
7. Project meetings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

C. Related Requirements:

1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

A. BIM: Building Information Modeling.

B. RFI: Request for Information. Request from Owner, Construction Manager, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities, list addresses, cellular telephone numbers, and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, in web-based Project software directory, and in prominent location in each built facility. Always keep list current.

1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results, where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.
4. The General Contractor shall coordinate its own operations with all sub-contractors and the Owner operations. This shall include work defined in different Sections of the contract documents that depend on each other for proper installation, sequence, connection, installation, and operation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and scheduled activities of other contractors and direction of Project coordinator to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.

1.6 BACKGROUND CHECK REQUIREMENTS

A. It is the requirement of the County of Union that ALL contractors (both General Contractors and their sub-contractors) and their personnel be vetted through a fingerprint based background check process prior to being permitted entry into the County facility(s) and the commencement of the proposed work.

B. It is the responsibility of the General Contractor or vendor in charge, to make sure that all personnel who will be working in and around the County facility contact the State of New Jersey, Department of Law & Public Safety, Division of State Police Criminal Information Unit at (609) 822-2000, Ext. 2918 or visit their website at https://njsp.org/criminal-history-records/ and follow the instructions to obtain a copy of each person's "Individual Criminal History Record".

C. PLEASE NOTE: ALL FEES & TIME ASSOCIATED IN COMPLETING THIS PROCESS ARE THE SOLE RESPONSIBILITY OF THE APPLICANT AND/OR THEIR AFFILIATES (E.G. GENERAL CONTRACTOR AND/OR SUBCONTRACTORS).

D. Once obtained, original sealed records (no copies) shall be sent/delivered to the Union County Sheriff's Office at the following address:
   1. Union County Sheriff's Office; 2 Broad Street, Control Center; Elizabeth, NJ 07207; 908-527-4440

E. Upon completion of the review and processing of the information received, the Union County Sheriff's Office will issue identification cards to all contractors' personnel authorized into the County facility to conduct work activities. It is the responsibility of the General Contractor or vendor in charge of the proposed work to maintain a current and accurate list of; any and all; screened and approved personnel with the Union County Sheriff's Office.

F. THE COUNTY OF UNION SHALL NOT BE RESPONSIBLE FOR ANY DELAYS AND/OR DAMAGES EITHER DIRECTLY OR INDIRECTLY RESULTING FROM THE FAILURE TO COMPLY WITH THESE REQUIREMENTS BY ANY GENERAL CONTRACTOR OR VENDOR IN CHARGE.

1.7 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

   1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:

      a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
      b. Coordinate the addition of trade-specific information to coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.

c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
f. Indicate required installation sequences.
g. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Plenum Space: Indicate sub-framing for support of ceiling, raised access floor, and wall systems, mechanical and electrical equipment, and related Work. Locate components within plenums to accommodate layout of light fixtures and other components indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms, showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Mechanical and Plumbing Work: Show the following:

    a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
    b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
    c. Fire-rated enclosures around ductwork.

7. Electrical Work: Show the following:

    a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger including bundled runs of conduit.
    b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
    c. Panel board, switchboard, switchgear, transformer, busway, generator, and motor-control center locations.
    d. Location of pull boxes and junction boxes dimensioned from column center lines.

8. Fire-Protection System: Show the following:

    a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.

9. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.
10. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 013300 "Submittal Procedures."

C. Coordination Drawing Process: Prepare coordination drawings in the following manner:

1. Schedule submittal and review of Fire Sprinkler, Plumbing, HVAC, and Electrical Shop Drawings to make required changes prior to preparation of coordination drawings.
2. Commence routing of coordination drawing files with HVAC Installer, who will provide drawing plan files denoting approved ductwork. HVAC Installer will locate ductwork and piping on a single layer, using orange color. Forward drawings to Plumbing Installer.
3. Plumbing Installer will locate plumbing and equipment on a single layer, using blue color.
4. Fire Sprinkler Installer will locate piping and equipment, using red color. Fire Sprinkler Installer shall forward drawing files to Electrical Installer.
5. Electrical Installer will indicate service and feeder conduit runs and equipment in green color. Electrical Installer shall forward drawing files to Communications and Electronic Safety and Security Installer.
6. Communications and Electronic Safety and Security Installer will indicate cable trays and cabling runs and equipment in purple color. Communications and Electronic Safety and Security Installer shall forward completed drawing files to Contractor.
7. Contractor shall perform the final coordination review. As each coordination drawing is completed, Contractor will meet with Architect to review and resolve conflicts on the coordination drawings.

D. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:

1. File Preparation Format:

   a. Same digital data software program, version, and operating system as original Drawings.
   b. DWG, current version as defined by the design professional operating in Microsoft Windows operating system.

2. File Submittal Format: Submit or post coordination drawing files using format same as file preparation format or PDF format if approved by the design professional.
3. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.

   a. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.

1.8 REQUEST FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Owner name.
3. Owner's Project number.
4. Name of Architect and Construction Manager.
5. Architect's Project number.
6. Name of Contractor.
7. RFI number, numbered sequentially.
8. RFI subject.
9. Specification Section number and title and related paragraphs, as appropriate.
10. Drawing number and detail references, as appropriate.
11. Field dimensions and conditions, as appropriate.
12. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
13. Contractor's signature.
14. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.

1. Attachments shall be electronic files in PDF format.

D. Architect's and Construction Manager's Action: Architect and Construction Manager will review each RFI, determine action required, and respond. Allow seven days for Architect's response for each RFI. RFIs received by Architect or Construction Manager after 1:00 p.m. will be considered as received the following working day.

1. The following Contractor-generated RFIs will be returned without action:

    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for approval of Contractor's means and methods.
    d. Requests for coordination information already indicated in the Contract Documents.
    e. Requests for adjustments in the Contract Time or the Contract Sum.
    f. Requests for interpretation of Architect's actions on submittals.
    g. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect or Construction Manager of additional information.

3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."

    a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect and Construction Manager in writing within 5 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use software log that is part of web-based Project management software. Include the following: Software log with not less than the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect and Construction Manager.
4. RFI number, including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's and Construction Manager's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

F. On receipt of Architect's and Construction Manager's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect and Construction Manager within three days if Contractor disagrees with response.

1.9 DIGITAL PROJECT MANAGEMENT PROCEDURES

A. Use of Architect's Digital Data Files: Digital data files of Architect's electronic drawings will be provided by Architect for Contractor's use during construction.

1. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect (including an Indemnification Agreement).

    a. Subcontractors and other parties granted access by Contractor to Architect's digital data files shall execute a data licensing agreement in the form of Agreement acceptable to Owner and Architect.
    b. Contractor to define drawing format / software, and files required.
    c. An administrative processing fee of $300 will be paid by the party making the request to the design professional for each individual request.

2. The following digital data files may be furnished upon request for each appropriate discipline:

    a. Floor plans.
    b. Reflected ceiling plans.

B. Web-Based Project Management Software Package: Use Architect's web-based Project management software package for purposes of hosting and managing Project communication and documentation until Final Completion.

1. Web-based Project management software includes, at a minimum, the following features:

    a. Compilation of Project data, including Contractor, subcontractors, Architect, Architect's consultants, Owner, and other entities involved in Project. Include names of individuals and contact information.
    b. Creation, logging, tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, Construction Change Directives, and Change Orders.

2. Provide up to seven Project management software user licenses for use of Owner, Construction Manager, Architect, and Architect's consultants. Software training at Architect's office for web-based Project software users can be arranged upon request.
3. At completion of Project, provide digital archive in format that is readable by common desktop software applications in format acceptable to Architect. Provide data in locked format to prevent further changes.

C. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:

1. Assemble complete submittal package into a single indexed file, incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

1.10 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of seven days prior to meeting.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, Construction Manager, and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Responsibilities and personnel assignments.
    b. Tentative construction schedule.
    c. Phasing.

d. Critical work sequencing and long lead items.
e. Designation of key personnel and their duties.
f. Lines of communications.
g. Use of web-based Project software.
h. Procedures for processing field decisions and Change Orders.
i. Procedures for RFIs.
j. Procedures for testing and inspecting.
k. Procedures for processing Applications for Payment.
l. Distribution of the Contract Documents.
m. Submittal procedures.
n. Sustainable design requirements.
o. Preparation of Record Documents.
p. Use of the premises and existing building.
q. Work restrictions.
r. Working hours.
s. Owner's occupancy requirements.
t. Responsibility for temporary facilities and controls.
u. Procedures for moisture and mold control.
v. Procedures for disruptions and shutdowns.
w. Construction waste management and recycling.
x. Parking availability.
y. Office, work, and storage areas.
z. Equipment deliveries and priorities.
aa. First aid.
bb. Security.
cc. Progress cleaning.

3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Sustainable Design Requirements Coordination Conference: Construction Manager will schedule and conduct a sustainable design coordination conference before starting construction, at a time convenient to Owner, Construction Manager, Architect, and Contractor.

1. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent and sustainable design coordinator; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect meeting sustainable design requirements, including the following:

a. Sustainable design Project checklist.
b. General requirements for sustainable design-related procurement and documentation.
c. Project closeout requirements and sustainable design certification procedures.
d. Role of sustainable design coordinator.
e. Construction waste management.
f. Construction operations and sustainable design requirements and restrictions.

3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

D. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other Sections and when required for coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect, Construction Manager of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. Contract Documents.
    b. Options.
    c. Related RFIs.
    d. Related Change Orders.
    e. Purchases.
    f. Deliveries.
    g. Submittals.
    h. Sustainable design requirements.
    i. Review of mockups.
    j. Possible conflicts.
    k. Compatibility requirements.
    l. Time schedules.
    m. Weather limitations.
    n. Manufacturer's written instructions.
    o. Warranty requirements.
    p. Compatibility of materials.
    q. Acceptability of substrates.
    r. Temporary facilities and controls.
    s. Space and access limitations.
    t. Regulations of authorities having jurisdiction.
    u. Testing and inspecting requirements.
    v. Installation procedures.
    w. Coordination with other work.
    x. Required performance results.
    y. Protection of adjacent work.
    z. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

E. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.

2. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:

    a. Preparation of Record Documents.
    b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    c. Procedures for completing and archiving web-based Project software site data files.
    d. Submittal of written warranties.
    e. Requirements for completing sustainable design documentation.
    f. Requirements for preparing operations and maintenance data.
    g. Requirements for delivery of material samples, attic stock, and spare parts.
    h. Requirements for demonstration and training.
    i. Preparation of Contractor's punch list.
    j. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
    k. Submittal procedures.
    l. Coordination of separate contracts.
    m. Owner's partial occupancy requirements.
    n. Installation of Owner's furniture, fixtures, and equipment.
    o. Responsibility for removing temporary facilities and controls.

4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

F. Progress Meetings: Conduct progress meetings at regular intervals as defined and agreed to with Owner, Architect, Construction Manager and Contractor. (assumed bi-weekly)

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner, Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

        1) Review schedule for next period.

    b. Review present and future needs of each entity present, including the following:

        1) Interface requirements.
        2) Sequence of operations.
        3) Resolution of component conflicts.

4) Status of submittals.
5) Status of sustainable design documentation.
6) Deliveries.
7) Off-site fabrication.
8) Access.
9) Site use.
10) Temporary facilities and controls.
11) Progress cleaning.
12) Quality and work standards.
13) Status of correction of deficient items.
14) Field observations.
15) Status of RFIs.
16) Status of Proposal Requests.
17) Pending changes.
18) Status of Change Orders.
19) Pending claims and disputes.
20) Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

G. Contractor Coordination Meetings: Conduct Project coordination meetings at regular intervals (assumed weekly). Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of the General Contractor each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
c. Review present and future needs of each contractor present, including the following:

1) Interface requirements.
2) Sequence of operations.
3) Resolution of component conflicts.
4) Status of submittals.

5) Deliveries.
6) Off-site fabrication.
7) Access.
8) Site use.
9) Temporary facilities and controls.
10) Work hours.
11) Hazards and risks.
12) Progress cleaning.
13) Quality and work standards.
14) Status of RFIs.
15) Proposal Requests.
16) Change Orders.
17) Pending changes.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

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SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Preconstruction photographs.
2. Concealed Work photographs.
3. Periodic construction photographs.
4. Final Completion construction photographs.
5. Preconstruction video recordings.

B. Related Requirements:

1. Section 017700 "Closeout Procedures" for submitting photographic documentation as Project Record Documents at Project closeout.

1.3 INFORMATIONAL SUBMITTALS

A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph and video recording. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.

B. Digital Photographs: Submit image files within three days of taking photographs.

1. Submit photos by uploading to web-based Project management software site. Include copy of key plan indicating each photograph's location and direction.
2. Identification: Provide the following information with each image description in web-based Project management software site:

a. Name of Project.
b. Name and contact information for photographer.
c. Name of Architect and Construction Manager.
d. Name of Contractor.
e. Date photograph was taken.
f. Description of location, vantage point, and direction.
g. Unique sequential identifier keyed to accompanying key plan.

1.4 QUALITY ASSURANCE

A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.

1.5 FORMATS AND MEDIA

A. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of 12 megapixels, and at an image resolution of not less than 3200 by 2400 pixels, and with vibration-reduction technology. Use flash in low light levels or backlit conditions.

B. Digital Video Recordings: Provide high-resolution, digital video in MPEG format, produced by a digital camera with minimum sensor resolution of 12 megapixels and capable of recording in full high-definition mode with vibration-reduction technology. Provide supplemental lighting in low light levels or backlit conditions.

C. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

D. Metadata: Record accurate date and time from camera.

E. File Names: Name media files with date Project area and sequential numbering suffix.

1.6 CONSTRUCTION PHOTOGRAPHS

A. Photographer: Engage a qualified photographer to take construction photographs.

B. General: Take photographs with maximum depth of field and in focus.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

C. Preconstruction Photographs: Before commencement of the Work, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect Construction Manager.

1. Flag construction limits before taking construction photographs.
2. Take 20 photographs to show existing conditions adjacent to property before starting the Work.
3. Take 20 photographs of existing buildings either on or adjoining property, to accurately record physical conditions at start of construction.
4. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.

D. Concealed Work Photographs: Before proceeding with installing work that will conceal other work, take photographs sufficient in number, with annotated descriptions, to record nature and location of concealed Work, including, but not limited to, the following:

1. Electrical conduit.
2. Waterproofing and weather-resistant barriers.
3. Roofing Work including structure, penetrations, chimneys, built-in gutters, etc.

E. Periodic Construction Photographs: Take 20 photographs monthly. Select vantage points to show status of construction and progress since last photographs were taken.

F. Final Completion Construction Photographs: Take 20 photographs after date of Substantial Completion for submission as Project Record Documents. Architect will inform photographer of desired vantage points.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013233

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SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

B. Related Requirements:

1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
3. Section 013233 "Photographic Documentation" for submitting preconstruction photographs, periodic construction photographs, and Final Completion construction photographs.
4. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
5. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
6. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

C. Action Submittals: Written and graphic information and physical samples that require Architect's and Construction Manager's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

D. Informational Submittals: Written and graphic information and physical samples that do not require Architect's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.3 SUBMITTAL SCHEDULE

A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and Construction Manager and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.

    a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.

4. Format: Arrange the following information in a tabular format:

    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal Category: Action; informational.
    d. Name of subcontractor.
    e. Description of the Work covered.
    f. Scheduled date for Architect's and Construction Manager's final release or approval.
    g. Scheduled dates for purchasing.
    h. Scheduled date of fabrication.
    i. Scheduled dates for installation.

1.4 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Architect.
4. Name of Construction Manager.
5. Name of Contractor.
6. Name of firm or entity that prepared submittal.
7. Names of subcontractor, manufacturer, and supplier.
8. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier and alphanumeric suffix for resubmittals.
9. Category and type of submittal.
10. Submittal purpose and description.
11. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
12. Drawing number and detail references, as appropriate.
13. Indication of full or partial submittal.
14. Location(s) where product is to be installed, as appropriate.
15. Other necessary identification.
16. Remarks.
17. Signature of transmitter.

B. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect and Construction Manager on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

C. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

D. Submittals Utilizing Web-Based Project Software: Prepare submittals as PDF files or other format indicated by Project management software.

1.5 SUBMITTAL PROCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect and Construction Manager reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 15 days for review of each resubmittal.
4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.

D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block, and clearly indicate extent of revision.

3. Resubmit submittals until they are marked with approval notation from Architect's and Construction Manager's action stamp.

E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's and Construction Manager's action stamp.

1.6 SUBMITTAL REQUIREMENTS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

    a. Manufacturer's catalog cuts.
    b. Manufacturer's product specifications.
    c. Standard color charts.
    d. Statement of compliance with specified referenced standards.
    e. Testing by recognized testing agency.
    f. Application of testing agency labels and seals.
    g. Notation of coordination requirements.
    h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

    a. Wiring diagrams that show factory-installed wiring.
    b. Printed performance curves.
    c. Operational range diagrams.
    d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before Shop Drawings, and before or concurrently with Samples.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

    a. Identification of products.
    b. Schedules.
    c. Compliance with specified standards.
    d. Notation of coordination requirements.
    e. Notation of dimensions established by field measurement.

f. Relationship and attachment to adjoining construction clearly indicated.
g. Seal and signature of professional engineer if specified.

C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.

1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package.
2. Identification: Permanently attach label on unexposed side of Samples that includes the following:

a. Project name and submittal number.
b. Generic description of Sample.
c. Product name and name of manufacturer.
d. Sample source.
e. Number and title of applicable Specification Section.
f. Specification paragraph number and generic name of each item.

3. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.

a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, through Construction Manager, will return submittal with options selected.

D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.

E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.

G. Certificates:

1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
2. Installer Certificates: Submit written statements on manufacturer's letterhead, certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
4. Material Certificates: Submit written statements on manufacturer's letterhead, certifying that material complies with requirements in the Contract Documents.
5. Product Certificates: Submit written statements on manufacturer's letterhead, certifying that product complies with requirements in the Contract Documents.
6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of AWS B2.1/B2.1M on AWS forms. Include names of firms and personnel certified.

H. Test and Research Reports:

1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

    a. Name of evaluation organization.
    b. Date of evaluation.
    c. Time period when report is in effect.
    d. Product and manufacturers' names.
    e. Description of product.
    f. Test procedures and results.
    g. Limitations of use.

1.7 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

1.8 CONTRACTOR'S REVIEW

A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect and Construction Manager.

B. Contractor's Approval: Indicate Contractor's approval for each submittal with indication in web-based Project management software. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

1. Architect and Construction Manager will not review submittals received from Contractor that do not have Contractor's review and approval.

1.9 ARCHITECT'S AND CONSTRUCTION MANAGER'S REVIEW

A. Action Submittals: Architect and Construction Manager will review each submittal, indicate corrections or revisions required[, and return].

1. PDF Submittals: Architect and Construction Manager will indicate, via markup on each submittal, the appropriate action.
2. Submittals by Web-Based Project Management Software: Architect and Construction Manager will indicate, on Project management software website, the appropriate action.

B. Informational Submittals: Architect and Construction Manager will review each submittal and will not return it or will return it if it does not comply with requirements. Architect and Construction Manager will forward each submittal to appropriate party.

C. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

D. Architect and Construction Manager will return without review submittals received from sources other than Contractor.

E. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

SECTION 013500 - SPECIAL PROCEDURES FOR HISTORIC TREATMENT

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes special procedures for Historic Treatment on Project including, but not limited to, the following:
   1. Storage and protection of existing historic materials.
   2. Temporary protection of historic materials during construction.
   3. Protection of historic materials during application of chemicals.
   4. Protection of historic materials during use of heat-generating equipment.
   5. Historic treatment procedures.

B. Related Sections include the following:
   1. Division 01 Section "Construction Progress Documentation" for preconstruction photographs taken before historic treatment.
   2. Division 01 Section "Photographic Documentation" for preconstruction photographs taken before historic treatment.

1.2 REFERENCES

A. Work shall conform to The Secretary of the Interior's *Standards for the Treatment of Historic Properties (Rev. 2017).* https://www.nps.gov/tps/standards.htm

1.3 DEFINITIONS

A. "Preservation": To apply measures necessary to sustain the existing form, integrity, and materials of a historic property. Work may include preliminary measures to protect and stabilize the property.

B. "Rehabilitation": To make possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.

C. "Restoration": To accurately depict the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and the reconstruction of missing features from the restoration period.

D. "Reconstruction": To reproduce in the exact form and detail a building, structure, or artifact as it appeared at a specific period in time.

E. "Stabilize": To apply measures designed to reestablish a weather-resistant enclosure and the structural reinforcement of an item or portion of the building while maintaining the essential form, as it exists at present.

F. "Protect and Maintain": To remove deteriorating corrosion, reapply protective coatings, and install protective measures such as temporary guards; to provide the least degree of intervention.

G. "Repair": To stabilize, consolidate, or conserve; to retain existing materials and features while employing as little new material as possible. Repair includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials. Within restoration, repair also includes limited replacement in kind, rehabilitation, and reconstruction, with compatible substitute materials for deteriorated or missing parts of features when there are surviving prototypes.

H. "Replace": To duplicate and replace entire features with new material in kind. Replacement includes the following conditions:
   1. Duplication: Includes replacing elements damaged beyond repair or missing. Original material is indicated as the pattern for creating new duplicated elements.
   2. Replacement with New Materials: Includes replacement with new material when original material is not available as patterns for creating new duplicated elements.
   3. Replacement with Substitute Materials: Includes replacement with compatible substitute materials. Substitute materials are not allowed, unless otherwise indicated.

I. "Remove": To detach items from existing construction and legally dispose of them off- site unless indicated to be removed and salvaged, or removed and reinstalled.

J. "Remove and Salvage": To detach items from existing construction and deliver them to Owner.

K. "Remove and Reinstall": To detach items from existing construction, repair and clean them for reuse, and reinstall them where indicated.

L. "Existing to Remain" or "Retain": Existing items of construction that are not to be removed and that are not otherwise indicated to be removed and salvaged, or removed and reinstalled.

M. "Material in Kind": Material that matches existing materials, as much as possible, in species, cut, color, grain, and finish.

1.4 MATERIAL OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during removal and dismantling work remain Owner’s property. Carefully dismantle and salvage each item or object.

