

Architectural & Engineering DESIGN Associates P.C.

CITY OF PLATTSBURGH – DRI DOWNTOWN GRANT PROGRAM PROPOSED FARMER MARKET – RE-BID

GREEN STREET CITY OF PLATTSBURGH CLINTON COUNTY, NEW YORK 12901

SEPTEMBER 02, 2020

PREPARED FOR

Plattsburgh

CITY OF PLATTSBURGH

41 CITY HALL PLACE, PLATTSBURGH, NEW YORK 12901

PROJECT #20005

1246 Rt. 3, P.O. Box 762, Plattsburgh, N.Y.12901 t - 518.562.1800 f - 518.562.1702 e - aedapc@aedapc.com www.aedapc.com

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FROM:

1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER):

- A. City of Plattsburgh
- B. Address:

41 City Hall Place Plattsburgh, New York, 12901

1.02 AND THE ARCHITECT (HEREINAFTER REFERRED TO AS ARCHITECT):

- A. Architectural & Engineers Design Associates, P.C.
- B. Address:

1246 Route 3 Plattsburgh, New York 12901

1.03 DATE: 08/28/2020

1.04 TO: POTENTIAL BIDDERS

- A. The Common Council of the City of Plattsburgh is requesting sealed bids for their Farmers Market, located at Green Street, Plattsburgh NY. Bids will be received until 2:30 pm on the 29th day of September, 2020. The bids will be publicly opened and read aloud at that time in the Common Council Chambers in City Hall.
- B. Bids shall be submitted to the City Community Development Office, 41 City Hall Place, Plattsburgh, New York 12901, (from 8:00 to 4:00 daily) in sealed envelopes with the name and address of the Bidder and "City of Plattsburgh Farmers Market" clearly marked on the face of the envelope.
- C. The complete Bid Package should include everything defined as outlined in SECTION 00 3100, available project information, Part 1 Paragraph1.01(L.)
 - 1. Signed Bid Form including the Base Bid and all Alternates/Unit Costs
 - 2. Certificate of non-collusion
 - 3. List of the last five projects completed, including a contact name and phone number
 - 4. Bid security in the form of a Bid Bond or Certified Check of a sum no less than 5% of the Bid amount
 - 5. Sub-contractor list
- D. Project Description: Rehabilitation/renovation of existing facility. Construction of new pavilion & site improvements.
- E. All bidding and contract documents may be obtained at no charge by visiting the City's website at https://www.cityofplattsburgh-ny.gov/Bids.aspx.
- F. Refer to other bidding requirements described in Document 00 2113 Instructions to Bidders and Document 00 3100 Available Project Information.
- G. The successful bidder will be required to provide Payment & Performance Bonds in the amount of 100% of their contract for this project.
- H. A pre-bid conference for all bidders is scheduled for Tuesday, September 15th, 2020 at 10:00 am at the construction site stated above. All prime contract bidders as well as interested sub-contractors should plan to attend this meeting.
- I. Submit your offer on the Bid Form provided. Bidders may supplement this form as appropriate.
- J. Your offer will be required to be submitted under a condition of irrevocability for a period of 45 days after submission.
- K. The Owner reserves the right to accept or reject any or all offers.
- L. This project is considered a Public Works Project and Prevailing Wage will apply.

- M. M/WBE participation is required for this project. 30% minimum participation by M/WBE contractors, sub-contractors and suppliers.
 - 1. MBE participation goal = 15%
 - 2. WBE participation goal = 15%

1.05 SIGNATURE

- A. For: City of Plattsburgh
- B. By:
 - 1. Signed: _____

(Authorized signing officer) END OF SECTION

SECTION 00 2113 INSTRUCTIONS TO BIDDERS

SUMMARY

1.01 SEE AIA A701, INSTRUCTIONS TO BIDDERS FOLLOWING THIS DOCUMENT. END OF SECTION



Instructions to Bidders

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

City of Plattsburgh Green Street, Plattsburgh New York 12901

THE OWNER:

(Name, legal status, address, and other information)

City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901 Telephone Number: (518) 563-7701 Fax Number: (518) 561-7367

THE ARCHITECT: (*Name, legal status, address, and other information*)

Architectural & Engineering Design Associates, PC 1246 Route 3 PO Box 762 Plattsburgh, NY 12901 Telephone Number: 518-562-1800

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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. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612[™]–2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

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ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- the Bidder has visited the site, become familiar with local conditions under which the Work is to be .4 performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

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§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids. (Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3 Substitutions

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

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§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security: *(Insert the form and amount of bid security.)*

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount

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of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310TM, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below: (Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

§ 4.3.2 Paper copies of the Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address, and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:

(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)

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ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305TM, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

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ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

.1 AIA Document A101[™]–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.

(Insert the complete AIA Document number, including year, and Document title.)

- .2 AIA Document A101[™]–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below. (*Insert the complete AIA Document number, including year, and Document title.*)
- .3 AIA Document A201TM–2017, General Conditions of the Contract for Construction, unless otherwise stated below. (*Insert the complete AIA Document number, including year, and Document title.*)
- .4 AIA Document E203[™]–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below: (*Insert the date of the E203-2013.*)

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.5 Drawings

| | Number | Title | Date | |
|----|----------------|-------|-------|-------|
| .6 | Specifications | | | |
| | Section | Title | Date | Pages |
| .7 | Addenda: | | | |
| | Number | Date | Pages | |

.8 Other Exhibits:

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

- [] AIA Document E204TM–2017, Sustainable Projects Exhibit, dated as indicated below: (Insert the date of the E204-2017.)
- [] The Sustainability Plan:

| Title | Date | Pages | |
|-------------|----------------------------------------------|-------|-------|
| [] Suppleme | entary and other Conditions of the Contract: | | |
| Document | Title | Date | Pages |

.9 Other documents listed below:

(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

Additions and Deletions Report for

AIA[®] Document A701[™] – *2018*

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 14:29:27 ET on 02/19/2020.