B. Coordinate with Architect who will establish special procedures for dismantling and salvage.

1.5 SUBMITTALS

A. Historic Treatment Program: Submit a written plan for each phase or process including protection of surrounding materials during operations. Describe in detail materials, methods, and equipment to be used for each phase of work.

B. Alternative Methods and Materials: If alternative methods and materials to those indicated are proposed for any phase of work, provide a written description including evidence of successful use on other, comparable projects, and program of testing to demonstrate effectiveness for use on this Project.

C. Qualification Data: For historic treatment specialists and supervisory personnel. Include list of completed projects with the scope of work and budget for each. All work must be completed within the last five years. Provide at least two previous project references.

D. Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by historic treatment operations. Submit before work begins.

E. Record Documents: Include modifications to manufacturers written instructions and procedures, as documented in the historic treatment preconstruction conference and as the Work progresses.

1.6 QUALITY ASSURANCE

A. Historic Treatment Specialist Qualifications: A firm that employs personnel, including supervisory personnel, experienced and skilled in the processes and operations indicated.

B. Historic Treatment Preconstruction Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

C.

Review manufacturer's written instructions for precautions and effects of products and procedures on building materials, components, and vegetation.

a. Record procedures established as a result of the review and distribute to affected parties.

1.7 STORAGE AND PROTECTION OF HISTORIC MATERIALS

A. Removed and Salvaged Historic Materials:

1. Clean salvaged historic items by the gentlest means possible.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area on or off site.
5. Protect items from damage during transport and storage.
6. Do not dispose of items removed from existing construction without prior written consent of Owner.

B. Removed and Reinstalled Historic Materials:
   1. Clean and repair historic items to functional condition adequate for intended reuse.
   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.

C. Existing Historic Materials to Remain: Protect construction indicated to remain against damage and soiling during historic treatment. When permitted by Architect, items may be removed to a suitable, protected storage location during historic treatment and reinstalled in their original locations after historic treatment operations are complete.

D. Storage and Protection: When removed from their existing location, store historic materials within a weather tight enclosure where they are protected from wetting by rain, snow, or ground water, and temperature variations. Secure stored materials to protect from theft.
   1. Identify removed items with an inconspicuous mark indicating their original location. Indicate original locations on plans, elevations, sections or photographs, by annotating the identifying parts.

1.8 PROJECT-SITE CONDITIONS

A. Exterior Cleaning and Repairing:
   1. Proceed with the work only when forecasted weather conditions are favorable.
      a. Wet Weather: Do not attempt repairs during rainy or foggy weather. Do not apply primer, paint, putty, or epoxy when the relative humidity is above 80%. Do not remove exterior elements of structures when rain is forecast or in progress.
      b. Do not perform exterior wet work when the air temperature is below 45° F. Do not begin cleaning, patching or repairing when there is any likelihood of frost or freezing.
      c. Do not begin cleaning when either the air or the surface temperature is below 45° F. unless approved means are provided for maintaining a 45° F. temperature of the air and materials during and for 48 hours subject to cleaning.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION, GENERAL

A. Prior to cleaning salvaged historic items, confer with the Architect regarding the best means and methods to accomplish this. In general, the following procedure will suffice:
   1. Gentle dry cleaning of accumulated dirt and dust by lightly brushing or using a soft cloth.
   2. Store items in an appropriate location, typically dry and away from direct sunlight.

B. Comply with manufacturer's written instructions for precautions and effects of products and procedures on adjacent building materials, components, and vegetation.

C. Ensure that supervisory personnel are present when work begins and during its progress.

D. Temporary Protection of Historic Materials during Construction:
   1. Protect existing materials during installation of temporary protections and construction. Do not deface or remove existing materials.
   2. Architect shall review attachment of temporary protection to existing construction prior to installation. All temporary attachments must be stainless steel.
   3. Set scaffolding and ladder legs away from masonry and provide impact buffers.

E. Protect landscape work adjacent to or within work areas as follows:
   1. Provide barriers to protect tree trunks.
   2. Bind spreading shrubs.
   3. Use coverings that allow plants to breathe and remove coverings at the end of each day. Do not cover plant material with a waterproof membrane for more than 8 hours at a time.
   4. Set scaffolding and ladder legs away from plants.

F. Utility and Communications Services:
   1. Notify the Owner, Architect, and authorities having jurisdiction, owning or controlling wires, conduits, pipes, and other services affected by the historic treatment work before commencing operations.
   2. Disconnect and cap pipes and services, as required by authorities having jurisdiction, as required for the historic treatment work.
   3. Maintain existing services unless otherwise indicated; keep in service and protect against damage during operations. Provide temporary services during interruptions to existing utilities.

G. Existing Drains: Prior to the start of work or any cleaning operations, test drains and other water removal systems to ensure that drains and systems are functioning properly. Notify Architect immediately of drains or systems that are stopped or blocked. Do not begin Work of this Section until the drains are in working order.
   1. Provide a method to prevent solids including stone or mortar residue from entering the drains or drain lines. Clean out drains and drain lines that become blocked or filled by sand or any other solids because of work performed under this Contract.
   2. Protect storm drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

H. Doors and Openings: Provide temporary protection including temporary operational and lockable doors, where doors and windows are removed for restoration work.

3.2 PROTECTION DURING APPLICATION OF CHEMICALS

A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm or damage resulting from applications of chemical cleaners and paint removers.

B. Comply with requirements in Division 01 Section "Temporary Facilities and Controls."

C. Cover adjacent surfaces with materials that are proven to resist chemical cleaners selected for Project unless chemicals being used will not damage adjacent surfaces. Use covering materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.

D. Do not clean surfaces during winds of sufficient force to spread cleaning solutions to unprotected surfaces.

E. Neutralize and collect alkaline and acid wastes and dispose of off Owner's property.

F. Dispose of runoff from chemical operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

3.3 HISTORIC TREATMENT PROCEDURES

A. The principal aim of preservation work is to halt the process of deterioration and stabilize the item's condition, unless otherwise indicated. Repair is required where specifically indicated. The following procedures shall be followed:
   1. Retain as much existing material as possible; repair and consolidate rather than replace.
   2. Use additional material or structure to reinforce, strengthen, prop, tie, and support existing material or structure.
   3. Use reversible processes wherever possible.
   4. Use traditional replacement materials and techniques. New work shall be distinguishable to the trained eye, on close inspection, from old work.
   5. Record the work before the procedure with preconstruction photos and during the work with periodic construction photos. Photographic documentation is specified in Division 01 Section "Photographic Documentation."

B. Prohibit smoking by personnel performing work on or near historic structures.

C. All open flame and welding on site is NOT permitted. Fire extinguishers are required in all areas during construction.

D. Obtain Architect's review and written acceptance in the form of a Constructive Change Directive or Supplemental Instruction before making changes or additions to construction or removing historic materials.

E. Notify Architect of visible changes in the integrity of material or components whether due to environmental causes including biological attack, UV degradation, freezing, or thawing; or due to structural defects including cracks, movement, or distortion.
   1. Do not proceed with the work in question until directed by Architect.

F. Where missing features are indicated to be repaired or replaced, provide features whose designs are based on accurate duplications rather than on conjectural designs, subject to the review and acceptance of Architect and Preservation Specialist.

G. Where Work requires existing features to be removed, cleaned, and reused, perform these operations without damage to the material itself, to adjacent materials, or to the substrate.

H. Identify new or replacement materials and features with inconspicuous, permanent marks to distinguish them from original materials. Record the legend of identification marks and the locations of these marks on Record Drawings.

I. When cleaning, match samples of existing materials that have been cleaned and identified for acceptable cleaning levels. Avoid over cleaning to prevent damage to existing materials during cleaning.

END OF SECTION 013500

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SECTION 013516 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes special procedures for alteration work.

1.3 DEFINITIONS

A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.

B. Consolidate: To strengthen loose or deteriorated materials in place.

C. Design Reference Sample: A sample that represents the Architect's pre-bid selection of work to be matched; it may be existing work or work specially produced for the Project.

D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish as approved by Architect.

F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.

J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.

K. Retain: To keep existing items that are not to be removed or dismantled.

L. Strip: To remove existing finish down to base material unless otherwise indicated.

1.4 COORDINATION

A. Alteration Work Sub-schedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.

1. Schedule construction operations in sequence required to obtain best Work results.
2. Coordinate sequence of alteration work activities to accommodate the following:

a. Owner's continuing occupancy of portions of existing building.
b. Other known work in progress.
c. Tests and inspections.

3. Detail sequence of alteration work, with start and end dates.
4. Utility Services: Avoid utility service interruptions. Coordinate shutoff, capping, and continuation of utility services.
5. Use of elevator and stairs.
6. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use in existing structure. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.

B. Pedestrian and Vehicular Circulation: Coordinate alteration work with circulation patterns within Project building(s) and site. Some work is near circulation patterns and adjacent to restricted areas. Circulation patterns cannot be closed off entirely and in places can be only temporarily redirected around small areas of work. Access to restricted areas may not be obstructed. Plan and execute the Work accordingly.

1.5 PROJECT MEETINGS FOR ALTERATION WORK

A. Preliminary Conference for Alteration Work: Before starting alteration work, conduct conference at Project site.

1. Attendees: In addition to representatives of Owner, Construction Manager, Architect, and Contractor, testing service representative, specialists, and chemical-cleaner manufacturer(s) shall be represented at the meeting.
2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:

a. Alteration Work Sub-schedule: Discuss and finalize; verify availability of materials, specialists' personnel, equipment, and facilities needed to make progress and avoid delays.
b. Fire-prevention plan.
c. Governing regulations.
d. Areas where existing construction is to remain and the required protection.
e. Hauling routes.
f. Sequence of alteration work operations.
g. Storage, protection, and accounting for salvaged and specially fabricated items.
h. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
i. Qualifications of personnel assigned to alteration work and assigned duties.

j. Requirements for extent and quality of work, tolerances, and required clearances.
k. Embedded work such as flashings and lintels, special details, collection of waste, protection of occupants and the public, and condition of other construction that affects the Work or will affect the work.

3. Reporting: Record conference results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from conference.

B. Contractor Coordination Meetings: Conduct coordination meetings specifically for alteration work at regular intervals (assumed weekly). Coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of the Contractor, each specialist, supplier, installer, and other entity concerned with progress or involved in planning, coordination, or performance of alteration work activities shall be represented at these meetings. All participants at conference shall be familiar with Project and authorized to conclude matters relating to alteration work. Construction Manager may attend meeting upon request.
2. Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items of significance that could affect progress of alteration work. Include topics for discussion as appropriate to status of Project.

a. Alteration Work Sub-schedule: Review progress since last coordination meeting. Determine whether each schedule item is on time, ahead of schedule, or behind schedule. Determine how construction behind schedule will be expedited with retention of quality; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities are completed within the Contract Time.
b. Schedule Updating: Revise Contractor's Alteration Work Sub-schedule after each coordination meeting where revisions to schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
c. Review present and future needs of each entity present, including review items listed in the "Preliminary Conference for Alteration Work" Paragraph in this article and the following:

1) Interface requirements of alteration work with other Project Work.
2) Status of submittals for alteration work.
3) Access to alteration work locations.
4) Effectiveness of fire-prevention plan.
5) Quality and work standards of alteration work.
6) Change Orders for alteration work.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.6 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain Owner's property.

1. Carefully dismantle and salvage each item or object in a manner to prevent damage and protect it from damage, then promptly deliver it to Owner where directed at Project site.

1.7 INFORMATIONAL SUBMITTALS

A. Alteration Work Sub-schedule:

1. Submit alteration work sub-schedule within seven days of date established for commencement of alteration work.

B. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.

1.8 QUALITY ASSURANCE

A. Specialist Qualifications: An experienced firm regularly engaged in specialty work similar in nature, materials, design, and extent to alteration work as specified in each Section and that has completed a minimum of five recent projects with a record of successful in-service performance that demonstrates the firm's qualifications to perform this work.

1. Field Supervisor Qualifications: Full-time supervisors experienced in specialty work similar in nature, material, design, and extent to that indicated for this Project. Supervisors shall be on-site when specialty work begins and during its progress. Supervisors shall not be changed during Project except for causes beyond the control of the specialist firm.

B. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.

1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.
2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.

C. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.

D. Safety and Health Standard: Comply with ANSI/ASSE A10.6.

1.9 STORAGE AND HANDLING OF SALVAGED MATERIALS

A. Salvaged Materials:

1. Existing materials to be salvaged as identified by the Owner:
   a. Items noted on the drawings or identified by the Owner in the field.
   b. All existing hinged doors and hardware to be removed.

2. Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.
3. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.
4. Store items in a secure area until delivery to Owner.
5. Transport items to Owner's storage area designated by Owner.
6. Protect items from damage during transport and storage.

B. Salvaged Materials for Reinstallation:

1. Repair and clean items for reuse as indicated.
2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label 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 unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.

C. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after alteration and other construction work in the vicinity is complete.

D. Storage: Catalog and store items within a weathertight enclosure where they are protected from moisture, weather, condensation, and freezing temperatures.

1. Identify each item for reinstallation with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
2. Secure stored materials to protect from theft.
3. Control humidity so that it does not exceed 85 percent. Maintain temperatures 5 deg F or more above the dew point.

E. Storage Space:

1. Owner will arrange for limited on-site location(s) for free storage of salvaged material. This storage space includes security for stored material.
2. Arrange for off-site locations for storage and protection of salvaged material that cannot be stored and protected on-site.

1.10 FIELD CONDITIONS

A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of preconstruction photographs and preconstruction videotapes.

1. Comply with requirements specified in Section 013233 "Photographic Documentation."

B. Discrepancies: Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.

C. Owner's Removals: Before beginning alteration work, verify in correspondence with Owner that the following items have been removed:

1. Furniture and loose equipment.

D. Size Limitations in Existing Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within existing spaces, areas, rooms, and openings, including temporary protection, by 12 inches or more.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.

1. Use only proven protection methods, appropriate to each area and surface being protected.
2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
3. Erect temporary barriers to form and maintain fire-egress routes.
4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
5. Contain dust and debris generated by alteration work and prevent it from reaching the public or adjacent surfaces.
6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
8. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.

B. Temporary Protection of Materials to Remain:

1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.

C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.

D. Utility and Communications Services:

1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
3. Maintain existing services unless otherwise indicated; keep in service and protect against damage during operations. Provide temporary services during interruptions to existing utilities.

E. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.

1. Prevent solids such as adhesive or mortar residue or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

F. Existing Roofing: Prior to the start of work in an area, install roofing protection to maintaining integrity of roofing systems. Maintain existing roof warranty in place. Work must be performed by a certified installer to maintain the system warranty.

3.2 PROTECTION FROM FIRE

A. General: Follow fire-prevention plan and the following:

1. Comply with NFPA 241 requirements unless otherwise indicated.
2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.

    a. If combustible material cannot be removed, provide fire blankets to cover such materials.

B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or combustible materials, including welding, torch-cutting, soldering, brazing, removing paint with heat, or other operations where open flames or implements using high heat or combustible solvents and chemicals are anticipated:

1. Obtain Owner's approval for operations involving use of welding or other high-heat equipment. Use of open-flame equipment is not permitted. Notify Owner at least 72 hours before each occurrence, indicating location of such work.
2. As far as practicable, restrict heat-generating equipment to shop areas or outside the building.
3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
4. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.
5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.

6. Fire Watch: Before working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows:

    a. Train each fire watch in the proper operation of fire-control equipment and alarms.
    b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
    c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.
    d. Have fire-watch personnel perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work in each area to detect hidden or smoldering fires and to ensure that proper fire prevention is maintained.
    e. Maintain fire-watch personnel at each area of Project site until two hours after conclusion of daily work.

C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.

D. Sprinklers: Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to sprinklers, shield them temporarily with guards.

1. Remove temporary guards at the end of work shifts, whenever operations are paused, and when nearby work is complete.

3.3 PROTECTION DURING APPLICATION OF CHEMICALS

A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.

B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.

C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.

D. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.

E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.4 GENERAL ALTERATION WORK

A. Have specialty work performed only by qualified specialists.

B. Ensure that supervisory personnel are present when work begins and during its progress.

C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs. Comply with requirements in Section 013233 "Photographic Documentation."

D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.

E. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.

1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 013516

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SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, Commissioning Authority, Construction Manager, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 DEFINITIONS

A. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.

1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).

D. Mockups: Full-size physical assemblies that are constructed either as freestanding temporary built elements or as part of permanent construction. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Integrated Exterior Mockups: Mockups of the exterior envelope constructed on-site as freestanding temporary built elements or as indicated in-place portions of permanent construction, consisting of multiple products, assemblies, and subassemblies, with cutaways enabling inspection of concealed portions of the Work if accepted and approved in writing in advance by the Architect / Engineer.

    a. Include each system, assembly, component, and part of the exterior wall and roof to be constructed for the Project. Colors of components shall be those selected by the Architect for use in the Project.

2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction if accepted and approved in writing in advance by the Architect / Engineer.

E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.

F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" shall have the same meaning as the term "testing agency."

I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work, to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work, to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect [or Construction Manager].

1.4 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Statement: Submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.5 CONFLICTING REQUIREMENTS

A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.6 ACTION SUBMITTALS

A. Mockup Shop Drawings: For mockups.

1. Include plans, sections, elevations, and details, indicating materials and size of mockup construction.
2. Indicate manufacturer and model number of individual components.
3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.7 INFORMATIONAL SUBMITTALS

A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.

B. Qualification Data: For Contractor's quality-control personnel.

C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:

1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
2. Primary wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.

D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Entity responsible for performing tests and inspections.
3. Description of test and inspection.
4. Identification of applicable standards.
5. Identification of test and inspection methods.
6. Number of tests and inspections required.
7. Time schedule or time span for tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

F. Reports: Prepare and submit certified written reports and documents as specified.

G. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

1.8 CONTRACTOR'S QUALITY-CONTROL PLAN

A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities and to coordinate Owner's quality-assurance and quality-control activities. Coordinate with Contractor's Construction Schedule.

B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.

1. Project quality-control manager may also serve as Project superintendent.
2. The individual must have successfully completed a minimum of (5) five projects within the past (5) five years as the project quality control manager and as the project superintendent. Provide resume of the individual and project references including client contact information (client name, individual contact, address, phone number, email address). .

C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.

D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:

1. Contractor-performed tests and inspections, including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.
3. Owner-performed tests and inspections indicated in the Contract Documents, including tests and inspections indicated to be performed by Commissioning Authority as required by the Owner / contract.

E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring the Work into compliance with standards of workmanship established by Contract requirements and approved mockups.

F. Monitoring and Documentation: Maintain testing and inspection reports, including log of approved and rejected results. Include Work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming Work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.9 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, telephone number, and email address of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample-taking and testing and inspection.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, telephone number, and email address of technical representative making report.

2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement of whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, telephone number, and email address of factory-authorized service representative making report.
2. Statement that equipment complies with requirements.
3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement of whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

1.10 QUALITY ASSURANCE

A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar in material, design, and extent to those indicated for this Project.

F. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented in accordance with ASTM E329, and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

G. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following Contractor's responsibilities, including the following:

1. Provide test specimens representative of proposed products and construction.
2. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
3. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
4. Build site-assembled test assemblies and mockups, using installers who will perform same tasks for Project.
5. When testing is complete, remove test specimens and test assemblies, and mockups; do not reuse products on Project.
6. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, through Construction Manager, with copy to Contractor. Interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from the Contract Documents.

J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups of size indicated.
2. Build mockups in location indicated or, if not indicated, as directed by Architect.
3. Notify Architect and Construction Manager seven days in advance of dates and times when mockups will be constructed.
4. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction of the Project.
5. Demonstrate the proposed range of aesthetic effects and workmanship.
6. Obtain Architect's approval of mockups before starting corresponding Work, fabrication, or construction.

    a. Allow fourteen days for initial review and each re-review of each mockup.

7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
10. Demolish and remove mockups when directed unless otherwise indicated.

K. Integrated Exterior Mockups: Construct integrated exterior mockup according to approved Shop Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials. Comply with requirements in "Mockups" Paragraph.

1. Coordinate construction of the mockup to allow observation of air barrier installation, flashings, air barrier integration with fenestration systems, and other portions of the building air/moisture barrier and drainage assemblies, prior to installation of veneer, cladding elements, and other components that will obscure the work.

1.11 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
2. Payment for these services will be made by the Owner.
3. Costs for retesting and reinspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.

1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
2. Engage a qualified testing agency to perform quality-control services.

a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

D. Testing Agency Responsibilities: Cooperate with Architect, Commissioning Authority, Construction Manager, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect, Commissioning Authority, Construction Manager, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform duties of Contractor.

E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."

F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

G. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspection equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's Construction Schedule. Update and submit with each Application for Payment.

1. Schedule Contents: Include tests, inspections, and quality-control services, including Contractor- and Owner-retained services, commissioning activities, and other Project-required services paid for by other entities.
2. Distribution: Distribute schedule to Owner, Architect, Commissioning Authority, Construction Manager, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.12 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Commissioning Authority, , Construction Manager, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and Commissioning Authority, through Construction Manager, with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Deficiency log which includes a log of deficiencies, corrective actions taken, retesting, and reinspecting corrected Work.
4. Date test or inspection results were transmitted to Architect.
5. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's, Commissioning Authority's, and Construction Manager's and authorities' having jurisdiction reference during normal working hours.

1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspection, sample-taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

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SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

H. “In-kind”: Shall mean to replicate and replace exactly as constructed

I. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project within the past five years; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.

   1. Using a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name such as “carpenter”. It also does not imply that requirements specified apply exclusively to trades-people of the corresponding generic name.

J. "Provide": Furnish and install, complete and ready for the intended use.

K. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Abbreviations and acronyms not included in this list shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States." The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
7. ABMA - American Boiler Manufacturers Association; www.abma.com.
8. ACI - American Concrete Institute; (Formerly: ACI International); www.concrete.org.
9. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
10. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
11. AF&PA - American Forest & Paper Association; www.afandpa.org.
12. AGA - American Gas Association; www.aga.org.
13. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
14. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
15. AI - Asphalt Institute; www.asphaltinstitute.org.