PAGE 1

City of Plattsburgh Green Street, Plattsburgh New York 12901

City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901 Telephone Number: (518) 563-7701 Fax Number: (518) 561-7367

•••

Architectural & Engineering Design Associates, PC 1246 Route 3 PO Box 762 Plattsburgh, NY 12901 Telephone Number: 518-562-1800

Certification of Document's Authenticity

AIA[®] Document D401 [™] – 2003

I, James A. Abdallah, P.E., Vice President, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 14:29:27 ET on 02/19/2020 under Order No. 0752876803 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A701TM -2018, Instructions to Bidders, as published by the AIA in its software, other than those additions and deletions shown in the associated Additions and Deletions Report.

| (Signed) | | | |
|----------|--|------|--|
| (Title) | | | |
| (Dated) | | | |
| | | | |
| | | | |
| | | | |

SECTION 00 3100

AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.01 INFORMATION AVAILABLE TO BIDDERS

- A. All questions regarding plans and specifications must be submitted in writing to Architectural & Engineering Design Associates, P.C. Responses will be issued in writing in the form of Project Addenda and will be distributed to all plan holders. All questions received prior to the pre-bid conference will be reviewed at the pre-bid conference. The deadline for question submission will be 3pm four business days before the bid opening, any questions submitted after this time will not be subject to response by addendum.
- B. Sales Tax is not required to be included in the bid for this project.
- C. Smoking on property is prohibited.
- D. Attention of the bidders is particularly called to the requirements as to the conditions of employment to be observed and minimum wage rates under the Contract (Prevailing Wage).
- E. The construction budget for this project is \$ T.B.D.
- F. In accordance with Local, State and Federal mandates the successful bidders shall follow guidelines for COVID 19 safety measures. All Bid proposals must include all expenses related to complying with the COVID 19 safety measures. For New York State guidelines follow: https:// forward.ny.gov/.
- G. Insurance Fees and any other Permit Fees shall be included in each contractors bid. Building Permit fees will not be applicable.
- H. In completing the Construction Payment Application process bidders are advised that the City of Plattsburgh will not pay for materials stored off site. Payment can be made for large components or other bulky materials delivered to the site provided that the materials or components are inventoried, secured and insured to the satisfaction of the Owner and AEDA,PC. When applying for payment for stored materials the Contractor will be required to submit with the payment application a detailed inventory of the materials, adequate evidence of insurance as well as billing invoices indicating the value of the materials.
- I. Retainage for the project will be 5% through the issuance of a Certificate of Completion. Final release of retainage will not be entertained until all punch list items are completed, all as-built and O&M documentation is submitted and approved and final inspection certificates are issued to the City of Plattsburgh.
- J. Submission of Release and Waiver of Lien Documents by the Prime Contractor and each Subcontractor and/or Major Supplier will be required with each payment application submission. Final Release and Waiver of Lien Documents as well as Consent of Surety for Final Payment are required to be submitted with final payment application.
- K. It is the intent of the project documents and the contract outlined therein to provide the City of Plattsburgh with a complete and functional project/facility without omission, therefore bidders are advised that complete contract documents are being issued to all bidders and details of the work for the contract may be found on any of the drawings or within any of the various specification sections regardless of trade breakdown, drawing titles, and designation or section.
- L. As the structure is asbestos-containing, portions of the building shall be demolished in accordance with NYS ICR 56-115 Controlled Demolition with Asbestos in Place, See Appendix B for more information.
- M. All debris shall be removed and disposed of in accordance with all applicable NYSDOL, NYSDEC, and NYSDOT requirements.
- N. Project is to be completed by May 1st, 2021.
- O. The Complete Bid Package should include the following:
 - 1. Signed Bid Form including the Base Bid and all Alternates/Unit Costs.

- 2. Certificate of Non-Collusion.
- 3. List of the last five projects completed, including a contact name and phone number.
- 4. Bid security in the form of a Bid Bond or Certified Check of a sum no less than 5% of the Bid Amount.
- 5. Sub-contractor list.
- P. The City of Plattsburgh encourages M/WBE firms to apply.
 - 1. MBE participation requirement = 15%
 - 2. WBE participation requirement = 15%
 - 3. A documented "good faith effort" includes a search of the NYS directory of certified MWBEs for each of the MWBE applicable budget items covered by DOS funds (the directory is found at https://ny.newnycontracts.com/). In searching the directory, the grantees should use specific keywords and commodity codes. They should also avoid limiting the search to their geographic location only (i.e. the City); at a minimum, a regional search is recommended to demonstrate appropriate outreach!
 - 4. Reach out to all MWBEs found in the NYS directory. It is recommended that the grantees reach out directly to all of the firms found in the directory in writing, then follow up with at least a few of them to ensure that they are aware of the procurement opportunity. All efforts should be documented in writing.
 - 5. Keep track of their outreach efforts. The grantees must save printouts/screenshots of their search of the directory to demonstrate timely searches. They should also keep copies of correspondence with MWBEs (direct solicitation, follow up correspondence, MWBE feedback, etc.).
 - 6. Contact the DOS MWBE Program at the Bureau of Fiscal Management for assistance with finding MWBEs. We ask that the grantees reach out to us at dos.sm.mwbe@dos.ny.gov, if they are unable to locate MWBEs in the directory or if they would like assistance with searches or goal setting.
 - In addition to the above, the grantees must provide all the applicable supporting documentation and information as per instructions on page 2 of the waiver Form E (i.e. copies of RFP/RFQ, media for RFP/RFQ publication, selection processes, price comparison, negotiation with non-MWBE contractors to identify MWBE subcontracting opportunities, meeting notes, agreement, etc.)
 - In addition to the above, the grantees must provide all the applicable supporting documentation and information as per instructions on page 2 of the waiver Form E (i.e. copies of RFP/RFQ, media for RFP/RFQ publication, selection processes, price comparison, negotiation with non-MWBE contractors to identify MWBE subcontracting opportunities, meeting notes, agreement, etc.)

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

INSTRUCTIONS: THE REQUEST FOR WAIVER <u>MUST</u> INCLUDE DETAILED "GOOD FAITH EFFORT" JUSTIFICATION/DOCUMENTATION, AS DEFINED IN THE REQUIREMENTS AND DOCUMENT SUBMISSION INSTRUCTIONS (NEXT PAGE). *INCOMPLETE REQUESTS WILL BE RETURNED UNPROCESSED*

| Offeror/Contractor Name: | Federal Identification | n No.: | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------|-----------------------|---------|
| Address: | Solicitation/Contract | No.: | | |
| | Contact Name & Pho | one No.: | | |
| City, State, Zip Code: | M/WBE Goals: MBE | % | WBE | % |
| By submitting this form and the required information, the offer Effort has been taken to promote M/WBE participation pursua contract. Contractor is requesting a (check applicable): | | | | |
| | | | | |
| Type of waiver | | | Total | Partial |
| 1. MBE Waiver – A waiver of the MBE Goal for this proc | | | % | % |
| 2. WBE Waiver – A waiver of the WBE Goal for this proc | | | % | % |
| 3. Waiver Pending ESD Certification (Check here if subo certified M/WBE, but an application for certification h Date of such filing with Empire State Development: | | | | |
| PREPARED BY (Signature): Date: SUBMISSION OF THIS FORM CONSTITUTES THE OFFEROR/CONTRACTOR'S ACKNOWLEDGEMENT AND AGREEMENT TO COMPLY WITH THE M/WBE REQUIREMENTS SET FORTH UNDER NYS EXECUTIVE LAW, ARTICLE 15-A AND 5 NYCRR PART 143. FAILURE TO SUBMIT COMPLETE AND ACCURATE INFORMATION MAY RESULT IN A FINDING OF NONCOMPLIANCE AND/OR TERMINATION OF THE CONTRACT. | | | | |
| Name and Title of Preparer (Printed or Typed): | Telephone Number: | Email Ad | ldress: | |
| | ******** FOR DMWBD | | Y ******* | * |
| | REVIEWED BY: | DATE: | | |
| Please submit the Request for Waiver to the Program administering the Grant. | Waiver Granted: | | lo | |
| (DOS PROGRAM ENTER NAME/CONTACT/ADDRESS) | Total Waiver ESD Certification Notice of Deficien | | _ Partial _ *Condi | |
| | *Comments: | | | |

MWBE REQUEST FOR WAIVER: REQUIREMENTS AND DOCUMENT SUBMISSION INSTRUCTIONS

When completing the Request for Waiver Form please check all boxes that apply. <u>To be considered</u>, <u>the Request for Waiver must be accompanied by the applicable documentation for items 1 - 11, as listed below. If box # 3 has been checked above, please submit item 11. Copies of the following information and all relevant supporting documentation must be submitted along with the request:</u>

- 1. A DETAILED statement with the project description (any special characteristics, needs, specifications, etc.), and an explanation setting forth your basis and justification for requesting a partial or total waiver of the MWBE goals.
- 2. The names of general circulation, trade association, and M/WBE-oriented publications in which you solicited certified M/WBEs for the purposes of complying with your participation goals related to this contract.
- 3. A list identifying the date(s) that all solicitations for certified M/WBE participation were published in any of the above publications.
- 4. A list of all certified M/WBEs appearing in the NYS Directory of Certified Firms that were solicited for purposes of complying with your certified M/WBE participation levels.
- 5. Copies of notices, dates of contact, letters, and other correspondence as proof that solicitations were made in writing and copies of such solicitations, or a sample copy of the solicitation, if an identical solicitation was made to all certified M/WBEs.
- 6. Provide copies of responses to your solicitations received by you from certified M/WBEs.
- 7. Provide a description of any contract documents, plans, or specifications made available to certified M/WBEs for purposes of soliciting their bids and the date and manner in which these documents were made available.
- 8. Provide documentation of any negotiations between you, the Offeror/Contractor, and the M/WBEs undertaken for purposes of complying with the certified M/WBE participation goals.
- 9. Provide any other information you deem relevant which may help us in evaluating your request for a waiver.
- 10. Provide the name, title, address, telephone number, and email address of offeror/contractor's representative authorized to discuss and negotiate this waiver request.
- 11. Copy of notice of application receipt issued by Empire State Development (ESD).

Note:

Unless a Total Waiver has been granted, the Offeror/Contractor will be required to submit all reports and documents pursuant to the provisions set forth in the Contract, as deemed appropriate by NYS Department of State, to determine M/WBE compliance.