16. AIA - American Institute of Architects (The); www.aia.org.
17. AISC - American Institute of Steel Construction; www.aisc.org.
18. AISI - American Iron and Steel Institute; www.steel.org.
19. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
20. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
21. ANSI - American National Standards Institute; www.ansi.org.
22. AOSA - Association of Official Seed Analysts, Inc.; www.aosaseed.com.
23. APA - APA - The Engineered Wood Association; www.apawood.org.
24. APA - Architectural Precast Association; www.archprecast.org.
25. API - American Petroleum Institute; www.api.org.
26. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
27. ARI - American Refrigeration Institute; (See AHRI).
28. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
29. ASCE - American Society of Civil Engineers; www.asce.org.
30. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
31. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
32. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
33. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
34. ASSP - American Society of Safety Professionals (The); www.assp.org.
35. ASTM - ASTM International; www.astm.org.
36. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
37. AVIXA - Audiovisual and Integrated Experience Association; (Formerly: Infocomm International); www.soundandcommunications.com.
38. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
39. AWPA - American Wood Protection Association; www.awpa.com.
40. AWS - American Welding Society; www.aws.org.
41. AWWA - American Water Works Association; www.awwa.org.
42. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
43. BIA - Brick Industry Association (The); www.gobrick.com.
44. BICSI - BICSI, Inc.; www.bicsi.org.
45. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.org.
46. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
47. BWF - Badminton World Federation; (Formerly: International Badminton Federation); www.bissc.org.
48. CE - Conformite Europeenne; http://ec.europa.eu/growth/single-market/ce-marking/.
49. CEA - Canadian Electricity Association; www.electricity.ca.
50. CFFA - Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com.
51. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
52. CGA - Compressed Gas Association; www.cganet.com.
53. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
54. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
55. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
56. CPA - Composite Panel Association; www.compositepanel.org.
57. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
58. CRRC - Cool Roof Rating Council; www.coolroofs.org.
59. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
60. CSA - CSA Group; www.csa-group.org.
61. CSI - Construction Specifications Institute (The); www.csiresources.org.
62. CSSB – Cedar Shingle and Shake Bureau; www.cedarbureau.org
63. CTA - Consumer Technology Association; www.cta.tech.

64. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.coolingtechnology.org.
65. CWC - Composite Wood Council; (See CPA).
66. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
67. DHA - Decorative Hardwoods Association; (Formerly: Hardwood Plywood & Veneer Association); www.decorativehardwoods.org.
68. DHI - Door and Hardware Institute; www.dhi.org.
69. ECA - Electronic Components Association; (See ECIA).
70. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
71. ECIA - Electronic Components Industry Association; www.eciaonline.org.
72. EIA - Electronic Industries Alliance; (See TIA).
73. EIMA - EIFS Industry Members Association; www.eima.com.
74. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
75. ESTA - Entertainment Services and Technology Association; (See PLASA).
76. ETL - Intertek (See Intertek); www.intertek.com.
77. EVO - Efficiency Valuation Organization; www.evo-world.org.
78. FM Approvals - FM Approvals LLC; www.fmglobal.com.
79. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
80. FRSA - Florida Roofing, Sheet Metal Contractors Association, Inc.; www.floridaroof.com.
81. FSA - Fluid Sealing Association; www.fluidsealing.com.
82. FSC - Forest Stewardship Council U.S.; www.fscus.org.
83. GA - Gypsum Association; www.gypsum.org.
84. GANA - Glass Association of North America; (See NGA).
85. GS - Green Seal; www.greenseal.org.
86. HI - Hydraulic Institute; www.pumps.org.
87. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
88. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
89. HPVA - Hardwood Plywood & Veneer Association; (See DHA).
90. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
91. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
92. IAS - International Accreditation Service; www.iasonline.org.
93. ICBO - International Conference of Building Officials; (See ICC).
94. ICC - International Code Council; www.iccsafe.org.
95. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
96. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
97. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
98. IEC - International Electrotechnical Commission; www.iec.ch.
99. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
100. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
101. IESNA - Illuminating Engineering Society of North America; (See IES).
102. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
103. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
104. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
105. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
106. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
107. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
108. ISO - International Organization for Standardization; www.iso.org.
109. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
110. ITU - International Telecommunication Union; www.itu.int/home.
111. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.

112. LMA - Laminating Materials Association; (See CPA).
113. LPI - Lightning Protection Institute; www.lightning.org.
114. MBMA - Metal Building Manufacturers Association; www.mbma.com.
115. MCA - Metal Construction Association; www.metalconstruction.org.
116. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
117. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
118. MHIA - Material Handling Industry of America; www.mhia.org.
119. MMPA - Moulding & Millwork Producers Association; www.wmmpa.com.
120. MPI - Master Painters Institute; www.paintinfo.com.
121. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
122. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
123. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.
124. NADCA - National Air Duct Cleaners Association; www.nadca.com.
125. NALP - National Association of Landscape Professionals; www.landscapeprofessionals.org.
126. NBI - New Buildings Institute; www.newbuildings.org.
127. NCMA - National Concrete Masonry Association; www.ncma.org.
128. NEBB - National Environmental Balancing Bureau; www.nebb.org.
129. NECA - National Electrical Contractors Association; www.necanet.org.
130. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
131. NEMA - National Electrical Manufacturers Association; www.nema.org.
132. NETA - InterNational Electrical Testing Association; www.netaworld.org.
133. NFHS - National Federation of State High School Associations; www.nfhs.org.
134. NFPA - National Fire Protection Association; www.nfpa.org.
135. NFPA - NFPA International; (See NFPA).
136. NFRC - National Fenestration Rating Council; www.nfrc.org.
137. NGA - National Glass Association (The); (Formerly: Glass Association of North America); www.glass.org.
138. NLGA - National Lumber Grades Authority; www.nlga.org.
139. NRCA - National Roofing Contractors Association; www.nrca.net.
140. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
141. NSF - NSF International; www.nsf.org.
142. NSI - National Stone Institute; (Formerly: Marble Institute of America); www.naturalstoneinstitute.org.
143. NSPE - National Society of Professional Engineers; www.nspe.org.
144. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
145. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
146. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
147. PDI - Plumbing & Drainage Institute; www.pdionline.org.
148. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); www.plasa.org.
149. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
150. RFCI - Resilient Floor Covering Institute; www.rfci.com.
151. RIS - Redwood Inspection Service; www.redwoodinspection.com.
152. SAE - SAE International; www.sae.org.
153. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
154. SDI - Steel Deck Institute; www.sdi.org.
155. SDI - Steel Door Institute; www.steeldoor.org.
156. SEFA - Scientific Equipment and Furniture Association (The); www.sefalabs.com.
157. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
158. SIA - Security Industry Association; www.siaonline.org.

159. SJI - Steel Joist Institute; www.steeljoist.org.
160. SMA - Screen Manufacturers Association; www.smainfo.org.
161. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
162. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.
163. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
164. SPIB - Southern Pine Inspection Bureau; www.spib.org.
165. SPRI - Single Ply Roofing Industry; www.spri.org.
166. SRCC - Solar Rating & Certification Corporation; www.solar-rating.org.
167. SSINA - Specialty Steel Industry of North America; www.ssina.com.
168. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
169. SWI - Steel Window Institute; www.steelwindows.com.
170. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
171. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
172. TCNA - Tile Council of North America, Inc.; www.tileusa.com.
173. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
174. TIA - Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
175. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
176. TMS - The Masonry Society; www.masonrysociety.org.
177. TRI - Tile Roofing Institute; www.tileroofing.org.
178. UL - Underwriters Laboratories Inc.; www.ul.com.
179. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
180. USGBC - U.S. Green Building Council; www.usgbc.org.
181. WA - Wallcoverings Association; www.wallcoverings.org.
182. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
183. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
184. WI - Woodwork Institute; www.wicnet.org.
185. WWPA – Western Wood Products Association; www.wwpa.org

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.
   1. ICC - International Code Council; www.iccsafe.org.
   2. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.
   1. DOC - Department of Commerce; National Institute of Standards and Technology; www.nist.gov.
   2. DOD - Department of Defense; www.quicksearch.dla.mil.
   3. DOE - Department of Energy; www.energy.gov.
   4. EPA - Environmental Protection Agency; www.epa.gov.
   5. FG - Federal Government Publications; www.gpo.gov/fdsys.
   6. GSA - General Services Administration; www.gsa.gov.
   7. OSHA - Occupational Safety & Health Administration; www.osha.gov.

D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.govinfo.gov.
2. DOD - Department of Defense; Military Specifications and Standards; Available from DLA Document Services; www.quicksearch.dla.mil.
3. DSCC - Defense Supply Center Columbus; (See FS).
4. FED-STD - Federal Standard; (See FS).
5. FS - Federal Specification; Available from DLA Document Services; www.quicksearch.dla.mil.

E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CBHF; State of California; Department of Consumer Affairs; Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation; www.bearhfti.ca.gov.
2. CCR; California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.calregs.com.
3. CDHS; California Department of Health Services; (See CDPH).
4. CDPH; California Department of Public Health; Indoor Air Quality Program; www.cal-iaq.org.
5. CPUC; California Public Utilities Commission; www.cpuc.ca.gov.
6. SCAQMD; South Coast Air Quality Management District; www.aqmd.gov.
7. TFS; Texas A&M Forest Service; Sustainable Forestry and Economic Development; www.txforestservice.tamu.edu.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

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SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.
2. Section 012100 "Allowances" for allowance for metered use of temporary utilities.

1.3 USE CHARGES

A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.

B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 INFORMATIONAL SUBMITTALS

A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

B. Implementation and Termination Schedule: Within 15 days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.

C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

D. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

E. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

F. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
3. Indicate methods to be used to avoid trapping water in finished work.

G. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:

1. Locations of dust-control partitions at each phase of work.
2. HVAC system isolation schematic drawing.
3. Location of proposed air-filtration system discharge.
4. Waste-handling procedures.
5. Other dust-control measures.

H. Noise and Vibration Control Plan: Identify construction activities that may impact the occupancy and use of existing spaces within the building or adjacent existing buildings, whether occupied by others, or occupied by the Owner. Include the following:

1. Methods used to meet the goals and requirements of the Owner.
2. Concrete cutting method(s) to be used.
3. Location of construction devices on the site.
4. Show compliance with the use and maintenance of quieted construction devices for the duration of the Project.
5. Indicate activities that may disturb building occupants and that are planned to be performed during non-standard working hours as coordinated with the Owner.
6. Indicate locations of sensitive equipment or occupancy areas or other areas requiring special attention as identified by Owner. Indicate means for complying with Owner's requirements.

1.5 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

C. Accessible Temporary Egress: Comply with applicable provisions in ICC/ANSI A117.1.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

B. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain-link fence, sized to height of fence, in color selected by Architect from manufacturer's standard colors.

C. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.

D. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches.

E. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

2.2 TEMPORARY FACILITIES

A. Common-Use Field Office: Upon Owner approval utilize space designated within the existing building to accommodate needs of Owner, Architect, Construction Manager, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep designated area clean and orderly.

B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction and marked for intended location and application.
3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 min at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 017700 "Closeout Procedures."

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

3.2 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.3 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary services or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
2. The existing 911 dispatch area must remain in operation 24/7 until Phase 1 is fully operational. It is the General Contractors responsibility to provide any; and all coordination and cost for temporary power and services required to fulfill this requirement.

B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.

C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.

D. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

E. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

1. Use of Permanent Toilets: Use of Owner's existing or new toilet facilities is not permitted.

F. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.

G. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.

    a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    b. Maintain negative air pressure within work area, using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.

2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

H. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

I. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

1. Install electric power service overhead unless otherwise indicated.
2. Connect temporary service to Owner's existing power source, as directed by Owner.

J. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

K. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment and one land-based telephone line(s) for designated field office. Upon Owners approval, utilize space within the existing building for construction office.

1. At each telephone, post a list of important telephone numbers.

a. Police and fire departments.
b. Ambulance service.
c. Contractor's home office.
d. Contractor's emergency after-hours telephone number.
e. Architect's office.
f. Construction Manager's home office.
g. Engineers' offices.
h. Owner's office.
i. Principal subcontractors' field and home offices.

L. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Architect and Owner.

3.4 SUPPORT FACILITIES INSTALLATION

A. Comply with the following:

1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
2. Utilize designated area within existing building for temporary field offices.
3. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.

C. Temporary Use of Planned Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
2. Prepare subgrade and install subbase and base for temporary roads and paved areas in accordance with Section 312000 "Earth Moving."

3. Recondition base after temporary use, including removing contaminated material, regrading, proof-rolling, compacting, and testing.
4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course in accordance with Section 321216 "Asphalt Paving."

D. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain, including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

E. Parking: Use designated areas of Owner's existing parking areas for construction personnel as approved by Owner.

F. Storage and Staging: Provide temporary offsite area or Use designated areas of Project site for storage and staging needs as approved by Owner.

G. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

H. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings as directed by Owner.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

    a. Provide temporary, directional signs for construction personnel and visitors.

3. Maintain and touch up signs, so they are legible at all times.

I. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

J. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

K. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

L. Existing Elevator Use: Use of Owner's existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.

1. Do not load elevators beyond their rated weight capacity.

2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work, so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.

M. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.

N. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Section 011000 "Summary."

C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the Project duration.
4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals, so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.

G. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

H. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.

I. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

J. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.

K. Covered Walkway: Erect protective covered walkway for passage of individuals through or adjacent to Project site. Coordinate with entrance gates, other facilities, and obstructions. Comply with regulations of authorities having jurisdiction.

1. Provide overhead decking, protective enclosure walls, handrails, barricades, warning signs, exit signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage.
2. Paint and maintain appearance of walkway for duration of the Work.

L. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.

M. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.

1. Construct dustproof partitions with gypsum wallboard, with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.

2. Construct dustproof partitions with two layers of 6-mil polyethylene sheet on each side. Cover floor with two layers of 6-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.

    a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.

3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
4. Insulate partitions to control noise transmission to occupied areas.
5. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
6. Protect air-handling equipment.
7. Provide walk-off mats at each entrance through temporary partition.

N. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition in accordance with requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign, stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.6 MOISTURE AND MOLD CONTROL

A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.

2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard and replace stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.

D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

    a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective and require replacing.
    b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 72 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
    c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 72 hours.

3.7 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.

2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

B. Related Requirements:

1. Section 011000 "Summary" for Contractor requirements related to Owner-furnished products.
2. Section 012100 "Allowances" for products selected under an allowance.
3. Section 012500 "Substitution Procedures" for requests for substitutions.
4. Section 014200 "References" for applicable industry standards for products specified.
5. Section 017700 "Closeout Procedures" for submitting warranties.

1.3 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products, unless indicated otherwise.
3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in Part 2 "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.

1. Evaluation of Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.

C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.

D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:

1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
2. Data indicating compliance with the requirements specified in Part 2 "Comparable Products" Article.

E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."

F. Substitution: Refer to Section 012500 "Substitution Procedures" for definition and limitations on substitutions.

1.4 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1. Resolution of Compatibility Disputes between Multiple Contractors:

a. Contractors are responsible for providing products and construction methods compatible with products and construction methods of other contractors.
b. If a dispute arises between the multiple contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.

1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.
2. Equipment Nameplates: Provide a permanent nameplate on each item of service- or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:

a. Name of product and manufacturer.
b. Model and serial number.
c. Capacity.
d. Speed.
e. Ratings.

3. See individual identification Sections in Divisions 21, 22, 23, and 26 for additional equipment identification requirements.

1.5 COORDINATION

A. Modify or adjust affected work as necessary to integrate work of approved comparable products and approved substitutions.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and that products are undamaged and properly protected.

C. Storage:

1. Provide a secure location and enclosure at Project site for storage of materials and equipment.
2. Store products to allow for inspection and measurement of quantity or counting of units.
3. Store materials in a manner that will not endanger Project structure.
4. Store products that are subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation and with adequate protection from wind.
5. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of the Owner or endorsed by manufacturer to Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

a. Submit additional documentation required by Architect through Construction Manager in order to establish equivalency of proposed products. Unless otherwise indicated, evaluation of "or equal" product status is by the Architect, whose determination is final.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:

1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 013300 "Submittal Procedures."

1. Form of Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

C. Submittal Requirements, Two-Step Process: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

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SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Coordination of Owner-installed products.
6. Progress cleaning.
7. Starting and adjusting.
8. Protection of installed construction.

B. Related Requirements:

1. Section 011000 "Summary" for coordination of Owner-furnished products, and limits on use of Project site.
2. Section 013100 “Project Management and Coordination” for Background check requirements for all contractors.
3. Section 013300 "Submittal Procedures" for submitting surveys.
4. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
5. Division 02 "Selective Demolition" for demolition and removal of selected portions of the building.
6. Division 04 “Masonry” for restoration and repointing of brick chimneys.
7. Division 06 “Rough Carpentry” for removal and/or repairing of structural roof framing elements, and repair of existing built-in gutters.
8. Division 07 “Thermal and Moisture Protection” for wood shingles, sheet metal flashing and trim, and joist sealants.
9. Division 09 “Finishes” for painting and lead safe practices.

1.3 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.4 PREINSTALLATION MEETINGS

A. Cutting and Patching Conference: Conduct conference at Project site.

1. Prior to submitting cutting and patching plan, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Inform Architect and Construction Manager of scheduled meeting. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:

a. Contractor's superintendent.
b. Trade supervisor responsible for cutting operations.
c. Trade supervisor(s) responsible for patching of each type of substrate.
d. Mechanical, electrical, and utilities subcontractors' supervisors, to the extent each trade is affected by cutting and patching operations.

2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

B. Layout Conference: Conduct conference at Project site.

1. Prior to establishing layout of new and existing perimeter and structural column grid(s), review building location requirements. Review benchmark, control point, and layout and dimension requirements. Inform Architect and Construction Manager of scheduled meeting. Require representatives of each entity directly concerned with Project layout to attend, including the following:

a. Contractor's superintendent.
b. Contractor's personnel responsible for performing Project surveying and layout.
c. Professional surveyor responsible for performing site survey serving as basis for Project design.

2. Review meanings and intent of dimensions, notes, terms, graphic symbols, and other layout information indicated on the Drawings.
3. Review requirements for including layouts on Shop Drawings and other submittals.
4. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For land surveyor.

B. Certified Surveys: Submit two copies signed by land surveyor.

C. Certificates: Submit certificate signed by land surveyor, certifying that location and elevation of improvements comply with requirements.

D. Cutting and Patching Plan: Submit plan describing procedures at least 10 min days prior to the time cutting and patching will be performed. Include the following information:

1. Extent: Describe reason for and extent of each occurrence of cutting and patching.

2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.

    a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.
    b. Provide temporary services to maintain system operations while permanent service is out of service.
    c. Temporary services must be in place and fully operational before existing service is interrupted and taken out of service.

E. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.6 CLOSEOUT SUBMITTALS

A. Final Property Survey: Submit four copies showing the Work performed and record survey data plus one PDF copy.

1.7 QUALITY ASSURANCE

A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

B. Professional Engineer Qualifications: Refer to Section 014000 "Quality Requirements."

C. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, or when encountering the need for cutting and patching of elements whose structural function is not known, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include but are not limited to the following:

    a. Primary operational systems and equipment.
    b. Fire separation assemblies.
    c. Air or smoke barriers.
    d. Fire-suppression systems.
    e. Plumbing piping systems.

f. Mechanical systems piping and ducts.
g. Control systems.
h. Communication systems.
i. Fire-detection and -alarm systems.
j. Electrical wiring systems.
k. Operating systems of special construction.

3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:

a. Water, moisture, or vapor barriers.
b. Membranes and flashings.
c. Exterior curtain-wall construction.
d. Sprayed fire-resistive material.
e. Equipment supports.
f. Piping, ductwork, vessels, and equipment.
g. Noise- and vibration-control elements and systems.

4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Comply with requirements specified in other Sections.

1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.

C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect through Construction Manager in accordance with requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks and existing conditions. If discrepancies are discovered, notify Architect and Construction Manager promptly.

B. Engage a land surveyor experienced in laying out the Work, using the following accepted surveying practices:

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish limits on use of Project site.
3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
4. Inform installers of lines and levels to which they must comply.
5. Check the location, level and plumb, of every major element as the Work progresses.
6. Notify Architect and Construction Manager when deviations from required lines and levels exceed allowable tolerances.
7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Construction Manager.

3.4 FIELD ENGINEERING

A. Identification: Owner will identify existing benchmarks, control points, and property corners.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect or Construction Manager. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect and Construction Manager before proceeding.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

E. Final Property Survey: Engage a land surveyor to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.

1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

3.5 INSTALLATION

A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces, unless otherwise indicated on Drawings.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure satisfactory results as judged by Architect. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.

F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.

G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.

J. Repair or remove and replace damaged, defective, or nonconforming Work.

1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

3.6 CUTTING AND PATCHING

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of Work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements in Section 011000 "Summary."

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as practicable, as judged by Architect. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

    a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    b. Restore damaged pipe covering to its original condition.

3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

    a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch, corner to corner of wall and edge to edge of ceiling. Provide additional coats until patch blends with adjacent surfaces.

4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 COORDINATION OF OWNER'S PORTION OF THE WORK

A. Site Access: Provide access to Project site for Owner's construction personnel.

1. Provide temporary facilities required for Owner-furnished, Contractor-installed products.
2. Refer to Section 011000 "Summary" for other requirements for Owner-furnished, Contractor-installed products.

B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.

1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

3.8 PROGRESS CLEANING

A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

    a. Use containers intended for holding waste materials of type to be stored.

4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls." Section 017419 "Construction Waste Management and Disposal."

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.9 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.10 PROTECTION AND REPAIR OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.

C. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.

D. Comply with manufacturer's written instructions for temperature and relative humidity

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.

B. Related Requirements:

1. Section 042000 "Unit Masonry" for disposal requirements for masonry waste.

1.3 DEFINITIONS

A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.

C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner’s property.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition and construction waste become property of Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 INFORMATIONAL SUBMITTALS

A. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

B. Refrigerant Recovery: Comply with requirements in Section 0241 for refrigerant recovery submittals.

1.6 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with transportation and disposal regulations of authorities having jurisdiction.

B. Waste Management Conference(s): Conduct conference(s) at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste management plan including responsibilities of each contractor.
2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
5. Review waste management requirements for each trade.
6. Discuss dumpster locations and staging.
7. Discuss removal coordination and locations of waste bins to avoid interference with Owner’s operation and occupancy requirements.

1.7 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification and a waste work plan including definition of dumpster location by phase, staging areas, and removal cycle. Distinguish between demolition and construction waste.

B. Waste Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project.
2. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
3. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
4. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General: Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following:

1. Demolition Waste:

a. Asphalt paving.
b. Concrete.
c. Concrete reinforcing steel.
d. Brick.
e. Concrete masonry units.
f. Wood studs.
g. Wood joists.
h. Plywood and oriented strand board.
i. Wood paneling.
j. Wood trim.
k. Structural and miscellaneous steel.
l. Rough hardware.
m. Roofing.
n. Insulation.
o. Doors and frames.
p. Door hardware.
q. Windows.
r. Glazing.
s. Metal studs.
t. Gypsum board.
u. Acoustical tile and panels.
v. Carpet.
w. Carpet pad.
x. Demountable partitions.
y. Equipment.
z. Cabinets.
aa. Plumbing fixtures.
bb. Piping.
cc. Supports and hangers.
dd. Valves.
ee. Sprinklers.
ff. Mechanical equipment.
gg. Refrigerants.
hh. Electrical conduit.
ii. Copper wiring.
jj. Lighting fixtures.
kk. Lamps.
ll. Ballasts.
mm. Electrical devices.
nn. Switchgear and panelboards.
oo. Transformers.

2. Construction Waste:

a. Masonry and CMU.
b. Lumber.
c. Wood sheet materials.
d. Wood trim.
e. Metals.
f. Roofing.
g. Insulation.
h. Carpet and pad.
i. Gypsum board.
j. Piping.
k. Electrical conduit.
l. Packaging: Goal is to salvage or recycle 100 percent of the following uncontaminated packaging materials:

1) Paper.
2) Cardboard.
3) Boxes.
4) Plastic sheet and film.
5) Polystyrene packaging.
6) Wood crates.
7) Wood pallets.
8) Plastic pails.

m. Construction Office Waste: Goal is to salvage or recycle 100 percent of the following construction office waste materials:

1) Paper.
2) Aluminum cans.
3) Glass containers.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

1. Comply with operation, termination, and removal requirements in Section 015000 "Temporary Facilities and Controls."

B. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged and recycled.
2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

    a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overfilling bins.

3.3 RECYCLING DEMOLITION WASTE

A. Sort demolition waste by material type as noted.

B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.

D. Wood Materials: Separate lumber, engineered wood products, panel products, and treated wood materials.

E. Metals: Separate metals by type.

F. Gypsum Board: Remove edge trim and sort with other metals. Remove and dispose of fasteners.

G. Acoustical Ceiling Panels and Tile.

H. Metal Suspension System: Separate metal members, including trim and other metals from acoustical panels and tile, and sort with other metals.

I. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips as required by carpet reclamation agency or carpet recycler.

J. Carpet Tile: Remove debris, trash, and adhesive by carpet reclamation agency or carpet recycler.

K. Piping: Reduce piping to straight lengths by material and size. Separate supports, hangers, valves, sprinklers, and other components by material and size.

L. Conduit: Reduce conduit to straight lengths by material and size.

M. Lamps: Separate lamps by type according to requirements in 40 CFR 273.

3.4 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets.
2. Polystyrene Packaging: Separate.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Sort and separate with wood products.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Gypsum Board: Stack in container.

D. Paint: Seal containers and store by type.

3.5 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. General: Except for items or materials to be salvaged or recycled, remove waste materials and legally dispose of legally.

C. Burning: Do not burn waste materials.

END OF SECTION 017419

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SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.

B. Related Requirements:

1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial Completion and Final Completion.
2. Section 013233 "Photographic Documentation" for submitting Final Completion construction photographic documentation.
3. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.3 DEFINITIONS

A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Architect's use prior to Architect's inspection, to determine if the Work is substantially complete.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of cleaning agent.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.5 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

C. Field Report: For pest-control inspection.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items required by other Sections.

1.7 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect Construction Manager. Label with manufacturer's name and model number.

    a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's Construction Manager's Owner's signature for receipt of submittals.

5. Submit testing, adjusting, and balancing records.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
6. Advise Owner of changeover in utility services.
7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.

8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Complete final cleaning requirements.
10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.8 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:

1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report.
5. Submit Final Completion photographic documentation.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect [and Construction Manager] will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate is issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.9 LIST OF INCOMPLETE ITEMS

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.

2. Include the following information at the top of each page:

    a. Project name.
    b. Date.
    c. Name of Architect and Construction Manager.
    d. Name of Contractor.
    e. Page number.

3. Submit list of incomplete items in the following format:

    a. PDF Electronic File: Architect, through Construction Manager, will return annotated file.

1.10 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

1. Submit by uploading to web-based project software site.

E. Warranties in Paper Form:

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

F. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove snow and ice to provide safe access to building.
f. Clean exposed exterior and interior hard-surface finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
g. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
h. Clean flooring, removing debris, dirt, and staining; clean according to manufacturer's recommendations.
i. Vacuum and mop concrete.
j. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
k. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
l. Remove labels that are not permanent.
m. Wipe surfaces of mechanical and electrical equipment [elevator equipment,] and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
p. Clean ducts, blowers, and coils.
q. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
r. Clean strainers.
s. Leave Project clean and ready for occupancy.

C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

D. Construction Waste Disposal: Comply with waste-disposal requirements in Section 015000 "Temporary Facilities and Controls." Section 017419 "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations required by Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for Project Record Documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.
4. Miscellaneous record submittals.

B. Related Requirements:

1. Section 017300 "Execution" for final property survey.
2. Section 017700 "Closeout Procedures" for general closeout procedures.

1.3 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit one set(s) of marked-up record prints.
2. Number of Copies: Submit copies of Record Drawings as follows:

a. Initial Submittal:

1) Submit PDF electronic files of scanned record prints and one set(s) of file prints (hard copy – full size drawings). Deliver on thumb-drive catalogued by drawing number and title.
2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.

b. Final Submittal:

1) Submit PDF electronic files of scanned Record Prints and three set(s) of file prints. Deliver on thumb-drive catalogued by drawing number and title.

2) Print each drawing, whether or not changes and additional information were recorded (hard copy – full size drawings).

B. Record Specifications: Submit hard copy and annotated PDF electronic files of Project's Specifications, including addenda and Contract modifications. Deliver PDFs on thumb-drive catalogued by specification number and title.

C. Record Product Data: Submit hard copy and annotated PDF electronic files and directories of each submittal. Deliver PDFs on thumb-drive.

1. Where record Product Data is required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.

E. Reports: Submit written report indicating items incorporated into Project Record Documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

1.4 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.

a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
b. Accurately record information in an acceptable drawing technique.
c. Record data as soon as possible after obtaining it.
d. Record and check the markup before enclosing concealed installations.
e. Cross-reference record prints to corresponding photographic documentation.

2. Content: Types of items requiring marking include, but are not limited to, the following:

a. Dimensional changes to Drawings.
b. Revisions to details shown on Drawings.
c. Depths of foundations.
d. Locations and depths of underground utilities.
e. Revisions to routing of piping and conduits.
f. Revisions to electrical circuitry.
g. Actual equipment locations.
h. Duct size and routing.
i. Locations of concealed internal utilities.
j. Changes made by Change Order or Construction Change Directive.
k. Changes made following Architect's written orders.
l. Details not on the original Contract Drawings.
m. Field records for variable and concealed conditions.
n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.

5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect and Construction Manager. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:

1. Format: Same digital data software program, version, and operating system as for the original Contract Drawings.
   a. Format: DWG, Version, Acceptable to Architect and Owner using a Microsoft Windows operating system; or
   b. Format: Annotated PDF electronic file with comment function enabled.

2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
3. Refer instances of uncertainty to Architect through Construction Manager for resolution.
4. Architect will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.

   a. See Section 013100 "Project Management and Coordination" for requirements related to use of Architect's digital data files.

C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Format: Annotated PDF electronic file with comment function enabled.
3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
4. Identification: As follows:

   a. Project name.
   b. Date.
   c. Designation "PROJECT RECORD DRAWINGS."
   d. Name of Architect and Construction Manager.
   e. Name of Contractor.

1.5 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

B. Format: Submit record specifications as annotated PDF electronic file.

1.6 RECORD PRODUCT DATA

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.

B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

C. Format: Submit Record Product Data as annotated PDF electronic file.

1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

1.7 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

B. Format: Submit miscellaneous record submittals as PDF electronic file.

1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

1.8 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store Record Documents in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's and Construction Manager's reference during normal working hours.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017839

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SECTION 024100 – SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Removal and demolition of selected items from selected areas of the existing buildings as indicated on the drawings, and as required to complete the work and the project objectives.

B. Section includes:

1. Demolition and removal of existing wood shakes/shingles and wood lath nailers.
2. Demolition and removal of selected structural roof and wall framing members.
3. Additional demolition and removal of misc. items as required for primary repair.

C. Related Sections

1. 29 CFR 1926 – U.S. Occupational Safety and Health Standards; Current edition.
2. NFPA 241 – Standard for Safeguarding Construction, Alterations, and Demolition Operations; Current edition.
3. DIVISION 01
   a. Alteration Project Procedures: Asbestos and asbestos-containing materials encountered during demolition.
   b. Temporary Construction: Site fences, security, protective barriers and waste removal.
   c. Cutting and patching.
   d. Construction Waste Management and Disposal.

1.2 DEFINITIONS

A. Remove: Remove and legally dispose of items except those to be reinstalled, salvaged, or to remain Owner’s property.

B. Remove and Salvage: Items indicated to be removed and salvaged remain Owner’s property. Remove, clean, and pack or crates items to protect against damage. Identify contents of containers and deliver to Owner’s designated storage area.

C. Remove and Reinstall: Remove items indicated. Clean, service, and otherwise prepare for reuse.; store and protect against damage. Reinstall items in same locations or in locations as indicated or noted.

D.

E. Existing to Remain: Protect construction indicated to remain against damage and moisture during selective demolition. When permitted by Owner’s Representative and Architect, items may be removed to suitable storage location during selective demolition and then cleaned and reinstalled in original locations.

1.3 PRE-DEMOLITION MEETING:

A. Pre-demolition meeting: Conduct conference at the project site. This meeting may be scheduled as part of and during a scheduled project meeting.

1.4 SUBMITTALS:

A. Comply with requirements of Division 01.

1. Document with drawings and photographs keyed to drawings and label elements and materials designated for salvage.
2. Provide temporary shoring as required to ensure stability of building elements to remain.
3. Provide protection as required to protect both elements and materials to be removed and salvaged and elements and materials to remain from damage or deterioration.
4. Remove and salvage all items as indicated on drawings and in technical provisions.
5. Package and crate items to be salvaged, providing labels and tags.
6. Deliver items to be restored and reinstalled to locations indicated or designated for restoration or storage.
7. Deliver items to be salvaged but not reinstalled to locations designated by Owner.
8. Survey of Existing Conditions: Submit pre-demolition photos (min. resolution of 3 megapixels) and video recordings electronically showing condition of elements to be removed and disposed of and/or salvaged (including overall views and close-up views of any cracks, damage, deterioration, or missing elements). Employ use of measured drawings, templates, etc. as required. All existing conditions documentation shall be submitted prior to commencing selective demolition work.

1.4 FIELD CONDITIONS

A. Conditions existing at the time of inspection for bidding shall be maintained by the Owner as far as practically possible.

1. Before selective demolition commences, Owner will remove items to be salvaged and stored as directed by Owner for potential reuse.

B. Architect shall be notified of discrepancies between existing conditions and the Drawings prior to proceeding with the selective demolition.

C. Storage of removed items or materials on-site is not permitted.

1.5 PERFORMANCE REQUIREMENTS

A. Protections: Provide temporary barricades and other forms of protection required to protect personnel and the general public from injury due to selective removals and demolition work.

1. Provide protective measures as required to provide free and safe passage of personnel.
2. Protect from damage existing finish work that is to remain in place and which becomes exposed during operations.

B. Regulatory Requirements: Comply with governing EPA notification regulations before commencing selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

D. Damages:

1. Promptly repair any and all damage to property and finish work that is to remain in place and which becomes exposed during operations.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 EXAMINATION

A. Prior to commencement of the selective removals and work, inspect the areas in which the work will be performed. Determine and list the existing conditions of rooms or area surfaces and equipment. After the Work in each respective area is completed, determine if adjacent surfaces or equipment have been damaged as a result of the Work; if so, the damage shall be corrected at the Contractor's expense.

B. Verify that affected utilities have been disconnected and capped as required before starting selective demolition operations.

C. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to the Architect.

D. If there is a question or concern that removal of any element might result in a deficiency or unplanned collapse of any portion of the structure during the selective demolition operations, notify the Architect immediately, prior to removal or modification of any element.

3.2 UTILITY SERVICE AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

1. Comply with requirements for existing services/system interruptions specified in Section 011000 – Summary of Work.

B. Existing Services/Systems to be Removed, Relocated, or Abandoned: Locate, identify disconnect, and seal off or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Arrange to shut off indicated utilities with Owner, when required.
2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass areas of selective demolition and that maintain continuity of services/systems to other parts of the buildings.

3.3 PREPARATION

A. LAWS AND REGULATIONS: All work shall comply with all safety requirements of the State and City where the work is taking place, including the latest edition of the National Fire Protection Association; and OSHA regulations.

B. 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.

C. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent facilities to remain.

D. 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.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove using construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within the limitations of governing regulations and as follows:

1. 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.

2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. 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 prior to starting flame-cutting operations. Maintain a fire watch and have portable fire-suppression devices available during flame-cutting operations.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
5. Dispose of demolished items and materials promptly.

B. Reuse of Existing Elements: Project has been designed to result in end-of-Project rates for reuse of building elements. Do not demolish building elements beyond what is indicated on the drawings without approval.

C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner’s storage area designated by Owner.
5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
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 intended.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, 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.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from project site and legally dispose of them in an EPA-approved landfill.

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

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property to be properly and legally disposed of.

3.6 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition prior to selective demolition began.

B. All areas in which Work was performed under this Section shall be left "broom clean."

END OF SECTION 024100

SECTION 024200 - REMOVAL & SALVAGE OF CONSTRUCTION MATERIALS

PART 1 - GENERAL

1.1 SUMMARY

A. Removal and demolition of selected items from selected areas of the existing buildings as indicated on the drawings, and as required to complete the work and the project objectives.

1.2 SELECTIVE DEMOLITION/SALVAGE:

A. Provide selective removals, and salvage in accordance with the Contract Documents.
   1. Document with drawings and photographs keyed to drawings and label elements and materials designated for salvage.
   2. Provide temporary shoring as required to ensure stability of building elements and fabric to remain.
   3. Provide protection as required to protect both elements and materials to be removed and salvaged and elements and materials to remain from damage or deterioration.
   4. Remove and salvage all items as indicated on drawings and in technical provisions.
   5. Package and crate items to be salvaged, providing labels and tags.
   6. Deliver items to be restored and reinstalled to locations indicated or designated for restoration or storage.
   7. Deliver items to be salvaged but not reinstalled to locations designated by Owner.

1.3 QUALITY ASSURANCE

A. Submit the following:
   1. Submit a schedule indicating proposed methods and sequence of operations for selective removal and salvage work prior to commencement of operations.

B. Selective Demolition/Salvage:
   1. Qualification Data: Qualification data for firms and personnel specified in "Quality Assurance" Article that demonstrates that both firms and personnel have capabilities and experience complying with requirements specified for firm and foreman, provide a list of at least three completed projects within the State where the project is located of similar in size and scope to the work required on this project. For each project list project name, address, architect, scope of contractor's work, and other relevant information. This information shall be submitted with the bid.
   2. Selective Demolition, Removal and Salvage Program: Detailed description of methods and procedures, equipment, tools, and materials proposed for use in removal and salvage operations including, but not limited to, the following:

      a. Documenting and identifying elements and materials to be removed.

b. Procedures for controlling noise and dust.
c. Releasing or freeing materials and elements from existing construction.
d. Protection for elements to be removed and for elements to remain.
e. Handling and transporting materials and elements removed.
f. Packaging elements to be removed.
g. Storage locations.
h. Tools and methods of removing/salvaging items as indicated.

3. Documentation Photographs: Submit photographs electronically with a minimum resolution of 3 megapixels, recording condition of elements to be removed and salvaged (including overall views and close-up views of any cracks, damage, deterioration, or missing elements) before beginning selective demolition, removals, and salvage work.

1.4 PERFORMANCE REQUIREMENTS

A. Protections: Provide temporary barricades and other forms of protection required to protect railroad personnel and general public from injury due to selective removals and demolition work.
1. Provide protective measures as required to provide free and safe passage of personnel.
2. Protect from damage existing finish work that is to remain in place and which becomes exposed during operations.

B. Damages
1. Promptly repair any and all damage to all property and finishes caused by the removals and demolition work, to the Architects / Engineer's satisfaction.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 EXAMINATION

A. Prior to commencement of the selective removals and work, inspect the areas in which the work will be performed. Determine and list the existing conditions of rooms or area surfaces and equipment. After the Work in each respective area is completed, determine if adjacent surfaces or equipment have been damaged as a result of the Work; if so, the damage shall be corrected at the Contractor's expense.

3.2 PREPARATION

A. LAWS AND REGULATIONS: All work shall comply with all safety requirements of the State and City where the work is taking place, including the latest edition of the National Fire Protection Association; and OSHA regulations.

3.3 INSTALLATION, GENERAL

A. 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.

3.4 CLEAN-UP AND REPAIR

A. All areas in which Work was performed under this Section shall be left "broom-clean."

END OF SECTION 024200

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SECTION 042000 – MASONRY RESTORATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes, but is not limited to, the following:
   1. Raking and repointing of existing brick chimneys exposed to the weather.
   2. Installation of new bluestone chimney caps and spark arrestors.

B. Related Sections
   1. DIVISION 01 – Allowances (Mortar Analysis)
   2. DIVISION 06 - Rough Carpentry
   3. DIVISION 07 - Roofing
   4. DIVISION 07 - Sheet Metal and Flashing

1.2 SUBMITTALS

A. Procedure: Comply with requirements of DIVISION 01 - Submittals and as modified below each product indicated.

B. Product Data: Submit specifications, rough-in diagrams, details and installation instructions for each type of roof accessory required, including details and certifications required to show compliance with specified requirements. For each type of roof accessory indicated.

C. Shop Drawings: Show fabrication and installation details for roof accessories. Submit full shop drawings, showing attachment to structure and coordination with related adjacent construction. Indicate profiles, sizes, connections, size and type of fasteners and accessories.

D. Samples: Provide samples for each type of exposed factory-applied color finish required and for each type of roof accessory indicated, prepare samples to adequately show color.
   1. New brick as required for chimneys.
   2. New bluestone caps at chimneys (2 inches thick x custom length and width to match existing conditions).
   3. Each type of mortar for pointing.
      a. Formulas/Mix designs. Minimum of (3) three for each condition based on an analysis prepared by a qualified Architectural Materials Conservator.
      b. Form of 6 inch long by 1/2 inch wide sample strips of mortar set in aluminum or plastic channel.

E. Quality Control Submittals
   1. Qualifications Certification: Submit written certification or similar documentation signed by applicable subcontractor, Prime Contractor and manufacturer (where applicable) indicating compliance with applicable “Qualifications” requirements specified below in “Quality Assurance” article.

F. Contract Closeout Submittals: Comply with requirements of DIVISION 01 - Closeout, including submission of operating and maintenance instructions as item in "General Construction Instructions" manual described in that section.

1.3 QUALITY ASSURANCE

A. Architectural Materials Conservator Qualifications: Submit records of experienced, qualifying firm as specialist in masonry restoration, specifically mortar analysis. A qualified conservator must have five (5) years' experience in similar masonry projects.

B. Contractor Qualifications: Submit records of experienced, qualifying firm as specialist in masonry restoration. Submit written record indicating projects on which the specialist has worked, with name, address, and telephone number of purchase of service and location of work personnel. Include last three projects. A qualified contractor must have five (5) years' experience in similar masonry projects.

C. Product Data:
1. Submit manufacturer's technical data for each product indicated including recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements.
2. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated. Copper Standard: Comply with CDA's "Copper in Architecture handbook". Note: For copper materials, the specifications standard overrides SMACNA.

D. Restoration Program: Submit a written program for each phase of restoration process including protection of surrounding materials on building and site during operations. Describe in detail materials, methods, and equipment to be used for each phase of restoration work.

E. Source Limitations for Masonry Units: obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, form a single manufacturer for each cementitious component and from a single source or producer for each aggregate.

F. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality including color for exposed masonry, from a single manufacturer for each cementitious component and from single source manufacturer for each aggregate.

G. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockups for each type of exposed unit masonry construction.
2. Where masonry is to match existing, erect mockups adjacent and parallel to existing surface.
3. Clean on-half exposed faced faces of mockups with masonry cleaner as indicated.
4. Protect accepted mockups from the elements with weather-resistant membrane.
5. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
6. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless such deviations are specifically approved by Architect in writing.
7. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
8. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination".

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store masonry construction materials off ground, under cover, and in dry location to prevent deterioration or damage due to moisture, temperature changes, contaminants, corrosion, and other causes, if units become wet, do not place until units are in air-dried condition.

B. Store cementitious materials off ground, undercover, and in dry location.

C. Store aggregates where level grading and other required characteristics can be maintained.

D. Cover materials, including reinforcement, when necessary to protect from elements.

E. Do not use calcium-chloride or de-icing salts to remove ice from masonry surfaces.

1.5 PROJECT CONDITIONS:

A. Protection of Masonry: During construction, cover tops of walls, projects, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed. Immediately remove grout, mortar, and soil that come in contact with such masonry.

C. Protect base of walls from mortar splatter by spreading coverings on adjacent surfaces as required.

D. Project projections from mortar droppings.

E. Turn scaffold boards near walls on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

F. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
   1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until unit masonry has dried, but not less than seven (7) days after completing cleaning. Comply with cleaning product manufacturer's directions.