M/WBE 104 Instructions (1/15)

SECTION 00 4100 BID FORM

THE PROJECT AND THE PARTIES

1.01 TO:

A. City of Plattsburgh (Owner)
 41 City Hall Place
 Plattsburgh, New York 12901

1.02 FOR:

- A. All construction work, including but not limited to, all work in trades necessary to provide the Owner with restoration of existing facility and construction of the new farmers market, and all work not specifically included in the contract as indicated
- B. Project: 20005 City of Plattsburgh DRI Downtown Grant Program Proposed Farmers Market - Re-Bid
- C. Project Number: 20005

1.03 DATE: _____ (BIDDER TO ENTER DATE)

1.04 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

- A. Bidder's Full Name _____
 - 1. Address ______
 - 2. City, State, Zip_____

1.05 OFFER

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by AEDA, P.C. for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:
- B. **PROJECT BASE BID** Total cost of project including allowances:
 - 1. ______ dollars
 - 2. (\$_____), in lawful money of the United States of America.
- C. **PROJECT ALTERNATE #01** Construction of Pavilion Power Distribution & Outlet for Pavilion
 - 1. _____ dollars
 - 2. (\$_____), in lawful money of the United States of America.
- D. **PROJECT ALTERNATE #02** Pavilion interior & exterior Lighting
 - 1. ______ dollars
 - 2. (\$_____), in lawful money of the United States of America.

E. **PROJECT ALTERNATE #03** - Furnish & Installation of Overhead Door Furnish & Installation of Ceiling Fans

| 1. | | |
|----|-------------------------------------------------------------------------------------------------|----------------------------------------|
| | | dollars |
| 2. | (\$), in lawful ı | money of the United States of America. |
| PR | OJECT ALTERNATE #04 - Sewage Duple Mop Sink & Plumbing High/Low Water Cooler and Plumbing | ex Grinder Pump/Force Main |
| 1. | | |
| | | dollars |
| 2. | (\$), in lawful ı | money of the United States of America. |

1.06 ACCEPTANCE

F.

- A. This offer shall be open to acceptance and is irrevocable for 45 days from the bid closing date.
- B. If this bid is accepted by Owner within the time period stated above, we will:
 - 1. Execute the Agreement within seven days of receipt of Notice of Award.
 - 2. Furnish the required bonds within seven days of receipt of Notice of Award.
 - 3. Commence work within seven days after written Notice to Proceed of this bid.
- C. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.
- D. In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.07 CONTRACT TIME

A. If this Bid is accepted, we will complete the work by May 1st, 2021.

1.08 CHANGES TO THE WORK

- A. Change Orders as approved by the owner will be accepted allowing actual cost for labor and materials plus [10%] overhead and [5%] profit for general construction work performed by the contract holder. Subcontractors will be permitted to carry [10%] combined overhead and profit on labor and material cost. The General Contractor will be permitted to carry [5%] mark up on subcontractor change order cost. All change order requests must be provided on the standard AIA Change Order Forms and must be accompanied by a detailed breakdown of cost and material receipts or supplier quotes.
- B. On work deleted from the Contract, credit to Owner shall be Architect-approved net cost plus 100% of the profit percentage noted above.

1.09 ADDENDA

- A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.
- В.
- 1. Addendum # ______ Dated ______

| | 2. | Addendum # | | Dated | |
|----------|-------|-----------------|-------------------------------|-----------------|---|
| | 3. | Addendum # | | Dated | |
| | 4. | Addendum # | | Dated | |
| 1.10 BIC |) FOI | RM SIGNATURE(S) | | | |
| A. | | | | | _ |
| | | | (Bidder - print the full name | e of your firm) | |
| | | | | | |
| В. | | | | | _ |
| | | | (Authorized signing off | icer, Title) | |

C. _____

1.11 IF THE BID IS A JOINT VENTURE OR PARTNERSHIP, ADD ADDITIONAL FORMS OF EXECUTION FOR EACH MEMBER OF THE JOINT VENTURE IN THE APPROPRIATE FORM OR FORMS AS ABOVE.

END OF SECTION

SECTION 00 4400

CERTIFICATE OF NON-COLLUSION

PART 1 GENERAL

1.01 NON-COLLUSIVE CERTIFICATION REQUIRED OF ALL BIDDERS UNDER SECTION 103-D OF THE GENERAL MUNICIPAL LAW AS AMENDED BY CHAPTER 751 OF THE LAWS OF 1965 AND CHAPTER 675 OF THE LAWS OF 1966 EFFECTIVE SEPTEMBER 1,1966.

1.02 BY SUBMISSION OF THIS BID, THE BIDDER AND EACH PERSON SIGNING ON BEHALF OF THE BIDDER CERTIFIES, AND IN THE CASE OF A JOINT BID EACH PARTY THERETO CERTIFIES AS TO ITS OWN ORGANIZATION, UNDER PENALTY OF PERJURY, THAT TO THE BEST OF KNOWLEDGE AND BELIEF:

A. THE PRICES IN THIS BID HAVE BEEN ARRIVED AT INDEPENDENTLY WITHOUT COLLUSION, CONSULTATION, COMMUNICATION, OR AGREEMENT, FOR THE PURPOSE OF RESTRICTING COMPETITION, AS TO ANY MATTER RELATING TO SUCH PRICES WITH ANY OTHER BIDDER OR WITH ANY COMPETITOR;

B. UNLESS OTHERWISE REQUIRED BY LAW, THE PRICES WHICH HAVE BEEN QUOTED IN THIS BID HAVE NOT BEEN KNOWINGLY DISCLOSED BY THE BIDDER AND WILL NOT KNOWINGLY BE DISCLOSED BY THE BIDDER PRIOR TO OPENING, DIRECTLY OR INDIRECTLY, TO ANY OTHER BIDDER OR TO ANY COMPETITOR; AND

C. NO ATTEMPT HAS BEEN MADE OR WILL BE MADE BY THE BIDDER TO INDUCE ANY OTHER PERSON, PARTNERSHIP OR CORPORATION TO SUBMIT OR NOT TO SUBMIT A BID FOR THE PURPOSE OF RESTRICTING COMPETITION.

INDIVIDUAL BIDDER

A CO-PARTNERSHIP

A CORPORATION

BY:_____

END OF SECTION

AEDA PROJECT #20005

09-02-2020

SECTION 00 5200 AGREEMENT FORM

PART 1 GENERAL

1.01 FORM OF AGREEMENT

A. AIA document 101, Owner-Contractor Agreement Form - stipulated sum 2017 edition, forms the basis of the contract between the owner and contractor.

1.02 THE AGREEMENT TO BE EXECUTED IS ATTACHED FOLLOWING THIS PAGE.

1.03 RELATED REQUIREMENTS

- A. Section 00 7200 General Conditions.
- B. Section 00 7300 Supplementary Conditions.

END OF SECTION

DRAFT AIA Document A101° - 2017

Standard Form of Agreement Between Owner and Contractor

where the basis of payment is a Stipulated Sum

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)*

«<u>City of Plattsburgh</u>»« » «<u>41 City Hall Place</u> <u>Plattsburgh, NY 12901</u>» «<u>Telephone Number: (518) 563-7642</u>» «<u>Fax Number: (518) 561-7367</u>»

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

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

«<u>City of Plattsburgh</u>» «<u>Green Street, Plattsburgh New York 12901</u>» « »

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

«Architectural & Engineering Design Associates, PC»« »
«1246 Route 3
PO Box 762
Plattsburgh, NY 12901»
«Telephone Number: 518-562-1800»
« »

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.

The parties should complete Al010-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A2010-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.



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1

09-02-2020

TABLE OF ARTICLES

- THE CONTRACT DOCUMENTS 1
- THE WORK OF THIS CONTRACT 2
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 **DISPUTE RESOLUTION**
- 7 **TERMINATION OR SUSPENSION**
- **MISCELLANEOUS PROVISIONS** 8
- 9 **ENUMERATION OF CONTRACT DOCUMENTS**

EXHIBIT A INSURANCE AND BONDS

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 a Modification, 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.

DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION ARTICLE 3

§ 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.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

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(Check one of the following boxes and complete the necessary information.)

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

[«X »] By the following date: «May 1st 2021 »

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

| Portion of Work | Substantial Completion Date | |
|-----------------|-----------------------------|--|
| « » | | |

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, 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 « » (\$ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

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



§ 4.2.2 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.)

| ltem | Price | Conditions for Acceptance |
|--------------------------------------------------------------------------------|-------------------|---------------------------|
| « » | | |
| § 4.3 Allowances, if any, included in <i>(Identify each allowance.)</i> | the Contract Sum: | |
| ltem | Price | |
| « » | | |
| § 4.4 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.)

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| Item | | Units and Limitations | Price per Unit (\$0.00) |
|-----------------------------|---|-----------------------|-------------------------|
| « » | | | |
| A F T :: J-4- J J :4 | · | | |

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

(N/A)

§ 4.6 Other:

(Insert provisions for bonus 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 Architect by the Contractor and Certificates for Payment issued by the 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 Architect not later than the «Twenty Fifth » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the «Fifthteenth » day of the «second » month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than «Forty-Five» («45 ») days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 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 Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 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.

§ 5.1.6 In accordance with AIA Document A201TM–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 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.

§ 5.1.6.2 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 A201-2017;
- .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 A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, 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.)

«<u>5%</u>»

§ 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 Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

« »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, 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 at Substantial Completion shall not include retainage as follows:

(Insert any other conditions for release of retainage upon Substantial Completion.)

« »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 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.

§ 5.2 Final Payment

§ 5.2.1 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 A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

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

« »

§ 5.3 Interest

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.)

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ARTICLE 6 DISPUTE RESOLUTION § 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the 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.)

| « » | |
|--------------------------|--|
| <pre> « » « » « » </pre> | |
| « » | |
| « » | |
| | |

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201-2017, the method of binding dispute resolution shall be as follows: (Check the appropriate box.)

[«»] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[«X »] 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.

TERMINATION OR SUSPENSION ARTICLE 7

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201-2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, 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.)

« »

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 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)

«Colin L. Read» «41 City Hall Place Plattsburgh, NY 12901» «Telephone Number: (518) 563-7701» «Fax Number: (518) 561-7367» « »

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« »

§ 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 A101TM-2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, 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 A101TM-2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, 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.)