G. Hot-Weather Requirements: Comply with requirements of the IMIAWC (HW) contained in ACI 530.1/ASCE 6/TMS/602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS - GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed work.

2.2 MORTAR AND GROUT MATERIALS

A. Portland Cement: AASTM C 150, Type 1. Provide white cement.

B. Hydrated Lime: ASTM C 207, Type S.

C. Water: Clean, potable and free of oils, acids, alkalis and organic materials.

D. Aggregate: TBD.

2.3 MORTAR MIX

A. General:
1. Follow specifications for all work. Instructions herein as they pertain to mortar mix are for pricing purposes and are subject to the final recommendations and analysis of the Architectural materials Conservator.
2. Measurement and Mixing: Measure cementitious and aggregate material in a dry condition by volume or equivalent weight. Do not measure by shovel, use known measure. Mix materials in a clean mechanical batch mixer.
    a. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix, which will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 1-to-2 hours. Add remaining water in small portions until mortar of desired consistency is reached. Use mortar within 30 minutes of final mixing; do not re-temper or use partially hardened material.
    b. Mortar Color: Produce mortar of color required by use of selected ingredients, namely aggregates (colorants not permitted).
    c. All cement and lime must be sieved prior to use.
    d. Only one person is permitted to mix mortar, to ensure consistent quality control. Name of mixer and experience must be submitted to architect.
    e. A small control sample of the accepted mortar must be submitted to the architect and kept on site to verify color and texture consistency.

B. Mortar Proportions:
1. Mortar: Add aggregate to dry cement and lime and mix thoroughly.
2. Do not use admixtures of any kind in mortar, unless otherwise indicated.
3. Contractor to allow for 3 mockup samples to be reviewed by the Architect.

2.4 MISCELLANEOUS METAL MATERIAL

B. Refer to DIVISION 07 - Sheet Metal Flashing and Trim for flashing material for additional requirements.

C. Lead-Coated Copper Sheet: ASTM B 101, Temper H00 and H01, cold-rolled copper sheet of weight indicated below in Sections 2.5 and 2.6, coated both sides with lead weighing not less than 12 lb/100 sq. ft. nor more than 15 lb/100 sq. ft. of copper sheet (total weight of lead applied equally to both sides.)

D. Terne-Coated Stainless Steel: TCS II Commercial Grade manufactured by Follansbee (304.527.1260). Note all weights to be adjusted to match lead-coated copper weight shown in this specification section.

E. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 coated where required.

F. Stainless-Steel Shapes or Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304 or Type 316, No. 2D finish.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of Conditions (by Installer/Applicator): Examine conditions under which materials in this section are to be installed. Coordinate with the General Contractor and confirm conditions are satisfactory in writing, with copies to the Owner’s Representative and Architect, identifying any conditions detrimental to the proper and timely installation of the work that require correction. Do not proceed with installation until unsatisfactory conditions have been corrected in a manner acceptable to Installer /Contractor.

B. Installer to confirm unsatisfactory conditions have been corrected / rectified and are acceptable to ensure a proper and timely installation of the proposed products. Verify the work when properly installed will meet the specified warranty requirements. Submit written confirmation to the General Contractor with copies to the Owner’s Representative and Architect. Failure to submit written confirmation and subsequent installation will indicate all conditions are acceptable to Installer / Contractor.

3.2 INSTALLATION

A. General: Install roof accessories according to manufacturer's written instructions. Anchor roof accessories securely in place and capable of resisting forces specified. Use fasteners, separators, sealants, and other miscellaneous items as required for completing roof accessory installation. Install roof accessories to resist exposure to weather without failing, rattling, leaking, and fastener disengagement.

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 manufacturer.
1. Coat concealed side of roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.

2. Underlayment: Where installing exposed-to-view components of roof accessories 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.

C. Install roof accessories and fasten securely, in accordance with manufacturer installation instructions. Install all items, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.

D. Seal joints with elastomeric or butyl sealant as required by manufacturer of roof accessories.

E. Comply with applicable wind load requirements for installation and fastening of all systems noted in this section.

F. Use full-size units without cutting if possible.

G. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.

3.3 MORTAR BEDDING AND JOINTING

A. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

3.4 RAKING, REPAIRING, POINTING, AND CLEANING

A. Use only hand tools to remove existing mortar.

B. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

C. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

D. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

E. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's acceptance of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.

3.5 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

B. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

3.6 PROTECTING AND CLEANING

A. Protect system from damage during application and remainder of construction period, according to manufacturer’s written instructions.

B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

C. Protect adjacent elements as required by the manufacturer.

D. Clean any stains on materials that would be exposed in the completed work using procedures as recommended by manufacturer.

E. Schedule work to ensure that the sheet metal system is protected and covered if not complete after installation.

F. Protect roofing system from damage during installation of other systems subsequent to completion of roofing operations.

G. Dispose of all debris legally and in accordance with local jurisdiction requirements.

END OF SECTION 042000

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SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Framing with engineered wood products.
3. Wood blocking, cants, and nailers.
4. Wood furring.
5. Wood sleepers.
6. Wood lath (spaced sheathing).
6. Plywood.

1.2 RELATED SECTIONS

A. DIVISION 01
B. DIVISION 02 – Selective Demolition
C. DIVISION 04 – Masonry Restoration
D. DIVISION 06 – Finish Carpentry
E. DIVISION 07 – Wood Shingle Roofing
F. DIVISION 07 – Sheet Metal Flashing, and Trim

1.2 SUBMITTALS

A. Comply with submittal requirements indicated below and as stipulated in DIVISION 01 – Submittal Procedures.

A. 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 and fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Delete first subparagraph below if not applicable.

B. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

C. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:

1. Wood-preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.
4. Powder-actuated fasteners.
5. Expansion anchors.

1.3 QUALITY ASSURANCE

A. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria":

1. Dimension lumber framing.
2. Miscellaneous lumber.

1.4 DELIVERY, STORAGE AND HANDLING

A. Refer to DIVISION 01 requirements for product delivery, storage, and handling.

B. Protection:
1. Elevate new, replacement, and salvaged wood on shoring at least one (1) foot above the ground.
2. Place a vapor barrier on bare ground.
3. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.
4. Cover wood with a breathable waterproof covering until installed. Secure cover to avoid exposure to wind and moisture.

C. Handle products in conformance with the manufacturer’s requirements.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

B. Lumber fabricated from old growth timber is not permitted.

C. Provide sustainably harvested wood.

D. Lumber fabricated from recovered timber (abandoned in transit) is permitted in lieu of sustainably harvested lumber, unless otherwise noted, provided it meets the specified requirements for new lumber and is free of contamination; identify source.

E. Lumber: DOC PS 20 (19% maximum moisture content) and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.

2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece or omit grade stamp and provide certificates of grade compliance issued by grading agency.
3. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
4. Provide dressed lumber, S4S, unless otherwise indicated.

F. Engineered Wood Products: Provide engineered wood products acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.

2.2 DIMENSIONAL LUMBER FOR CONCEALED APPLICATIONS

A. Grading Agency: Southern Pine Inspection Bureau, Inc. (SPIB).

B. Grading Agency: West Coast Lumber Inspection Bureau (WCLB).

C. Grading Agency: Western Wood Products Association (WWPA).

D. Sizes: Nominal sizes as indicated on drawings, S4S.

E. Moisture Content: S-dry or MC19.

F. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
1. Lumber: S4S, No. 2 or Standard Grade.
2. Boards: Standard or No. 3.

2.3 HARDWOOD LUMBER: DIMENSIONAL LUMBER

A. Provide hardwood lumber for framing where noted:
1. Species: Douglas Fir
2. Grade: WWPA Structural Grade
3. Surface finish: Sawn
4. Moisture content: S-Dry or MC19.
5. Size: Per Drawings.
6. Quality: Full lengths and without splices, free from warp, cup, bow, checks, or other dimensional defect or variation which will affect fit-up and alignment.

2.4 PLYWOOD

A. Identify each piece of plywood by stamp, brand, mark, or tag showing at a minimum:
1. Registered Trademark: APA
2. Mill.
3. Panel Grade.
4. Span rating and thickness.
5. Exposure Classification.
6. Veneer Grade.

B. All plywood shall be:
1. APA RATED.
2. Span rating: 16”.

3. Thickness: Per Drawings or as conditions dictate.
4. Exposure: Exterior.
5. Veneer grade:
   a. Wall - infill: C-C plugged.
   b. Wall - visible: A/BB

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).

1. Preservative Chemicals: Acceptable to authorities having jurisdiction.
2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings, and the following:
1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
4. Wood framing members that are less than 18 inches above the ground in crawlspaces or unexcavated areas.

2.3 FIRE-RETARDANT-TREATED MATERIALS

A. General: Comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood). Use treatment for which chemical manufacturer publishes physical properties of treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D5664 for lumber and ASTM D5516 for plywood.
1. Use Exterior type for exterior locations and where indicated.
2. Use Interior Type A, High Temperature (HT) for enclosed roof framing, framing in attic spaces, and where indicated.
3. Use Interior Type A, unless otherwise indicated.

B. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.

C. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not bleed through, contain colorants, or otherwise adversely affect finishes.

D. Application: Treat items indicated on Drawings, and the following:

1. Concealed blocking.
2. Plywood backing panels.

2.4 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
   1. Blocking.
   2. Nailers.
   3. Cants.
   4. Furring.
   5. Grounds.

B. For items of dimension lumber size, provide Construction or No. 2 grade lumber with 19 percent maximum moisture content and any of the following species:
   1. Hem-fir (north); NLGA.
   2. Mixed southern pine; SPIB.
   3. Spruce-pine-fir; NLGA.
   4. Hem-fir; WCLIB, or WWPA.
   5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
   6. Western woods; WCLIB or WWPA.
   7. Northern species; NLGA.
   8. Eastern softwoods; NeLMA.

C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

E. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
   1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Lag Bolts: ASME B18.2.1.

F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when

installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

H. For required fasteners for cedar roof shingles and adjacent materials see RELATED SECTIONS in DIVISION 7.

2.6 MISCELLANEOUS MATERIALS

A. Adhesives for Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.
   1. Use adhesives that have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

B. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient.

C. Metal Framing Anchors: Made from hot-dip, zinc-coated steel sheet complying with ASTM A653/A 653M, G90 coating designation for lumber without chemical treatment, or 316L Stainless Steel or better when in contact with chemically treated lumber.
   1. Acceptable Manufacturers:
      a. Simpson Strong-Tie Company, Inc.
      b. Alpine Engineered Products, Inc.
      c. Cleveland Steel Specialty Co.
      d. Southeastern Metals Manufacturing Co., Inc.
      e. USP / Mitek Industries, Inc.
      f. Or approved equal.

   .
   2. Research / Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal framing anchors, for application indicated, with building code in effect for Project.
   3. Allowable Design Loads: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with Section 013500 – Special Procedures for Historic Treatment.

B. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements

for attaching other construction. Make all joints true, tight, and well nailed with square edges.

C. Fit and scribe finish carpentry to match existing and original members.

D. At all field cuts of preservative treated material, saturate all cuts after trial fit-up but before assembly and fastening.

E. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.

F. Do not splice structural members between supports, unless otherwise indicated.

G. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

H. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of members or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

I. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

J. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
3. Table 23-II-B-1, "Nailing Schedule," and Table 23-II-B-2, "Wood Structural Panel Roof Sheathing Nailing Schedule," in ICBO's Uniform Building Code.
4. Table 2305.2, "Fastening Schedule," in BOCA's BOCA National Building Code.
5. Table 2306.1, "Fastening Schedule," in SBCCI's Standard Building Code.
6. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
7. Table 602.3(1), "Fastener Schedule for Structural Members," and Table 602.3(2), "Alternate Attachments," in ICC's International One- and Two-Family Dwelling Code.

K. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.

L. For exposed work, arrange fasteners in straight rows parallel with edges of members, with fasteners evenly spaced, and with adjacent rows staggered.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.

B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

3.3 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

SECTION 062000 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:

1. Exterior trim, including but not limited to built-in gutters, running trim, rakes, and soffits.
2. Exterior lumber soffit, fascia, cornice and returns at the rooflines.

B. Related Sections include the following:

1. Section 061000 “Rough Carpentry" for furring, blocking, framing, and other carpentry work not typically exposed to view.
2. Section 099000 "Painting" for priming and back priming of wooden components.

1.3 DEFINITIONS

A. Inspection agencies, and the abbreviations used to reference them, include the following:

1. NELMA - Northeastern Lumber Manufacturers Association.
2. NHLA - National Hardwood Lumber Association.
3. NLGA - National Lumber Grades Authority.
4. RIS - Redwood Inspection Service.
5. SCMA - Southern Cypress Manufacturers Association.
6. SPIB - Southern Pine Inspection Bureau.
7. WCLIB - West Coast Lumber Inspection Bureau.
8. WWPA - Western Wood Products Association.

1.4 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Include construction details, material descriptions, dimensions of individual components and profiles, textures, and colors.

B. Samples for Verification:

1. Wood identification - obtain identification of existing wooden elements from:
   a. Alden Identification
      Service 3560
      Brookeside Drive
      Chesapeake Beach,
      MD 20732 Tel 443-
      624-5712
      aldenid@comcast.net
      https://wood-identification.com/wood-types/
   b. Or Architect-approved equal.

2. For each species and cut of lumber and panel products with non-factory-applied finish, with 1/2 of exposed surface finished, 50 sq. in for lumber. Submit the following samples of wood:
   a. Soffit boards: wood type Eastern White Pine (Pinus Strobus)
   b. Running trim: wood type Poplar (populus deltoids)

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer with written references upon request.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect materials against weather and contact with damp or wet surfaces. Stack lumber, plywood, and other panels. Provide for air circulation within and around stacks and under temporary coverings.

1.7 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements and at least one coat of specified finish to be applied without exposure to rain, snow, or dampness.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Lumber: DOC PS 20 and applicable grading rules of inspection agencies certified by the American Lumber Standards' Committee Board of Review.

1. Factory mark each piece of lumber with grade stamp of inspection agency indicating grade, species, moisture content at time of surfacing, and mill.
2. For exposed lumber, mark grade stamp on end or back of each piece or omit grade stamp and provide certificates of grade compliance issued by inspection agency.

2.2 EXTERIOR STANDING AND RUNNING TRIM

A. Lumber Trim for Painted Applications: Solid lumber with smooth face and of the following species and grade:
   1. C Grade Select: Eastern White Pine (Pinus Strobus), NELMA, NLGA, WCLIB, or WWPA.

B. Moldings: Wood moldings made from kiln-dried stock and graded under WMMPA WM 4. Profiles to be custom:
   1. Moldings for Opaque Finish (Painted): C-grade Select: Eastern White Pine (Pinus Strobus).

C. Minimum Standards:
   1. Finger jointed (or *comb jointed*) members are not permitted.
   2. The longest continuous lengths possible shall be used. No length of a wood member shall be less than 16 linear feet.
   3. Replicated members may require custom profiles.

2.3 MISCELLANEOUS MATERIALS

A. Fasteners for Exterior Finish Carpentry: Provide stainless steel nails or screws in sufficient length to penetrate minimum of 1-1/2 inches into substrate, unless otherwise recommended by manufacturer:

B. Glue: Aliphatic- or phenolic-resin wood glue recommended by manufacturer for general carpentry use.

C. Flashing: Comply with requirements in Division 07 Section "Sheet Metal Flashing and Trim" for flashing materials installed in finish carpentry.

D. Sealants: Comply with requirements in Division 07 Section "Joint Sealants" for materials required for sealing siding work.

2.4 FABRICATION

A. Wood Moisture Content: Comply with requirements of specified inspection agencies and with manufacturer's written recommendations for moisture content of finish carpentry at relative humidity conditions existing during time of fabrication and in installation areas.

B. Back out or kerf backs of the following members, except members with ends exposed in finished work:
   1. Exterior standing and running trim wider than 5 inches.
   2. Interior standing and running trim, except shoe and crown molds.
   3. Wood beaded board paneling.

C. Ease edges of lumber less than 1 inch in nominal thickness to 1/16-inch radius and edges of lumber 1 inch or more in nominal thickness to 1/8-inch radius.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

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

B. Before installing finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours.

C. Prime lumber for exterior applications to be painted, including both faces and edges. Cut to required lengths and prime ends. Comply with requirements in Division 09 Section "Painting."

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. Install finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

1. Scribe and cut finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
2. Countersink fasteners, fill surface flush, and sand where face fastening is unavoidable.
3. Install to tolerance of 1/8 inch in 96 for level and plumb. Install adjoining finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.

   and risers within each flight.
4. Coordinate finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate finish carpentry.

3.4 STANDING AND RUNNING TRIM INSTALLATION

A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long, except where necessary. Stagger joints in adjacent and related standing and running trim. Cope at returns and miter at corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints. Plane backs of casings to provide uniform thickness across joints, where necessary for alignment.

1. Match color and grain pattern across joints.
2. Install trim after gypsum board joint finishing operations are completed.
3. Drill pilot holes in hardwood before fastening to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed

carpentry work and fill holes.

4. Fit exterior joints to exclude water. Apply flat grain lumber with bark side exposed to weather.

3.5 ADJUSTING

A Replace finish carpentry that is damaged or does not comply with requirements. 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.

3.6 CLEANING

A Clean finish carpentry on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

END OF SECTION 062000

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SECTION 073129 - WOOD SHINGLE ROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cedar Shingle Roofing on all upper roofs and dormers of the following types:
   1. Cedar Shingles. (Certigrade)
   2. Pressure-Impregnated, Preservative Treated Shingles. (Certi-Last)
   3. Hip and Ridge Units. (Certi-Ridge)

B. Hip and Ridge Units. (Certi-Ridge)

C. Installation accessories including underlayment materials, slip-sheets, fasteners, and other items required for a complete roofing installation.

1.2 RELATED SECTIONS

A. Section 061000 - Rough Carpentry.

B. Section 076200 - Sheet Metal Flashing and Trim.

C. Section 079200 – Joint Sealants

1.3 REFERENCES

A. Cedar Shake and Shingle Bureau (CSSB):
   1. Registered Trademarks: The following terms are registered trademarks of the Cedar Shake and Shingle Bureau (CSSB) and are only to be used in the representation and specification of products manufactured by members of the CSSB.
      a. Certi-Wood.
      b. Certi-Label.
      c. Certigrade.
      d. Certi-Last.
      e. Certi-Guard.
      f. Certi-Ridge.
      g. Certi-Split.
      h. Certi-Sawn
      i. Blue Label.
   2. CSSB Certi-Label: Grading and Packing Rules for Western Red Cedar Shake and Western Red Cedar Singles.
   3. CSSB New Roof Construction Manual.

B. ASTM Annual Book of Standards (ASTM):
   1. ASTM A153 - Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware.
   2. ASTM A493 - Standard Specification for Stainless Steel Wire and Wire Rods for Cold Heading and Cold Forging.
   3. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Type II Used in Roofing and Waterproofing.

4. ASTM D4869 - Standard Specification for Asphalt-Saturated Organic Felt Type IV Underlayment Used in Steep Slope Roofing.
5. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings.

1.4 SUBMITTALS

A. Submit under provisions of Section 013000 - Administrative Requirements.

B. Product Data:
1. Manufacturer's data sheets on each product to be used.
2. Preparation instructions and recommendations.
3. Storage and handling requirements and recommendations.
4. Typical installation methods.

C. Verification Samples:
1. Cedar Shingles: Two representative units of each type, size, pattern and color.
2. Lead Coated Copper flashing: 12” square.
3. Warranties: Special warranties specified in this Section.

D. Shop Drawings: Include details of materials, construction and finish. Include relationship with adjacent construction.

E. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum of five years documented experience.

B. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.

C. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

D. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
1. Mockup, approx. 48” long, shall include typical roof eave, including built-in gutter, fascia and trim, apron flashing, including supporting construction cleats, seams, attachments, underlayment and accessories.
2. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
3. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
4. Retain mock-up during construction as a standard for comparison with completed work.
5. Do not alter or remove mock-up until work is completed or removal is authorized.

1.6 PRE-INSTALLATION CONFERENCE

A. Convene a conference at the site approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
   1. Review methods and procedures related to shingles, sheet metal flashing and trim, and ventilation.
   2. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
   3. Document proceedings, including corrective measures and actions required, and furnish copy of record to all participants.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store and handle all materials in strict compliance with manufacturer's written instructions and recommendations.

B. Stack materials on pallets or platforms, covered with suitable weathertight and ventilated covering. Do not store metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

C. Protect from damage due to weather, excessive temperature, and construction operations.

D. Allow all cedar roofing products to acclimate to site conditions before installing.

E. All labels shall be retained and provided to Owner.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

B. Do not install when rain is present.

C. Provide attic ventilation 1/150 is recommended.

D. Do not insulate directly under plywood decking or spaced sheathing.

1.9 COORDINATION

A. Coordinate installation of all materials to provide a leakproof, secure, and non-corrosive installation.

1.10 WARRANTY

A. Manufacturer's Warranty: Provide manufacturer's standard limited warranty.

B. Special Product-Defect Warranty: Submit a written warranty, signed by the shingle manufacturer, ensuring that the shingles, when installed according to manufacturer's written instructions, will remain free of leaks and agreeing to furnish replacement shingles or refund a pro-rata portion of the amount originally paid for the defective shingles due to original product defects, for the specified warranty period.
   1. Warranty period: 25 years from date of Substantial Completion.

1.11 EXTRA MATERIALS

A. Deliver extra materials to Owner. Furnish extra materials described below that match products to be installed, are packaged with protective covering for storage, and are identified with labels describing contents.

   1. Furnish shingles equal to 2 percent (2%) of amount installed but not less than 1 square (100 sq. ft.) identical to those installed, in unbroken bundles.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Members of the Cedar Shake and Shingle Bureau, which is located at: P.O. Box 1178; Sumas, WA 98295-1178; ASD Phone: 604-820-7700; Fax: 604-820-0266; Email: info@cedarbureau.com; Web: www.cedarbureau.org.

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 016000 - Product Requirements.

2.2 PERFORMANCE REQUIREMENTS

A. Standards Compliance: CSSB Certi-Label products.

B. Identification: Attach a label to each bundle of shakes identifying manufacturer, references to model code approval, type of product, grade, dimensions, and approved grading agency.

   1. Where applicable, include chemical treatment, method of application, purpose of treatments, and warranties available.

2.3 CEDAR SHINGLES

A. Basis of Design: Certigrade Cedar Shingles, Blue Label as manufactured by Members of the Cedar Shake and Shingle Bureau.
   1. Grade: Number 1, Blue Label 100 percent clear, edge grain, heartwood.

   2. Species: Alaskan Yellow Cedar 24" Royal

B. Cedar Shingle Characteristics and Ancillary Items:
   1. Size: 24 inches (610 mm) by 4/2, 4 units equal 2 inches (51 mm).
      a. 4/12 roof pitch and greater Blue Label Maximum Exposure: 7 inches (178 mm).

2. Treatment: Preservative. Pressure-impregnated. Certi-Last; as manufactured by Members of the Cedar Shake and Shingle Bureau.
3. Fasteners: Electrogalvanized fasteners are not acceptable.
   a. Nail Type: Ring shank.
   b. Nail Material: Type 316 stainless steel.

C. Hip and Ridge Caps:
1. Basis of Design: Certi-Ridge, Shingle; as manufactured by Members of the Cedar Shake and Shingle Bureau.
2. Hip and ridge caps shall be site-fabricated from roof shingles. Fabrication and installation as per CSSB specifications and recommendations.
3. Exposure to match roof shingle exposure.

2.4 ATTIC VENTILATION

NOTE: Ridge vents shall be installed only at buildings where gable vents are not currently present.

A. Ridge Vents: Flexible or rigid plastic ridge ventilator designed to allow the passage of hot air from attics, while resisting snow infiltration. For use in conjunction with eave/soffit ventilation products.
1. Net Free Ventilation Area (NFVA): 12.5 sq inches per lineal ft (26460 sq.mm per m) min.
2. Cobra Ridge Vent as manufactured by GAF or approved equal.

B. Fascia and Soffit/Under Eave Vents: Surface mounted.
1. Soffit Vent: Screened aluminum, corrosion resistant.
   a. Net Free Vent Space (NFVA): 9.0 sq inches per lineal ft (11613 sq mm per m).
2. Flashing: 26 ga hot dip galvanized sheet steel complying with ASTM A 653M, G90.Z275 painted.
3. Flashing: 16 oz/sq ft (0.56 mm) copper sheet, complying with ASTM B 370.
4. Type 304 or type 316 26-gauge stainless steel.

C. Perimeter Underlayment: Polyethylene-sheet-backed, self-adhering, polymer-modified, bituminous sheet; complying with ASTM D 1970: minimum 40 mils thick. Provide primer when recommended by underlayment manufacturer.
1. Membrane Properties:
   a. Tensile Strength (ASTM D 412, modified)” 250 psi minimum.
   b. Elongation (ASTM D412, modified): 250 percent minimum.
   c. Puncture Resistance (ASTM E 154): 40 pounds minimum.
   d. Adhesion to Plywood: 3.0 pounds per inch minimum.

2. Primer: Fast-drying, water-based primer, made by manufacturer of membrane, specifically intended for use with membrane.
   a. TCA-based formulations shall not be permitted.

3. Detailing Mastic: Solvent based rubberized asphalt mastic, made by manufacturer of self-adhering underlayment for sealing of edges and penetrations.

4. Products: Provide one of the following:
   a. Ice and Water Shield: Grace; GCP Applied Technologies
   b. Weather Watch: GAF Building Materials Corporation.
   c. WinterGuard: Certain Teed Corporation.
   d. Ice Guard Membrane No. 108-AG: Royston Laboratories, Inc.

D. Slip Sheet: Rosin-sized paper, 5-pound nominal weight.

E. Sheet Metal Flashing: Provide material specified in Section 076200.

F. Vent Pipe Flashing: Lead conforming to ASTM B 749, Type L51121, at least 1/16 inch thick, unless otherwise indicated. Provide lead sleeve sized to slip over and turn down into pipe, soldered to skirt at slope of roof extending at least 4 inches from pipe onto roof.

2.5 SHEET METAL FLASHING

A. Metals: Provide flashing fabricated from the following materials:
   1. Lead Coated Copper Sheet: ASTM B 101, cold-rolled copper sheet of minimum weight indicated, both sides coated with lead weighing not less than 12 nor more than 15 pounds per 100 square feet, unless otherwise indicated.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly constructed and prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Verify that the substrate is dry, sound, clean and smooth. It shall be free of any depressions, waves, and projections.

C. Replace damaged substrate with new materials.

D. Clean substrate surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

E. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

F. Coordinate installation with flashing other adjoining work to ensure proper sequencing.
   1. Do not install roofing materials until all vent stacks and other penetrations through roof sheathing have been installed and are securely fastened against movement.

3.3 INSTALLATION: GENERAL

A. Comply with manufacturer's written installation instructions and the following:
   1. CSSB's "Design and Application Manual for New Construction".
   2. NRCA's "The NRCA Roofing and Waterproofing Manual": Section "The NRCA Steep Roofing Manual," Chapter "Wood Shingle and Shake Roofing."

B. Perimeter Underlayment: Apply minimum 36-inch-wide layer of perimeter underlayment along entire perimeter of surface to receive wood shingles, including at eaves, ridges, hips, valleys, skylights, dormers, and edges, and around projections through roof. Extend perimeter underlayment a minimum of 24 inches inside exterior wall line at edges.

C. Shingles:
   1. Check with local building code official for plywood thickness/dimensions.
   2. Shingles to be at least doubled at all eaves.
   3. Butts of the shingles in the first course on roofs shall project 1-1/2 inch (38 mm) from the edge of roof eaves to insure proper spill into gutters and approximately 1 inch (25 mm) at gable and rake edge.
   4. Shingles Spacing: Not less than 1/4 inch (6 mm), not more than 3/8 inch (10 mm).
   5. Number 1 Blue Label Maximum Weather Exposure:
      a. Shingle Length: 24 inch (610 mm).
         1) Roof Slope: 3:12 to 4:12. Exposure: 5-3/4 inch (146 mm).
         2) Roof Slope: 4:12 and Steeper. Exposure: 7-1/2 inch (191 mm).
   6. Chimney Flashing: Extend up chimney to a height not less than 8 inches (76 mm), up the roof slope to a point equal in height to the flashing on the chimney but never less than 1-1/2 times shingle exposure.
   7. Manufactured Step-Flashing: Horizontal and Vertical 6-inch (64 mm) step flashings require a 3 inch (76 mm) minimum overlap.
   8. Step Flashing: Minimum height of 6 inches (64 mm). Greater heights are often required. Check with local building code official for step flashing height.
   9. Apron Counter Flashing: Extend to within 1 inch (25 mm) of surface of finished roof.

D. Saddles or Crickets: Formed in back of chimneys, curves or similar vertical surfaces, they shall be carried not be less than 10 inch (254 mm) under shakes and shingles.

E. Step flashing is to be used where vertical surfaces occur in connection with slopes. They are to be formed in separate pieces. Extend flashing horizontally not less than 6 inches (76 mm) and up the vertical wall so that they are lapped by the counter flashing. Counter flashing shall be vertically at least 6 inches (102 mm) above roof surface. Install step flashing in step fashion. Each piece to lap not less than 3 inches (76 mm); one flashing installed on each course concealed under the covering course. If other than masonry is used, the flashing is to extend up the wall not less than 6 inches (76 mm) behind the sheathing paper.

F. Dormer Flashings: To run 6 inches (76 mm) up under the sheathing paper and not less than 6 inches (76 mm) horizontally.

G. Window Caps and Other Projections: At points where rainwater accumulates, provide with flashings extending a distance of 6 inches (76 mm) up the wall behind the sheathing paper.

H. Soil Pipes: Metal to extend no less than 6 inches (152 mm) in all directions and installed to lap and shed water to shakes or shingles below.

I. Hips and Ridges: To be of alternate overlap type applied at same exposure as field of roof and with nails long enough to penetrate into sheathing at least 3/4 inches (19 mm).
1. Position fasteners approximately 2 inches (51 mm) above exposure line.
2. Install a strip of felt, eave protection material or metal over hip or ridge under the ridge or hip cap. If longer or shorter ridge cap is used, adjust exposure accordingly.

J. Valleys:
1. Install eaves protection membrane at least 36 inches (914 mm) wide and centered on the valley. Lap ends 6 inches (152 mm) and seal.
2. Shakes or shingles extending into the valley shall be sawed to the proper miter.
3. Do not lay shakes or shingles with grain parallel with the centerline of valleys.
4. All valleys shall be installed with shakes or shingles lapping the valley flashing not less than 7 inches (178 mm) on each side.
5. On shingle roofs of less than 6:12 slope, flashing should extend at least 11 inches (279 mm) on each side.
6. For shakes, metal valley sheets shall be center-crimped; of 20 inches (508 mm) minimum width; underlayed with a strip of roofing felt over the sheathing.
7. Where valleys are indicated to be "open valleys", install metal flashing over leak barrier before shingles or shakes are installed. Secure the flashing by nailing at 18 inches (457 mm) on center. No nails closer than 9 inches (229 mm) from center of valley.
8. Valley metals that have proved reliable in a particular geographic region should be selected.
    a. Lead Coated Copper Flashing: Verify with Western Wood Preservatives on gauge/thickness of coating.

K. Fasteners:
1. Fasteners to be long enough to penetrate into the solid wood sheathing at least 3/4 inch (19 mm) or all the way through.
2. Nails are to be driven flush but not so that the nail head crushes the wood. Place approximately 3/4 to 1 inch (19 to 25 mm) from the side edges of the shakes or shingles and approximately 1-1/2 inches (38 mm) above the butt line of the following course.
3. Each roof shake or shingle shall be secured with two full driven, required fasteners.

L. Attic Ventilation required. As recommended by local code.

3.4 FIELD QUALITY CONTROL

A. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

B. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.

3.5 CLEANING AND PROTECTION

A. Clean products in accordance with the manufacturer's recommendations.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes, but is not limited to the following sheet metal flashing and trim installation:
:
1. This project includes but is not limited to traditional flashing profiles and details at all roof edges, eaves, roof to wall flashing, masonry flashing and crickets.
2. Built-in gutters and new leaders.

B. Related Sections:

1. Section 042000 – For flashing at masonry.
2. Section 061000 – For rough carpentry at built-in gutters, rakes, structure, etc.
3. Section 073129 – For flashings at new roof and built-in gutters.
4. Section 079200 – For joint sealants.

1.3 DEFINITIONS

A. Not Exposed to View: Items not in line of sight from exterior of building (not restricted to street level), generally includes items at roof level of building and on roof side so they can be viewed only from roof.
B. Exposed to View: Items in line of sight from exterior of building (not restricted to street level), generally includes items on exterior side of building from top of parapets down to street level.

1.4 SYSTEM DESCRIPTION

A. Performance Requirements:

1. Fabricate and/or install flashing and sheet metal permanently watertight, and in manner that will not deteriorate in excess of manufacturer's published limitations.
2. Comply with NRCA/SMACNA Standard, and ANSI-SPRI ES-1 requirements.
3. Sheet Metal Flashing and Accessories: Provide installation of sheet metal Work with no fasteners exposed to elements.
4. Wind Resistance: Design, fabricate, and install to withstand wind loads, structural movement, thermally induced movement, and exposure to weather, in accordance with wind requirements, as indicated in DIVISION 07
    a. Fabricate and install roof edge flashing and copings capable of resisting the following forces according to recommendations in FMG Loss Prevention Data Sheet 1-49:
        (1) Wind Zone 1: For velocity pressures of 21 to 30 lbf/sq.ft.: 60 lbf/sq.ft. perimeter uplift force, 90 lbf/sq. ft. corner uplift force, and 30 lbf/sq.ft. outward force.

5. Thermal Movement: Provide sheet metal flashing and trim that allow for thermal movements resulting from the following maximum change (200 deg. F) 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.
6. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

B. Notify Architect of any instances which will not comply with above requirements.

1.5 SUBMITTALS

A. Procedure: Comply with requirements of DIVISION 01 Submittals and as modified below.
B. Product Data: For each product indicated submit product specifications, installation instructions, and manufacturer recommendations for each specified sheet metal material and fabricated product.
C. Shop Drawings: Submit drawings indicating layouts, profiles, shapes, seams, dimensions, and details for fastening, joining, supporting, and anchoring sheet metal flashing, trim and fabricated work. Include counter flashings, fascia and coping units, gutters, downspouts, scuppers, and expansion joint systems.
D. Samples: For each type of sheet metal flashing and trim. Submit a minimum of (2) samples for each product.
   1. Include 3-inch square samples of specified sheet materials to be exposed as finished surfaces and
   2. (2) samples, 12-inch long of finished units of specified fabricated products exposed as finished installation.

E. Submittals for manufactured units are to be received by Architect no less than 20 days after award of contract.

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 on documents unless more stringent requirements are indicated.
   1. Copper Standard: Comply with CDA’s “Copper in Architecture handbook”. Note: For copper materials, the specifications standard overrides SMACNA.

B. Mockups: Build mockups to demonstrate aesthetic effects and set quality standards for fabrication and installation.
   1. Build mockup of typical roof eave including built-in gutter, fascia, fascia trim, and apron flashing condition. Mock-up to be approximately 48 inches long, including supporting construction cleats, seams, attachments, supporting construction, and all associated accessories.
   2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion based on the approval of the Architect.
   3. Locate mock-up with Architect in field.

C. Fabricator and Installer Qualifications: Company specializing in producing sheet metal work with a minimum of five (5) years of successful documented experience.

D. Pre-installation Conference: Conduct conference at Project site to comply with Division 1 Section “Project Management and Coordination” requirements.,
   1. Meet with Owner, Architect, Owner’s insurer if applicable, Installer, and installers whose work interfaces with or affects sheet metal flashing and trim including installers of masonry at chimneys, roof materials and accessories, and any 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 installation discussion and solutions, corrective methods and actions required, and furnish copy of record to each participant.

1.7 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.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Lead-Coated Copper Sheet: ASTM B 101, Temper H00 and H01, cold-rolled copper sheet of weight indicated below in Sections 2.5 and 2.6, coated both sides with lead weighing not less than 12 lb/100 sq. ft. nor more than 15 lb/100 sq. ft. of copper sheet (total weight of lead applied equally to both sides.)

B. Terne-Coated Stainless Steel: TCS II Commercial Grade manufactured by Follansbee (304.527.1260). Note all weights to be adjusted to match lead-coated copper weight shown in this specification section.

2.2 ACCESSORIES

A. Provide miscellaneous materials and accessories required for complete installation.
   1. Fasteners: Same material and finish as flashing metal, with soft neoprene washers. No exposed fasteners allowed.
   2. Clips or Cleats: At a minimum provide metal of the same material and gage as sheet metal being installed.
   3. Underlayment: ASTM D 226, organic roofing felt, Type II ("No. 30").
   4. Slip Sheet: Rosin sized building paper, min. 3 lb/100 sg. Ft.
   5. Primer: Type recommended by finish manufacturer.
   6. Protective Backing Paint: Zinc rich alkyd.
   7. Sealant: As specified in DIVISION 07 – Joint Sealant. Roofer's mastic is not acceptable.
   8. Mastic Sealant: Polyisobutylene; non-hardening, non-skinning, non-drying, non-migrating sealant or approved equal. Roofer's mastic is not acceptable.
   9. Plastic Cement: ASTM D 4586, Type I.
   10. Solder: ASTM B 32; Sn50 (50/50) type. Solder and Fasteners: Provide type solder and fasteners recommended by producer of metal sheets, for fabrication and installation.
   11. Epoxy Seam Sealer: Two-part non-corrosive metal seam cementing compound as recommended by sheet metal manufacturer for exterior non-moving joints.
   12. Reglets: Metal or plastic units of the type and profile indicated; compatible with flashing indicated; non-corrosive.

13. Metal Accessories: Provide sheet metal clips, straps, anchoring devices and similar accessory units as required for installation of work, matching or compatible with material being installed, non-corrosive, size and gauge required for performance.

B. Provide bent and fabricated items in the profiles and dimensions required to meet the conditions noted on the drawings.

2.3 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. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
1. Passive Stainless Steel for **all** attachments.

C Solder for Lead-Coated Copper: ASTM B 32, Grade Sn60, 60 percent tin and 40 percent lead.

D. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing. Provide permanently elastic, non-sagging, nontoxic, non-staining tape.

E. Elastomeric Sealant: ASTM C 920, elastomeric polymer sealant: of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight. Verify all information with sealant manufacturer prior to installation.

F. Butyl Sealant: ASTM C 1311, single-component, solvent release, butyl rubber sealant, polyisobutylene plasticized, heavy bodied for hooked-type expansion joints with limited movement.

G. Asphalt Roofing Cement: ASTM D 4586, asbestos-free, of consistency required for application.

2.4 FABRICATION, GENERAL

A. General: Provide materials and components to conform with the roofing manufacturer’s existing warranty requirements. Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" and CDA’s “Copper in Architecture Handbook” that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.

B. Fabricate sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
1. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.

C. Sealed Joints: Form non-expansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations. Provide 3/8” gap for movement within 24” of each inside and outside corner. Provide movement joint between straight run of metal spaced to meet SMACNA requirements.

D. Expansion Provisions: Where lapped or bayonet-type expansion provisions in the Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints as recommended by manufacturer.

E. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.

F. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, non-corrosive metal, and in thickness not less than that of metal being secured.
1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual form application but not less than thickness of metal being secured.

2.5 ROOF DRAINAGE SHEET METAL FABRICATIONS

A. Downspouts: Custom fabricate round downspouts with mitered elbows. Furnish with metal hangers from same material as downspouts and anchors.
1. Downspouts shall be located in current locations and shall run to splash blocks at grade.
2. Downspout sleeves shall be soldered to built-in gutters to provide a leak-proof installation.

2.6 STEEP-SLOPE ROOF SHEET METAL FABRICATIOINS

A. Apron, Step, Cricket, and Backer Flashing: Fabricate from the following material:
1. Lead-Coated Copper: 21.2 oz./sq. ft.
2. TCS II: 26 Gauge

B. Valley Flashing: Fabricate from the following material:
1. Lead-Coated Copper: 21.2 oz./sq. ft.
2. TCS II: 26 Gauge

C. Drip Edges:
1. Lead-Coated Copper: 21.2 oz./sq. ft.
2. TCS II: 26 Gauge

D. Eave, Rake, Ridge, and Hip Flashing: Fabricate from the following material:
1. Lead-Coated Copper: 21.2 oz./sq. ft.
2. TCS II: 26 Gauge

E. Base Flashing: Fabricate from the following material:
1. Lead-Coated Copper: 21.2 oz./sq. ft.
2. TCS II: 26 Gauge

F. Counterflashing: Fabricate from the following material:
1. Lead-Coated Copper: 21.2 oz./sq. ft.
2. TCS II: 26 Gauge

G. Flashing Receivers: Fabricate from the following material:
1. Lead-Coated Copper: 21.2 oz/sq. ft.
2. TCS II: 26 gauge

H. Roof Penetration Flashing: Fabricate from the following material:
1. Lead: Where noted on Drawings only.
2. Lead-Coated Copper: 21.2 oz./sq. ft.

3. TCS II: 26 gauge

I. Wind Locks: Fabricate from the following material:
1. Lead-Coated Coper: 32 oz./sq. ft.
2. TCS II: 24 gauge

2.7 FINISHES:

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical and painted finishes kin exposed surfaces from damage by applying a strippable temporary covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the approved samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved samples and are assembled or installed to minimize contrast.

2.8 WARRANTY/GUARANTEE

A. Manufacturer's Standard Warranty: All manufactured metal flashing and trim units and accessories specified under this section are to be covered by the roof system manufacturer's warranty in DIVISION 07 Roofing.
1. All Custom Fabricated items are to be provided by the roof manufacturer and included in the system warranty.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Comply with DIVISION 01 requirements.
1. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, blocking, inserts, and nailing strips correctly located.
2. Verify roofing termination and base flashings are in place, sealed, secure, finished, and accepted.
3. Provide systems, materials, and components to conform with the roofing manufacturers existing warranty requirements (GAF).

B. Verification of Conditions (by Installer/Applicator): Examine conditions under which materials in this section are to be installed. Coordinate with the General Contractor and confirm conditions are satisfactory in writing, with copies to the Owner's Representative and Architect, identifying any conditions detrimental to the proper and timely installation of the work that require correction. Do not proceed with installation until unsatisfactory conditions have been corrected in a manner acceptable to Installer / Contractor.

C. Installer to confirm unsatisfactory conditions have been corrected / rectified and are acceptable to ensure a proper and timely installation of the proposed products. Verify the work when properly installed will meet the specified warranty requirements. Submit written confirmation to the General Contractor with copies to the Owner's Representative and Architect. Failure to submit written confirmation and subsequent installation will indicate all conditions are acceptable to Installer / Contractor.

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 using concealed fasteners. 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. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted by Architect and, Owner.
   1. Cleats: Comply with SMACNA Manual. Unless otherwise indicated or specified, provide 2-inch wide by 3-inch long of same material and thickness of metal installed. Secure one end with two fasteners and fold cleat over fastener head.

C. 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. 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.

D. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.

E. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and butyl sealant as required by the manufacturer.

F. 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 or in accordance with the manufacturer's spacing requirements. Anchor each cleat with a minimum of two fasteners. Bend tabs over fasteners.
   2. Provide continuous cleats where required for wind zone compliance and required by roof manufacturer for warranty compliance.

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 inches for wood screws.
   1. 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 def F, set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher temperatures. Do not install sealant-type joints at temperatures below 40 deg. F.
   2. Only use joint adhesive for non-moving joints specified not to be soldered. Locations must be submitted on shop drawings and reviewed by Architect prior to installation.
   3. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants".

I. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1 1/2 inches except where pre-tinned surface would show in finished work.
   1. Lead-Coated Copper Soldering: Wire brush edges of sheets before soldering.
   2. 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.
   3. Seams: Fabricate non-moving seams in sheet metal with flat-lock seams. Claran all edges to be soldered, then tin edges, form seams, flux, and finally solder to full penetration of continuous solder at all seams. Finished seam to be smooth and even. Contractor will be required to open up at least 2 completed seams to confirm they have been fully back-soldered. Clean edges prior. Flux all edges to be seamed. Pre-tin form seam bed and then flux.
   4. **Fire Watch:** All soldering to be completed 30 minutes before end of workday. Provide 30-minute fire watch before closing for the day.