« »

§ 8.7 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101TM–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101TM–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201TM–2017, General Conditions of the Contract for Construction
- .4 AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

| ~ | X |
|---|---|

.5 Drawings

| | Number « » | Title | Date |
|----|----------------|-------|------------|
| .6 | Specifications | | |
| | Section | Title | Date Pages |
| | « » | | |

.7 Addenda, if any:

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| Number | Date | Pages | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------|-------|--|--|
| « » | Date | lages | | | |
| 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: <i>(Check all boxes that apply and include appropriate information identifying the exhibit where required.)</i> | | | | | |
| [\ll \gg] AIA Document E204 TM -2017, Sustaina (Insert the date of the E204-2017 incorporated in | | lated as indicated below: | | | |
| « » | | | | | |
| [« »] The Sustainability Plan: | | Π | | | |
| 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 A201[™]_2017 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 entered into as of the day and year first written above. | | | | | |
| « » OWNER (Signature) | | CTOR (Signature) | | | |
| «Colin L. Read»«. Mayor» (Printed name and title) | « »« » (Printed | name and title) | | | |
| | | | | | |

I

AGREEMENT

(Certification of Owner's Attorney)

I, the undersigned, ______, the duly authorized and acting legal representative of the City of Plattsburgh do hereby certify as follows:

I have examined the foregoing Contract and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions and provisions thereof.

By:____

(Attorney for City of Plattsburgh)

(Date)

CITY OF PLATTSBURGH - DRI DOWNTOWN GRANT PROGRAM - PROPOSED FARMERS MARKET

SECTION 00 7200

GENERAL CONDITIONS

FORM OF GENERAL CONDITIONS

1.01 THE GENERAL CONDITIONS APPLICABLE TO THIS CONTRACT IS ATTACHED FOLLOWING THIS PAGE.

RELATED REQUIREMENTS

2.01 SECTION 00 7300 - SUPPLEMENTARY CONDITIONS.

END OF SECTION



General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

City of Plattsburgh Green Street, Plattsburgh New York 12901

City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901

THE ARCHITECT: (Name, legal status and address)

Architectural & Engineering Design Associates, PC 1246 Route 3 PO Box 762 Plattsburgh, NY 12901

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- **3 CONTRACTOR**
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- 13 MISCELLANEOUS PROVISIONS
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT

THE OWNER: (Name, legal status and address)

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. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

ADDITIONS AND DELETIONS:

The author of this document has

added information needed for its

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503[™], Guide for Supplementary Conditions.

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15 CLAIMS AND DISPUTES

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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 a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's 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 the Owner and by Separate Contractors.

§ 1.1.5 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.

§ 1.1.6 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.

§ 1.1.7 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.

§ 1.1.8 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.

§ 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, Subsubcontractors, 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 protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

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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 protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203TM–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202TM–2013, Project Building Information Modeling Protocol Form, 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 Architect does 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,

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assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 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 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 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.

§ 2.3.5 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.

§ 2.3.6 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.

§ 2.4 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 prior approval of the Architect and the 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 Architect's 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.

§ 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 Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

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§ 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 2.3.4, 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 Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the 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 Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the 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 and 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. Unless the Architect 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.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work 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.

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§ 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 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 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 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 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 Contractor shall secure and pay for the building permit as well as 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 and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect 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 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 and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

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§ 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 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 of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect 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 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 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 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.

§ 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 Architect's approval. The Architect'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 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

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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 perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 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 Architect and Owner, and delivered to the Architect 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 is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is 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 Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner 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 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 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.

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§ 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 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 and the Architect 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.

§ 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 Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

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.

§ 3.14 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 or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, 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 may do so and the Owner shall be entitled to reimbursement from the Contractor.

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§ 3.16 Access to Work

The Contractor shall provide the Owner 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 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 or Architect. 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.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, 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.

ARTICLE 4 ARCHITECT

§ 4.1 General

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

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The 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. The 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.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the

Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

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The Owner and Contractor 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 Contractor 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 Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 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. Review of such submittals 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 Architect's review of the Contractor's submittal shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The 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.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 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 Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

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

§ 4.2.12 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 rendered in good faith.

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

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests 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 a Separate Contractor or the subcontractors of a Separate Contractor.

§ 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 Owner 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 Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner 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 or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner 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 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 and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner 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 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 and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. 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.

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 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

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§ 6.2.1 The Contractor shall afford the Owner and Separate 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 or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work,

promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify 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 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 Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor 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 a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 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 or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor 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, 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 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, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner 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.

§ 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

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect 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 Architect and signed by the Owner 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:

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- .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 Architect 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 Architect 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 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 Architect 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.

§ 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 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 Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's 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 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 Architect will 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

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affect the Contract Sum or Contract Time, the Contractor shall notify the Architect 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 Architect 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 or Architect, of an employee of either, or of a Separate Contractor; (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 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 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 Architect 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 Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and

unless objected to by 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 ten days before the date established for each progress payment, the Contractor shall submit to the Architect 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 or Architect require, such as copies of requisitions, and releases and waivers of liens 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 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 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 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor 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 Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, 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 entitled to payment in the amount certified. The foregoing representations 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 Architect. However, the issuance of a Certificate for Payment will not be a representation that the 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.

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§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The 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 previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from 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;
- .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 withholds certification for payment under Section 9.5.1.3, 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 Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a 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 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 Architect 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 Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 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 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.

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§ 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 Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner 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 startup, 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 that 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 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 Contractor's list, the Architect 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 Contractor's 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 to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare 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.

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§ 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 shall 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.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, 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 receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's 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 Architect's final 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 (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 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 Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, 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 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.

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§ 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.

§ 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; and
- .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.

§ 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 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 and 10.2.1.3 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 and 10.2.1.3. 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 or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to 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 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.

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§ 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 and Substances

§ 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 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 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 tests verifying the presence or absence. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor 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 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, Architect, 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 in the affected area if in fact the material or substance presents the risk of 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.

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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, 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 to the Owner 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.

§ 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 the Contractor 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 to the Contractor 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.

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§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, subsubcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) 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 Architect, Architect's consultants, 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 and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§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 Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the 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 Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's 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 Architect has not specifically requested to examine prior to its being covered, the 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

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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 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 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 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 or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2 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.