3.3 ROOF DRAINAGE SYSTEM INSTALLATION

A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA and CDA recommendations and as indicated. Coordinate installation of perimeter flashing with installation of roof drainage system.

B. Downspouts: Join sections with 1 1/2” telescoping joints. Provide fasteners to hold downspouts securely 1 inch away from walls. Refer to Drawings for attachment. Locate fasteners at top and bottom no greater than 60 inches o.c. in between.
   1. Provide elbows at base of downspout to direct water away from building.
   2. Provide splashblocks at base of downspout.

C. Expansion joint covers: Install expansion joint covers at locations and of configurations indicated. Lap joints a minimum of 4 inches in the direction of water flow.

3.3 ROOF FLASHING INSTALLATION

A. General: Install sheet metal roof flashing and trim to comply with performance requirements 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.

B. Roof edge flashing: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 for specified wind zone and as indicated.
   1. Interlock bottom edge of roof flashing with continuous cleats anchored to substrate at 12-inch centers.

C. Counterflashing: Coordinate installation of counter-flashing with installation of base flashing. Set reglets in compressed mortar joints. Insert counterflashing in reglets or receivers and fit tightly to base flashing using lead wedges. Secure in a waterproof manner. Extend counter flashing 4” over continuous base flashing. Lap counter-flashing joints a minimum of 4 inches and bed with sealant approved by the roofing manufacturer to maintain the warranty requirements.

D. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Install in accordance with the roofing manufacturer’s existing warranty requirements. Install flashing as follows:
   1. Turn lead flashing down inside vent piping, being careful not to block vent piping with flashing.

2. Seal with elastomeric sealant and clamp flashing to pipes penetrating roof except for lead flashing on vent piping.

3.4 DAILY SEAL

A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the workday, a daily seal must be performed to temporarily close the membrane to prevent water infiltration.
B. Use adhesive or other similar material in accordance with the manufacturer's requirements.

3.5 CUSTOM FABRICATED ITEMS

A. Comply with standard industry details as shown by SMACNA in the "Architectural Sheet Metal Manual" and CDA’s Copper in Architecture Handbook”. Comply with metal producer’s recommendations for tinning, soldering, and cleaning flux from metal.

3.6 PROTECTING AND CLEANING

A. Protect sheet metal systems from damage during application and remainder of construction period, according to manufacturer's written instructions.

B. 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 river stems, and pieces of flashing. Maintain in a clean condition during construction.

C. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

D. Clean and neutralize flux materials. Clean off excess solder and sealants.

E. Clean any stains on materials that would be exposed in the completed work using procedures as recommended by manufacturer.
1. Schedule work to ensure that the sheet metal system is protected and covered if not complete after installation.
2. Protect roofing system from damage during installation of other systems subsequent to completion of roofing operations.

F. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

G. 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.

H. Protect adjacent elements as required by the manufacturer.

I. Perform daily clean up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of legally and in accordance with local jurisdiction requirements.

J. Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

3.7 FIELD QUALITY CONTROL

A. See DIVISION 01 - Quality Requirements, for field inspection requirements.
   1. Inspection will involve review of work during installation to ascertain compliance with Construction Documents.

END OF SECTION 076200

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes, but is not limited to, the following: Joint Sealant Work to be complete within the construction:
   1. Exterior joints in vertical surfaces and non-traffic horizontal surfaces including (but not limited to):
      a. At sheet metal flashing and trim areas.
      b. At any other exterior joints not mentioned herein but required to prevent air and water from penetrating the exterior and interior area of the building.
      c. At dissimilar materials.

B. Related Sections:
   1. DIVISION 01
   2. DIVISION 04 – Unit Masonry
   3. DIVISION 07 – Sheet Metal, Flashing and Trim

1.2 REFERENCES

A. Reference Standards: Comply with following, including but not limited to:
   1. ASTM C 834 - Standard Specification for Latex Sealants;
   2. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.
   3. ASTM C 1193 - Standard Guide for Use of Joint Sealants.
   4. ASTM D1667 – Standard specification for flexible cellular materials – vinyl chloride polymers and copolymers (closed-cell foam)

1.3 SYSTEM DESCRIPTION

A. Performance Requirements
   1. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

1.4 PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.5 SUBMITTALS

A. Procedure: Comply with submittal requirements indicated below and as stipulated in DIVISION 01 SUBMITTAL PROCEDURES and as modified below for product indicated.
   1. Product Data: Submit manufacturer's product literature, technical specifications, application instructions, product storage and handling requirements, and similar data for each product specified below as required to demonstrate compliance with specified requirements and provide complete application information.
   2. Specified Products: Submit Product Data, Samples, Shop Drawings, and Quality Control Submittals identified below.

a. For each type and color of joint sealant required, provide full range of color samples for “Color Selection” by Architect. Provide samples with joint sealants in ½” wide joints formed between two (2) 6-inch-long strips of material matching the appearance of the exposed surfaces adjacent to joint sealants.

3. Equivalent Products or Substitutions: If product to be incorporated into Project is not specified by name and product designation below, comply with all requirements specified in “Product Data”, “Samples”, “Shop Drawings”, and “Quality Control Submittals”.

B. Compatibility and adhesion test reports.

C. Product certificates and test reports.

1.6 QUALITY ASSURANCE

A. Preconstruction Compatibility and Adhesion Testing: Submit samples of materials that will contact or affect joint sealants to joint-sealant manufacturers for testing according to ASTM C 1087 and ASTM C 794 and or the manufacturer’s standard test method to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
1. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to Project joint substrates according to the method in ASTM C 1193 that is appropriate for the types of Project joints.

B. Pre-installation Compatibility and Adhesion Testing: Test elastomeric sealants and accessories with samples of each joint substrate material for compatibility, adhesion, and freedom from staining. Include recommendations for substrate preparation and primers for proper adhesion, and solvents for cleaning.

C. Mockups: Build mockups as directed by Architect, incorporating sealant joints, as follows, to verify selections made as part of this specification under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution:
1. Joints in mockups of assemblies specified in other Sections that are indicated to receive elastomeric joint sealants, which are specified by reference to this Section.

D. Qualifications:
1. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum five (5) years of successful documented experience.
2. Installer: Experienced installer who has completed joint sealant applications similar in material, design, and extent to that indicated for this Project that have resulted in construction with a record of successful in-service performance. For 5 years with successful Project.
3. Contractor/Manufacturer Testing Laboratory: Independent testing laboratory acceptable to Owner, complying with requirements of ASTM E699, and having experience and capability to conduct satisfactorily testing indicated without delaying progress of Project.

E. Certifications:
1. Statement of Non-Compliance: When necessary to proceed with joint sealer installation under conditions not fully complying with specified requirements or manufacturer’s recommendations because of time schedule difficulties or other reasons Installer determines to be crucial to Project and approved by Architect, prepare written statement for Owner's record (with copies to the Prime Contractor and Architect) indicating:
a. Nature of non-compliance
b. Reasons for proceeding

c. Extra or precautionary measures taken to ensure best possible installation, and
d. Names of individuals concurring with decision to proceed with installation.
e. Submit notice that warranty will still be issued with full compliance.
f. If warranty cannot be issued, then materials shall be removed and put in correctly.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Deliver materials to Site in original un-opened containers of bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.
B. Storage and Protection: Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminates, or other causes.

1.8 PROJECT/SITE CONDITIONS

A. Environmental Requirements - Do not proceed with joints sealant installation when ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or below 40 deg. F. and when joints substrates are wet.
   1. Do not proceed with installation of sealants during inclement weather unless all requirements and manufacturer's instructions can be complied with. Do not proceed with installation of sealants under extreme temperature conditions which would cause joint openings to be at either maximum or minimum width, nor when such extreme temperatures or heavy wind loads are forecast during the period required for initial or nominal cure of elastomeric sealants. Whenever possible, schedule the installation and cure of elastomeric sealants during periods of relatively low temperatures (but well within manufacturer's recommended range) so that subsequent tensile stresses upon the cured sealants will be minimized.

B. Project Conditions:
   1. Joint Width Conditions: Do not proceed with joint sealant installation where joint widths are less than allowed by joint sealant manufacturer for application indicated on Drawings.
   2. Joint Substrate Conditions: Do not proceed with joint sealant installation until contaminants capable of interfering with their adhesion are removed from joint substrates. Surfaces must be clean, dry, and free of contaminants.

1.9 COORDINATION

A. Coordinate the work with all systems requiring joint sealants and sections referencing this specification section.

1.10 WARRANTY

A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
B. Provide five (5) year written warranty covering correction of defective work within a five-year period after Date of Substantial Completion.
   1. Warranty: Repair or replace sealants which fail to perform as air-tight and water-tight joints; or fail in joint adhesion, cohesion, abrasion resistance, weather resistance, extrusion resistance, migration resistance, stain resistance, color retention, or general durability; or appear to deteriorate in any manner not clearly specified as inherent quality of material by submitted manufacturer's data.

2. Warranty Period: Five (5) years from date of Substantial Completion. Warranty shall be signed jointly and severally by the General Contractor and Installer for five (5) years from date of Substantial Completion

PART 2 - PRODUCTS

2.1 GENERAL

A. Provide only sealants and joint primers which are compatible with joint surfaces and backing or filler materials, as stated in the manufacture's published data, or as certified by manufacturer for each application.

B. Provide sealants having lowest modulus of elasticity which is consistent with degree of exposure to wear, abrasion, and vandalism. Any sealant exposed to traffic must have strength and modulus sufficiently high to resist damage by traffic, indentation.

C. For fully concealed joints, provide manufacturer's standard color of sealant or caulking compound which has best overall performance characteristics for application shown.

D. For exposed joints provide colors as selected by Architect from manufacturers full line of standard and custom colors for each product specified.

E. VOC Content of Interior Sealants: Provide interior sealants and sealant primers that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
   1. Sealants: 250 g/L.
   2. Sealant Primers for Non-Porous Substrates: 250 g/L.
   3. Sealant Primers for Porous Substrates: 775 g/L.

2.2 MANUFACTURERS

A. As a basis of design, details and specifications have been based on specified products by following manufacturers:
   1. Pecora Corp., Harleysville, Pennsylvania.
   2. Other acceptable manufacturers upon a compliance review may include the following:
      a. ChemRex Inc. /Sonneborn Building Products Division, Shakopee, Minnesota.
      b. Tremco Inc., Beachwood, Ohio.
      c. Dow Corning, Midland, Michigan.
      d. Sika Corporation, Lyndhurst, New Jersey
      e. Note: Sealant Manufacturer Selection: Provide written certification from manufacturers of adjacent systems certifying the proposed sealant product is compatible with the existing exterior systems at each project location. See 2.3 below.

B. Single Source Responsibility: Obtain joint sealants from single source manufacturer.

C. Products: Subject to compliance with requirements listed below. Provide one of the products listed in other Part 2 articles.

2.3 MATERIALS, GENERAL

A. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range of colors for specified products.

2.4 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied moisture or chemical curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

C. Suitability for Immersion in Liquids. Where elastomeric sealants are indicated for Use with joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247 and qualify for the length of exposure indicated by reference to ASTM C 920 for Class 1 or 2. Liquid used for testing sealants is deionized water, unless otherwise indicated.

D. Low Modulus Nonacid-Curing Silicone Sealant:
1. Products: Provide one of the following:
   a. 790; Dow Corning.
   b. Silpruf; GE Silicones.
   c. 890; Pecora Corporation.
2. Type and Grade: S (Single component) and NS (non-sag).
3. Class: 25.
4. Additional Movement Capability: `00 percent movement in extension and 50 percent movement in compression for a total of 150 percent movement.
5. Use related to Exposure: NT (non-traffic).
6. Use related to Joint Substrates: M, G, A, and as applicable to joint substrates, O.
7. Stain-Test-Response Characteristics: Non-staining to porous substrate as per ASTM C 1248.

2.5 SOLVENT RELEASE JOINT SEALANTS

A. Butyl Sealant: Non-curing, non-drying, non-hardening, non-skinning, non-staining, gunnable, synthetic rubber sealant.
1. Products: Provide one of the following:
   a. “BA-98”; Pecora Corporation
   b. “Tremco Acoustical Sealant”; Tremco, Inc.

B. Butyl Polyisobutylene Sealant: Non-curing, non-drying, solvent release; complying with 809.2 as described in AAMA 800.

C. Butyl-Rubber-Based Solvent Release Joint Sealant:
1. Products: Provide one of the following:
   a. Bostik 300; Bostik, Inc.
   b. BC-158; Pecora Corporation.
   c. Tremco Butyl Sealant; Tremco.
2. Comply with ASTM C 1085.

2.5 LATEX JOINT SEALANTS

A. Latex Sealant:
1. Products: Provide one of the following:

a. ChemCalk 600; Bostik, Inc.
b. AC-20 + Silicone; Pecora Corporation.
c. Sonolac: Soneborn Building Products Div., ChemRex, Inc.
d. Tremflex 834; Tremco.

2. Comply with ASTM C 834.

2.6 JOINT-SEALANT BACKING

A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing per ASTM requirements.

B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-waxing, non-extruding strips of flexible plastic foam of materials indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

1. Closed-cell polyethylene foam, non-absorbent to liquid water and gas, non-outgassing in un-ruptured state, or open cell polyurethane backer rod as approved by sealant manufacturer for use with their products.

C. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F . Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.

D. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

E. Compressible Filler - Non-Fire Rated Applications

1. Applications Exposed to View - Closed cell neoprene expansion joint filler in appropriate size and dimensions to use for joint width similar to:
   a. “#NS - Closed Cell Neoprene Sponge” by Hohmann & Barnard, Inc.
   b. “Rapid Soft-Joint/Expansion Joint” by Dur-O-Wall, Inc.
   c. “Sandell Closed Cell Neoprene” by Sandell Manufacturing Co., Inc.

2. Concealed Applications: Fiberglass batt insulation, mineral wool batt insulation, or similar material acceptable to Architect.

2.7 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or

harming joint substrates and adjacent nonporous surfaces in any way and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

2.8 SOURCE AND FIELD QUALITY CONTROL

A. Testing - Manufacturer Through Prime Contractor

1. Preconstruction Compatibility and Adhesion Testing: Provide joint sealant manufacturers with samples of materials that will contact or affect joint sealants for compatibility and adhesion testing as indicated below. Schedule sufficient time for testing and analysis or results to prevent delay in progress of Project.
   a. Use test methods standard with manufacturer to determine if priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
   b. Provide not less than 9 pieces of each type of material, including joint substrates, shims, joint sealant backings, secondary seals, and miscellaneous materials.
   c. Investigate materials failing compatibility or adhesion tests and obtain joint sealant manufacturer's written recommendations for corrective measures, including use of specially formulated primers.

2. Product Testing: Provide comprehensive test data for each type of joint sealant based on tests conducted by qualified independent testing laboratory on current product formulations within 24-month period preceding date of Contractor's submittal of test results to Architect.
   a. Test elastomeric sealants for compliance with specified requirements by reference to ASTM C920. Include test results for hardness, stain resistance, adhesion and cohesion under cyclic movement (per ASTM C719), low-temperature flexibility, modulus of elasticity at 100 percent strain, effects of heat aging, and effects of accelerated weathering.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of Conditions: Examine conditions under which joint sealants are to be installed in coordination with Installer of materials and components specified in this Section and notify affected Prime Contractors and Architect in writing, with copies to the Owner’s Representative and Architect, of any conditions detrimental to proper and timely installation. Do not proceed with installation until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

B. When Installer confirms conditions as acceptable to ensure proper and timely installation and to ensure requirements for applicable warranty or guarantee can be satisfied, submit to Prime Contractor written confirmation, with copies to the Owner’s Representative and Architect, from applicable Installer. Failure to submit written confirmation and subsequent installation will be assumed to indicate conditions are acceptable to Installer.

C. Verify compliance with requirements for joint configuration, installation tolerances and other conditions affecting joint sealant performance.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants.

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant.
   a. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.

2. Remove laitance and form-release agents from concrete.
   a. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates**,** where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION

A. Comply with joint sealant manufacturer’s printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   1. Do not leave gaps between ends of sealant backings.
   2. Do not stretch, twist, puncture, or tear sealant backings.
   3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
   1. Place sealants so they directly contact and fully wet joint substrates.
   2. Completely fill recesses in each joint configuration.
   3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

G. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, producing seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in compliance with sealant manufacturer's written instructions.

H. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

Compressible Filler: Insert compressible filler material in locations indicated on Drawings to completely fill voids. Provide multiple layers of compressible filler materials where required.

3.4 JOINT SEALANT SCHEDULE

A. General:
1. All joint sealant materials and locations shall be approved by the Architect prior to commencement of work.
2. Joints of a nature similar to that of joints indicated on the schedule shall be sealed with the same sealer, whether indicated on drawings to be sealed or not.

B. Exterior Building Joints:
1. Sealant: Low modulus silicone sealant.
2. Backer: Plastic foam joint backer.
3. Joint shape: Concave joint configuration.
4. Color: To be selected by Architect.

C. Concealed Metal Flashing Joints:
1. Acceptable sealants:
   a. Butyl sealant.
   b. Butyl polyisobutylene sealant.
   c. Butyl-rubber-based solvent-release joint sealant.

D. Interior Building Joints:
1. Sealant: Acrylic-latex emulsion sealant.
2. Backer: Plastic foam joint backer.
3. Joint shape: Concave joint configuration.

3.4 FIELD QUALITY CONTROL

A. Field Adhesion Test: Before beginning installation of elastomeric joint sealants, install trial joint sealant in each type of substrate material and condition. After manufacturer recommended curing, conduct hand pull test at each trial joint sealant application.
1. Make horizontal knife cut across joint and two – (2) inch long cuts from crosscut parallel to joint at edges.
2. Grasp (2) inch long piece of sealant and pull down at 90degree angle and try to pull sealant out of joint.
3. If sealant does not adhere to joint sides, take measures to improve adhesion and retest.
4. Re-seal cut trial areas.

B. Testing: Water test exterior joint sealers in accordance with AAMA 501.2. Take remedial measures and re-test until watertight.

3.5 CLEANING AND PROTECTION

A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur. Do not damage adjoining surfaces or finishes.

B. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from constructions operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that installations with repaired areas are indistinguishable from original work.

C. Dispose of all waste legally and in accordance with local jurisdiction requirements.

D. Comply with waste management and recycling program requirements.

3.6 CURING AND PROTECTION OF FINISHED WORK

A. Curing: Cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength, internal cohesive strength and surface durability.

B. Advise General Contractor of procedures required for protection of sealants during construction period, so that they will be without deterioration or damage (other than normal weathering) at time of acceptance.

C. Protect all adjacent surfaces from damage.

D. Clean soiled surfaces immediately.

E. Replace any damaged material which cannot be cleaned with new material.

END OF SECTION 079200

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SECTION 099000 - PAINTING AND FINISHING

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

A. Work of this Section includes all labor, materials, equipment, and services necessary to complete the painting and finishing as shown on the drawings and/or specified herein, including, but not limited to, the following:
   1. Prime painting unprimed surfaces to be painted under this Section.
   2. Painting all items furnished with a prime coat of paint, including touching up of or repairing of abraded, damaged or rusted prime coats applied by others.
   3. Painting all ferrous metal (except stainless steel) exposed to view.
   4. Painting all galvanized ferrous metals exposed to view.
   5. Painting of wood exposed to view, except items which are specified to be painted or finished under other Sections of these specifications. Back painting of all wood in contact with concrete, masonry or other moisture areas.
   6. Painting pipes, pipe coverings, conduit, ducts, insulation, hangers, supports and other mechanical and electrical items and equipment exposed to view.
   7. Incidental painting and touching up as required to produce proper finish for painted surfaces, including touching up of factory finished items.
   8. Painting of any surface not specifically mentioned to be painted herein or on drawings, but for which painting is obviously necessary to complete the job, or work which comes within the intent of these specifications, shall be included as though specified.

1.3 RELATED SECTIONS

A. Shop priming is required on some, but not all of the items scheduled to be field painted. Refer to other Sections of work for complete description.

   a. Division 01- Allowances (Paint Investigation)
   b. Division 06- Carpentry

1.4 MATERIALS AND EQUIPMENT **NOT** TO BE PAINTED

A. Do not paint items of equipment furnished with complete factory finish, except for items specified to be given a finish coat under this Section.

B. Do not paint non-ferrous metals, except for items specified and/or indicated to be painted.

C. Do not paint downspouts and leaders.

D. Do not paint roof shingles.

E. Surfaces not to be painted shall be left completely free of droppings and accidentally applied materials resulting from the work of this Section.

F. If the drawings do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the drawings do not indicate color or finish, the Architect will select from standard colors and finishes available.

G. Do not paint pre-finished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

H. Qualification Data: For firms and persons, demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.5 QUALITY ASSURANCE

A. Job Mock-Up
1. In addition to the samples specified herein to be submitted for approval, apply in the field, at their final location, each type and color of approved paint materials, applied to exterior roof trim areas to be selected in the field before proceeding with the remainder of the work, for approval by the Architect. These applications, when approved, will establish the quality and workmanship for the work of this Section.
2. Repaint individual areas which are not approved, as determined by the Architect, until approval is received. Assume at least two paint mock-ups of each color and gloss for approval.

B. Qualification of Painters: Use only qualified journeyman painters for the mixing and application of paint on exposed surfaces.

1. Applicator Qualifications: Engage an experienced applicator that has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.

C. Paint Coordination: Provide finish coats that are compatible with the prime coat paints used. Review other Sections of these specifications in which prime paints are to be provided to ensure compatibility of the total coatings system for the various substrates. Upon request from other subcontractors, furnish information on the characteristics of the finish materials proposed to be used, to ensure that compatible prime coats are used. Provide barrier coats over incompatible primers or remove and re-prime as required. Notify the Architect in writing of any anticipated problems using the coating systems as specified with substrates primed by others.