§ 12.2.3 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 or Separate 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.

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§ 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, 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 Architect timely notice of when and where tests and inspections are to be made so that the 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. 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 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 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 Architect of when and where tests and inspections are to be made so that the 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 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 Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the 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.

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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 Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2. .4

§ 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 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.

§ 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 or entities 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 and the 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, 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 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 be certified by the Initial Decision Maker, upon application, 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 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 the 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
- .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 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.

§ 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 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 after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 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.

Init. 1

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§ 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.

§ 15.4.4 Consolidation or Joinder

Init.

1

§ 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.

Additions and Deletions Report for

AIA[®] Document A201TM – 2017

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PAGE 1

City of Plattsburgh Green Street, Plattsburgh New York 12901

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City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901

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Architectural & Engineering Design Associates, PC 1246 Route 3 PO Box 762 Plattsburgh, NY 12901

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I, James A. Abdallah, P.E., Vice President, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 14:23:15 ET on 02/19/2020 under Order No. 0752876803 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A201TM -2017, General Conditions of the Contract for Construction, as published by the AIA in its software, other than those additions and deletions shown in the associated Additions and Deletions Report.

| (Signed) | | | |
|----------|--|------|--|
| (Title) | | | |
| (Dated) | | | |
| | | | |
| | | | |
| | | | |

SECTION 00 7300 SUPPLEMENTARY CONDITIONS

PART 1 GENERAL

1.01 SUMMARY

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 00 7200 General Conditions and other provisions of Contract Documents as indicated below. Provisions that are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.
- C. Changes made to these Supplementary Conditions as part of an Addendum to the Contract Documents added during the bidding process defined in the Addendum shall amend the Supplementary Conditions and be considered part of the project documents.
- D. These supplementary conditions also incorporate the procurement and contract standards and procedures of the office of community renewal (ocr) as applicable to nys cdbg projects.

PART 2 MODIFICATION TO INSTRUCTIONS TO BIDDERS AIA A701

2.01 ARTICLE 3 - BIDDING DOCUMENTS

- A. Delete the following subparagraph:
 - 1. 3.1.2
 - a. Refer to Advertisement for Bids regarding bidding documents.
- B. Add the following subparagraph:
 - 1. 4.1.9.
 - a. Each bidder on a public work contract, where the preparation of separate specifications is not required, shall submit with its bid a separate sealed list that names each subcontractor that the bidder will use to perform work on the contract, and the agreed-upon amount to be paid to each, for: (a) plumbing, (b) heating, ventilating and air conditioning and (c) electric wiring and standard illuminating fixtures. After the low bid is announced, the sealed list of subcontractors submitted with such low bid shall be opened and the names of such subcontractors shall be announced, and thereafter any change of subcontractor or agreed-upon amount to be paid to each shall require the approval of the public owner, upon a showing presented to the public owner of legitimate construction need for such change, which shall be open to public inspection.

2.02 ARTICLE 4.2 - BID SECURITY

- A. Add the following subparagraph:
 - 1. 4.2.1.1.
 - a. 5% Bid Security

PART 3 MODIFICATION TO GENERAL CONDITIONS AIA A201

3.01 ARTICLE 3.6 - TAXES

- A. Add the following subparagraph:
 - 1. 3.6.2: The Owner will obtain an exemption certificate for the Contractor for taxes and duties for the Work.

3.02 ARTICLE 7.3 - CONSTRUCTION CHANGE DIRECTIVES

- A. Add the following subparagraph:
 - 1. 7.3.10: The following fees apply to Changes in the Work in accordance with Subparagraph 7.3.6 and 7.2:
 - a. 10 percent overhead and 5 percent profit on the net cost of Work done by the Prime Contract holder.

- b. 5 percent profit mark-up to the Prime Contract holder on the cost of Work done by any Subcontractor with 10 percent combined overhead and profit on the net cost of Work done by the subcontractor.
- c. On Work deleted from the Contract, credit to the Owner shall be the Architect approved net cost plus 100% of the profit percentage noted above

3.03 ARTICLE 8 - TIME

1.

- A. Add the following subparagraph:
 - 1. 8.1.5: Contract Time is identified in Document 00 3100 Available project Information.

3.04 ARTICLE 11.5 - PERFORMANCE BOND AND PAYMENT BOND

- A. Add the following subparagraph:
 - 11.5.3: The bond value requirements are as follows:
 - a. Provide bonds on AIA A312.
 - b. Provide a 100 percent Performance Bond.
 - c. Provide a 100 percent Payment Bond.
 - d. Deliver bonds within 10 days of receipt of Notice of Award.

3.05 ARTICLE 11.1, 2, 3 AND 4 - CONTRACTOR'S, OWNER'S AND PROJECT MANAGEMENT PROTECTION LIABILITY AND PROPERTY INSURANCES