D. All paints must conform to the Volatile Organic Compounds (VOC) standards of prevailing codes and ordinances.

1.6 REFERENCES

A. Green Seal Standard GS-11; May 20, 1993.

B. MPI (APL) - Master Painters Institute.

C. SCAQMD 1168 - South Coast Air Quality Management District Rule #1168; October 3, 2003.

D. SSPC (PM1) - Steel Structures Painting Manual, Vol. 1, Good Painting Practice; Society for Protective Coatings; 1993, Third Edition.SSPC (PM2) - Steel Structures Painting Manual, Vol. 2, Systems and Specifications; Society for Protective Coatings; 1995, Seventh Edition.

E. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

1.7 DEFINITIONS

A. General: Standard coating terms defined in ASTM D 16 apply to this Section.

1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
2. Eggshell refers to low-sheen finish with a gloss range between 5 and 20 when measured at a 60-degree meter.
3. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.

4. Semi-gloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.
5. Full gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter.

1.8 SUBMITTALS

A. Materials List: Before any paint materials are delivered to the job site, submit to the Architect a complete list of all materials proposed to be furnished and installed under this portion of the work. This shall in no way be construed as permitting substitution of materials for those specified or accepted for this work by the Architect.

B. Samples

1. Accompanying the materials list, submit to the Architect copies of the full range of colors available in each of the proposed products.
2. Upon direction of the Architect, prepare and deliver to the Architect two (2) identical sets of samples of each of the selected colors and glosses painted onto 8-1/2" x 11" x 1/4" thick material; whenever possible, the material for samples shall be the same material as that on which the coating will be applied in the work.

C. Manufacturer's Recommendations: In each case where material proposed is not the material specified or specifically described as an acceptable alternate in this Section of these specifications, submit for the Architect's review the current recommended method of application published by the manufacturer of the proposed material.

D. Closeout Submittal

1. Coating Maintenance Manual: Upon conclusion of the project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual such as Sherwin Williams "Custodian Project Color and Product Information" report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, MSDS, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

1.9 PRODUCT HANDLING

A. Deliver all paint materials to the job site in their original unopened containers with all labels intact and legible at time of use. The following information shall be included:
1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.
8. VOC content.

B. Protection
1. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45° F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.

2. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and

health hazards resulting from handling, mixing, and application.

3. Use all means necessary to protect paint materials before, during and after application and to protect the installed work and materials of all other trades.

C. Replacements: In the event of damage, immediately make all repairs and replacements necessary.

1.10 EXTRA STOCK

A. Upon completion of this portion of the Work, deliver to the Owner an extra stock of paint equaling approximately ten (10) percent of each color and gloss used and each coating material used (Min.1 gallon), with all such extra stock tightly sealed in clearly labeled containers.

1.11 JOB CONDITIONS

A. Apply water-based paints only when the temperature of surfaces to be painted and the surrounding air temperatures are between 50 degrees F. and 90 degrees F., unless otherwise permitted by the paint manufacturer's printed instructions.

B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and the surrounding air temperatures are between 45 degrees F. and 95 degrees F. unless otherwise permitted by the paint manufacturer's printed instructions.

C. Do not apply paint in snow, rain, fog or mist; or when the relative humidity exceeds eighty-five (85) percent; or to damp or wet surfaces; unless otherwise permitted by the paint manufacturer's printed instructions.

D. Painting may be continued during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods.

E. Apply paint to putty after allowing a minimum of one (1) week for product to cure.

PART 2 PRODUCTS

2.1 PAINT MANUFACTURERS

A. Except as otherwise noted, provide the painting products as manufactured by Sherwin Williams (S-W), or a comparable product by Benjamin Moore, PPG Paint (Glidden Professional), or approved equal. Comply with number of coats and required minimum mil thicknesses as specified herein.

1. Requests for substitutions will be considered in accordance with provisions of Section 016000.

2.2 MATERIALS

A. Volatile Organic Compound (VOC) Content:

1. Provide coatings that comply with the most stringent requirements specified in the following:

a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.

b. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

B. Provide undercoat paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer and use only to recommended limits.

C. Colors and Glosses: All colors and glosses shall be as selected by the Architect and Owner’s representative. Certain colors may require paint manufacturer to prepare special factory mixes to match

colors selected by the Architect.

D. Coloring Pigment: Products of or furnished by the manufacturer of the paint or enamel approved for the work.

E. Linseed Oil: Raw or boiled, as required, of approved manufacture, per ASTM D 234 and D 260, respectively.

F. Turpentine: Pure distilled gum spirits of turpentine, per ASTM D 13.

G. Shellac: Pure gum shellac (white or orange) cut in pure denatured alcohol using not less than four (4) lbs. of gum per gallon of alcohol.

H. Driers, Putty, Spackling Compound, Patching Plaster, etc.: Best quality, of approved manufacture.

2.3 GENERAL STANDARDS

A. The various surfaces shall be painted or finished as specified below in Article 2.4. However, the Architect reserves the right to change the finishes within the range of flat, semi-gloss or gloss, without additional cost to the Owner.

B. All paints, varnishes, enamels, lacquers, stains and similar materials must be delivered in the original containers with the seals unbroken and label intact and with the manufacturer's instructions printed thereon.

C. All painting materials shall bear identifying labels on the containers with the manufacturer's instructions printed thereon.

D. Paint shall not be badly settled, caked or thickened in the container, shall be readily dispersed with a paddle to a smooth consistency and shall have excellent application properties.

E. Paint shall arrive on the job color-mixed except for tinting of under-coats and possible thinning.

F. All thinning and tinting materials shall be as recommended by the manufacturer for the particular material thinned or tinted.
1. Thinner addition shall not exceed manufacturer’s printed recommendation. Do not use kerosene or other organic solvents to thin water-based paints.

G. It shall be the responsibility of the Contractor to see that all mixed colors match the color selection made by the Architect prior to application of the coating.

2.4 SCHEDULE OF FINISHES

A. Coating on Exterior Wood
1. First Coat: SW Exterior Oil-Based Wood Primer Y24W08020.
2. Second Coat: Duration Exterior Acrylic Coating Gloss K32-Series.
3. Third Coat: Duration Exterior Acrylic Coating Gloss K32-Series.

PART 3 EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions where painting and finishing are to be applied and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.

3.2 GENERAL WORKMANSHIP REQUIREMENTS

A. Only skilled mechanics shall be employed. Application may be by brush or roller. Spray application only

upon acceptance from the Architect in writing.

B. The Contractor shall furnish the Architect a schedule showing when he expects to have completed the respective coats of paint for the various areas and surfaces. This schedule shall be kept current as the job progresses.

C. The Contractor shall protect his work at all times and shall protect all adjacent work and materials by suitable covering or other method during progress of his work. Upon completion of the work, he shall remove all paint and varnish spots from floors, glass and other surfaces. He shall remove from the premises all rubbish and accumulated materials of whatever nature not caused by others and shall leave his part of the work in clean, orderly and acceptable condition.

D. Remove and protect hardware, accessories, device plates, lighting fixtures, and factory finished work, and similar items, or provide ample in place protection. Upon completion of each space, carefully replace all removed items by workmen skilled in the trades involved.

E. Remove electrical panel box covers and doors before painting walls. Paint separately and re-install after all paint is dry.

F. All materials shall be applied under adequate illumination, evenly spread and flowed on smoothly to avoid runs, sags, holidays, brush marks, air bubbles and excessive roller stipple.

G. Coverage and hide shall be complete. When color, stain, dirt or undercoats show through final coat of paint, the surface shall be covered by additional coats until the paint film is of uniform finish, color, appearance and coverage, at no additional cost to the Owner.

H. All coats shall be dry to manufacturer's recommendations before applying succeeding coats.

I. Do not apply paint behind frameless mirrors that use mastic for adhering to wall surface.

3.3 PREPARATION OF SURFACES

A. General

1. The Contractor shall be held entirely responsible for the finished appearance and satisfactory completion of painting work. Properly prepare all surfaces to receive paint, which includes cleaning, sanding, and touching up of all prime coats applied under other Sections of the work. Broom clean all spaces before painting is started. All surfaces to be painted or finished shall be completely dry, clean and smooth.

2. Perform all preparation and cleaning procedures in strict accordance with the paint manufacturer’s instructions and as herein specified, for each particular substrate condition.
3. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease with clean cloths and cleaning solvents prior to mechanical cleaning. Program the cleaning and painting so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

B. Metal Surfaces

1. Weld Fluxes: Remove weld fluxes, splatters, and alkali contaminants from metal surfaces in an approved manner and leave surface ready to receive painting.

2. Bare Metal: Thoroughly clean off all foreign matter such as grease, rust, scale and dirt before priming coat is applied. Clean surfaces, where solder flux has been used, with benzene. Clean surfaces by flushing with mineral spirits. For aluminum surfaces, wipe down with an oil free solvent prior to application of any pre- treatment.

a. Bare metal to receive high performance coating specified herein must be blast cleaned SSPC SP-6 prior to application if field applied primer; coordinate with steel trades furnishing ferrous

metals to receive this coating to ensure that this cleaning method is followed.

3. Shop Primed Metal: Clean off foreign matter as specified for "Bare Metal." Prime bare, rusted, abraded and marred surfaces with approved primer after proper cleaning of surfaces. Sandpaper all rough surfaces smooth.
4. Galvanized Metal: Prepare surface as per the requirements of ASTM D 6386.
5. Metal Filler: Fill dents, cracks, hollow places, open joints and other irregularities in metal work to be painted with an approved metal filler suitable for the purpose and meeting the requirements of the related Section of work; after setting, sand to a smooth, hard finish, flush with adjoining surface.

C. Wood Surfaces: Sand to remove all roughness, loose edges, slivers, or splinters and then brush to remove dust. Wash off grease or dirt with an approved cleaner. Fill all cracks, splits, nail holes, screw holes, and surface defects with putty after the priming coat has been applied. Putty shall be brought up flush with the surface and sanded smooth and touched-up with primer when dry.

D. Testing for Moisture Content: Contractor shall test all masonry and drywall surfaces for moisture content using a reliable electronic moisture meter. Contractor shall also test latex type fillers for moisture content before application of topcoats of paint. Do not apply any paint or sealer to any surface or to latex type filler where the moisture content exceeds seven (7) percent as measured by the electronic moisture meter.

E. Touch-Up: Prime paint all patched portions in addition to all other specified coats.

3.4 MATERIALS PREPARATION

A. Mix and prepare painting materials in strict accordance with the manufacturer’s directions.

B. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing, and application of paint in a clean condition, free of foreign materials and residue.

C. Stir all materials before application to produce a mixture of uniform density, and as required during the application of the materials. Do not stir any film which may form on the surface into the material. Remove the film and, if necessary, strain the material before using.

D. Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are to be applied. Tint undercoats to match the color of the finish coat; provide sufficient difference in shade of undercoats to distinguish each separate coat.

3.5 APPLICATION

A. General

1. Apply paint by brush or roller in accordance with the manufacturer’s directions. Use brushes best suited for the type of material being applied. Use rollers of carpet, velvet back, or high pile sheep's wool as recommended by the paint manufacturer for material and texture required.
2. The number of coats and paint film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has completely dried. Sand between each enamel or varnish coat application with fine sandpaper or rub surfaces with pumice stone where required to produce an even, smooth surface in accordance with the coating manufacturer’s directions.
3. Apply additional coats when undercoats, stains, or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance. Give special attention to ensure that all surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a film thickness equivalent to that of flat surfaces.
4. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only.

    a. "Exposed surfaces" is defined as those areas visible when permanent or built-in fixtures, convector covers, covers for finned tube radiation, grilles, etc., are in place in areas scheduled to be painted.

5. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular black paint, before final installation of equipment.
6. Paint the back sides of access panels, removable or hinged covers to match the exposed surfaces.
7. Finish doors on tops, bottoms, and side edges the same as the faces, unless otherwise indicated.
8. Enamel finish applied to wood or metal shall be sanded with fine sandpaper and then cleaned between coats to produce an even surface.
9. Paste wood filler applied on open grained wood after beginning to flatten, shall be wiped across the grain of the wood, then with a circular motion, to secure a smooth, filled, clean surface with filler remaining in open grain only. After overnight dry, sand surface with the grain until smooth before applying specified coat.

B. Scheduling Painting

1. Apply the first coat material to surfaces that have been cleaned, pre-treated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
2. Allow sufficient time between successive coatings to permit proper drying. Do not re-coat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

C. Prime Coats: Re-coat primed and sealed walls and ceilings where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn- through or other defects due to insufficient sealing.

D. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage.

E. Touching-Up of Factory Finishes: Unless otherwise specified or shown, materials with a factory finish shall not be painted at the project site. To touch up, the Contractor shall use the factory finished material manufacturer's recommended paint materials to repair abraded, chipped, or otherwise defective surfaces.

3.6 FIELD QUALITY CONTROL

A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied.

B. The Owner will engage the services of an independent testing agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed and certified in the presence of the Contractor.

1. The testing agency will perform appropriate tests for the following characteristics as required by the Owner:

a. Quantitative material analysis.

b. Abrasion resistance.

c. Apparent reflectivity.

d. Flexibility.

e. Washability.

f. Absorption.

g. Accelerated weathering.

h. Dry opacity.

i. Accelerated yellowness.

j. Recoating.

k. Skinning.

l. Color retention.

m. Alkali and mildew resistance.

2. The Owner may direct the Contractor to stop painting if test results show material being used does not comply with specified requirements. The Contractor shall remove non-complying paint from the site, pay for testing, and repaint surfaces previously coated with the rejected paint. If necessary, the Contractor may be required to remove rejected paint from previously painted surfaces if, on repainting with specified paint, the 2 coatings are incompatible.

3.6 PROTECTION

A. Protect work of other trades, whether to be painted or not, against damage by the painting and finishing work. Leave all such work undamaged. Correct any damages by cleaning, repairing or replacing, and repainting, as acceptable to the Architect.

B. Provide "Wet Paint" signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

3.7 CLEAN UP

A. During the progress of the work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each workday.

B. Upon completion of painting work, clean window glass and other paint spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.

C. At the completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

END OF SECTION 099000

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LEAD SAFE PRACTICES

I. *Lead Safe Practices* are safe ways of working with leaded paint. Lead safe practices are used as part of activities when paint will be disturbed as part of the work.

II. The EPA Guidelines as posted at www.epa.gov, especially as they pertain to *The Lead- Safe Certified Guide to Renovate Right.*

III. Lead Safe Practices include the following goals:

1. To minimize dust during construction activity.
2. To clean the work areas using lead specific cleaning methods.
3. To keep the painted surfaces of the construction area intact. Intact leaded paint is not a lead hazard.
4. To protect those executing the work and others nearby by providing the appropriate PPE (Personal Protective Equipment), tools and equipment.

IV. This section is intended to provide the minimum requirements for lead-safe work practices.

V. Prohibited activities. When disturbing paint in the construction area do not:

1. Dry scrape painted surfaces.
2. Dry sand painted surfaces.
3. Use a high temperature heat gun or open flame to remove paint.
4. Use a grinder to remove paint.
5. Use painters' masks, as they do not protect one from lead dust.
6. Power-wash the construction area as this can spread lead paint chips into the surrounding ground area.
7. Open flame burning.
8. Power sanding without HEPA dust collection.
9. Sand blasting.

VI. Lead safe practices require the following:

1. Wet scraping of paint (use a spray bottle with water to pre-wet the surface).
2. Wet sand the surface (use a spray bottle with water to pre-wet the surface).
3. Use plastic sheeting to seal off area outside the construction area.
4. Use plastic sheeting to seal furnace vents.
5. Use a standard garden hose to wet down large areas before scraping/sanding.
6. Use drop cloths to catch paint chips and throw the paint chips in the trash.
7. Do not let children or pregnant women in the work areas until cleaned.
8. Use a HEPA filtered vacuum to clean the work area. Due to the requirement to work in wet areas, all electric circuits must be protected by GFCI with integral test buttons.
9. Maintain all paint not to be disturbed in an intact condition.
10. Instruct all workers in these lead safe practices.
11. Limited access to minimize the spread of lead dust by only allowing trained workers and supervisors to enter a work area until it has undergone specialized lead dust cleaning.
12. Use HEPA filtered sanding/grinding equipment.
13. Wash work clothes separately from the other clothing.

VII. Exterior work area protection. Secure a 6 mil. polyethylene sheet to the horizontal ground plane (flooring or grade) 6 ft. minimum out from the work area. At the end of a task mist, remove and dispose of plastic.

VIII. Interior work area protection. (NOT APPLICABLE)

1. Pre-clean with vacuum. Cover the entire floor of the work area with 2 layers of 6- mil polythene taped at edges with 2" wide easy-release masking tape. Or, tape a 6- mil polyethylene sheet to the floor 6 ft. out from the work area. Tape 6-mil. plastic over all HVAC registers and returns. At the end of a task mist, remove and dispose of plastic.
2. Isolate workspace. Because the work area may be subject to occupancy, it is necessary to work in isolated sections. Each section shall be structurally sealed with 6-mil plastic and duct tape during work and only opened for re-occupancy after a final cleaning and clearance.
3. Wrap furnishings. All exposed furniture, fixtures and furnishings must be protected from exposure to lead dust with at least one layer of polyethylene taped to the floor containment to create an airtight seal. At the end of a task mist, remove and dispose of plastic.
4. Seal closets & cabinets. All closets and cabinets in a work area must be protected from lead dust penetration with polyethylene and extended-release masking tape at all seams to create an airtight seal. At the completion of work mist, remove and dispose of plastic.

IX. Worker protection. To minimize the potential for worker exposure to lead dust, the following activities are never permitted in any work area:

1. No eating.
2. No drinking.
3. No chewing gum or tobacco.
4. No smoking.
5. No applying cosmetics.

X. Conclusion of activity. After completion of lead activities, and removal of containment, the following cleaning procedures must be followed:

1. Reposition all furnishings. HEPA vacuum all visible surfaces including clothing, furniture, walls, floors, windowsills, window troughs, ceilings, etc. Wet wipe all surfaces with detergent and rinse. Mop all floors. After surface is dry, HEPA vacuum all visible surfaces except ceiling.
2. For vinyl floors the contractor may strip wax buildup with a 10% solution of ammonia and water. Rinse. Apply two coats of liquid acrylic floor wax in accordance with manufacturer's specification.
3. If carpeting is present, HEPA vacuum carpeting twice very slowly to remove existing lead dust.

END OF SECTION 099000

The Deserted Village
Roof Replacement – Houses 5, 10, & 11
Cataract Hollow Road, Berkeley Heights, NJ
PS&S # 039400001

REFER TO THE INFORMATION BELOW FOR IMPORTANT BACKGROUND INFORMATION IN WHY LEAD REQUIRES SPECIAL HANDLING.

Lead is a naturally occurring, heavy, gray metal. When absorbed into the body, lead can have highly toxic effects. Lead exposure affects all the systems in the body. A small amount of lead exposure does more damage to children than adults. Lead can damage a child under 6 years old physically, behaviorally, and mentally. Once a child has been exposed to lead, the effects of exposure cannot be reversed.

Physical damage caused by lead exposure includes, but is not limited to, central nervous system problems, headaches, stomachaches, joint pains, and sleep disorders. Behavioral damage caused by lead exposure includes, but is not limited to, short attention span, irritability, aggressive and violent behavior, and hyperactivity. Mental damage caused by lead exposure includes, but is not limited to, lowered IQ points, lowered reading scores in school, and learning disabilities.

The only way to know if a child has been lead poisoned is to have a blood test performed by your physician. Once a child has been poisoned the damage cannot be reversed, but you can stop further damage from happening.

Lead has been used extensively in the United States for several centuries. As a result lead can be found in paint, soil, water, air and food. The most common way children are exposed to lead is through lead dust. The leaded dust comes from lead-based paint. Lead-based paint becomes and hazard and causes lead dust when the paint is in poor condition, is painted on friction or impact surfaces, and or is disturbed during a renovation.

Lead-based paint chips and dust then mix with household dust and build up in window troughs, on floors, and flat surfaces. Children are put at risk when lead in paint chips and dust gets on their hands and toys, which they may put in their mouths. If paint is kept intact and surfaces are kept clean, children can live safely in a home painted with lead-based paint. Homes built before 1940 have a 98% chance of containing lead-based paint. Homes built before 1960 have a 70% chance of containing lead based paint. Homes built before 1978 have a 20% chance of containing lead-based paint. Homes built after 1978 are unlikely to contain lead-based paint. Homes built before 1950 also used paint that had higher concentrations of lead. Paint kept in good condition that remains undisturbed is not a hazard.

Lead-based paint is usually not a hazard if it is good condition. Children are most commonly exposed to lead poisoning through lead in household dust caused by lead-based paint in the following situations:

a. In poorly maintained, older houses, lead-based paint, which may be several layers.

   down, flakes and peels off and creates lead dust. Paint failure is usually caused by moisture problems.

b. On friction or impact surfaces. For example, windows painted with lead-based paint rub (friction) together when the window is opened and closed, releasing lead dust. When a door painted with lead-based paint closes

(impact) on a doorstop, the impact damages the paint and releases lead dust.

c. On chewable surfaces, such as, windows and windowsills, doors and door frames, stairs railings, banisters, and porches. The lead in the paint gets directly into a child's mouth.

Uncontrolled or uncontained dust and debris from repainting and/or renovation that disturbs lead-based paint in a well-maintained home can also expose children to unsafe lead levels.

Lead-based paint chips and dust then mix with household dust and build up in window troughs, on floors, and flat surfaces. Children are endangered when lead in paint chips and dust gets on their hands and toys, which they may put in their mouths. If paint is kept intact and surfaces are kept clean, children can live safely in a home painted with lead-based paint.

The second most common way that children are exposed to lead is through soil. Soil around the buildings may have old lead-based paint chips from the exterior paint or lead from previous leaded gasoline deposits. Sanding and power washing can cause fine particles of lead-based paint to deposit in the soil. Children then play in the dirt and are at risk of ingesting lead or tracking lead into their homes on their shoes. Exposure can be decreased by covering bare soil with grass, sod, wood chips, concrete, or asphalt, or by making bare soil inaccessible to children.

Additional sources of lead exposure to children include water, parents whose jobs or hobbies expose them to lead, leaded crystal, lead soldered cans, lead glazed ceramics, and some home remedies or foreign cosmetics.

END OF LEAD SAFE PRACTICES

(ATTACHMENT TO SPECIFICATION SECTION 099000)