- A. The Contractor, at his own expense, shall procure and maintain until two years after the date of the Certificate of Completion or one year after the Contractor or any Sub- contractor last perform any work under the Contract if the Project is abandoned or deferred, insurance for liability for damages required by law of the kinds and in the amounts stated herein and as may be modified by provisions in the Information to Bidders, through insurance companies authorized to operate in the State. The insurance shall cover all operations necessary to complete the work, whether performed by the Contractor or Sub-contractors. Before starting work, the Contractor shall furnish the Owner Policy upon demand and one certificate of insurance for each and every type of insurance required. The policies and certificates shall in form and content be satisfactory to the Owner, shall show compliance by the Contractor with the provisions herein contained, and shall provide that the policies shall not be cancelled or altered until after 30 days written notice to the Owner. Property damage insurance shall in all cases include coverage for XCU hazards, (explosion, collapse and underground operations).
- B. All liability insurance required by this Contract shall be maintained in force during the term of this Contract and until two years after the date of the Certificate of Completion or two years after the Contractor or any Sub- contractor last performs any work under the Contract if the Project is abandoned or deferred.
- C. The Contractor shall comply with the following insurance requirements:
 - 1. The Owner (City of Plattsburgh) & the Architect/Engineer (Architectural & Engineering Design Associates, P.C.) shall be added to the General Liability policy as "additional Insured" for Forms CG2010 and CG2037 and/or equivalents.
 - 2. Owner's Protective Liability Coverage
 - a. The policy shall be written in the name of the owner.
 - b. The limits of liability shall be equal or greater than one million (\$1,000,000) occurrence, combined single limit and two million (\$2,000,000) general aggregate.
 - c. OCP coverage shall be purchased by the Owner.
 - d. Architect/Engineer shall be named as co-insured on the insurance policy (Architectural & Engineering Design Associates, P.C.)
 - e. Certificates of Insurance are to be issued by the Contractor's insurance carrier showing limits equal or greater than one million (\$1,000,000) occurrence, one million (\$1,000,000) personal injury, two million (\$2,000,000) products/completed operations aggregate, a per project general aggregate of two million (\$2,000,000) with coverages listed as follows:
 - 1) Comprehensive General Liability naming the project owner as an additional insured including:

- (a) Broad Form Property Damage
- (b) Contractual Liability
- (c) Products and Completed Operations
- (d) Independent Contractors
- (e) Personal Injury
- (f) Explosion, Collapse and Underground Property Damage
- (g) Designated Construction Project(s) General Aggregate Limit-added
- (h) Primary and Non-Contributing Liability-added
- 2) Automobile Liability Comprehensive Coverage one million (\$1,000,000) combined single limits.
- 3) Worker's Compensation Including coverage for all Executive Officers if the contractor is incorporated and including Broad Form All-States Endorsement.
- 4) Contractor shall provide evidence of satisfactory New York State Disability Insurance Coverage.
- 5) Umbrella Liability limits of one million C.S.L. per occurrence, five million (\$5,000,000) aggregate.
- 6) Pollution Liability-\$1,000,000 in limits-added
- 7) A 30-day Notice of Cancellation clause is to be included and the words "Endeavor to" shall be eliminated in such cancellation provision.
- 8) Architectural & Engineering Design Associates, P.C. and City of Plattsburgh shall be named as additional insured.
- Certificates of Insurance are to be issued by the on-site Sub-Contractor's insurance carrier showing limits equal to or greater than \$1 Million occurrence, \$1 Million personal injury, \$2 Million products/completed operations aggregate, a per project general aggregate of \$2 Million, with coverage's listed as follows:
 - a. Commercial General Liability (ISO Form #CG0001 or equivalent), naming Contractor, Owner, and Architect/Engineer as additional insured, and providing that such insurance is Primary insurance as respects the interest of the Contractor and that any other insurance required hereunder. Such coverage shall be written to include coverage for negligence of the Contractor.
 - b. Automobile Liability Comprehensive Coverage \$1 Million combined single limit.
 - c. Workers' Compensation Including coverage for all Executive Officers if the Contractor is incorporated.
 - d. Umbrella Liability, Limits of \$1 Million C.S.L. per occurrence, \$5 Million aggregate.
 - e. Pollution Liability-\$1,000,000 in limits-added
 - f. A 30-day Notice of Cancellation clause is to be included and the words "Endeavor to" shall be eliminated in such cancellation provision.
 - g. Architectural & Engineering Design Associates, P.C. and City of Plattsburgh shall be named as additional insured on all policies.
- 4. All Risk or Special Form Builders Risk:
 - a. For the 100% insurable value to be determined by the Owner and/or Engineer to be the contract amount.
 - 1) To be written in the name of the project owner and general contractor.
 - (a) Property deductibles no greater than \$1,000.00.
 - (b) Purchased by the Owner.

3.06 SIGNATURES

Α.

OWNER (Signature)

DATE:

CONTRACTOR (Signature)

DATE:

AEDA Project #20005

00 7300 - 3 of 4

SUPPLEMENTARY CONDITIONS

09-02-2020

3.07

3.08 ALL CONTRACTS IN EXCESS OF \$10,000 SHALL CONTAIN SUITABLE PROVISIONS FOR TERMINATION BY THE RECIPIENT, INCLUDING THE MANNER BY WHICH SUCH TERMINATION SHALL BE EFFECTED AND THE BASIS FOR SETTLEMENT.

Change Order

PROJECT: (Name and address) City of Plattsburgh Green Street, Plattsburgh New York 12901

OWNER: (*Name and address*) City of Plattsburgh

41 City Hall Place Plattsburgh, NY 12901 CONTRACT INFORMATION: Contract For: General Construction Date:

ARCHITECT: (Name and address)

Plattsburgh, NY 12901

Associates, PC

1246 Route 3 PO Box 762

Architectural & Engineering Design

CHANGE ORDER INFORMATION: Change Order Number: 001 Date:

CONTRACTOR: (Name and address)

1

THE CONTRACT IS CHANGED AS FOLLOWS:

(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

| The original Contract Sum was \$ | 0.00 |
|-----------------------------------------------------------------------------|------|
| The net change by previously authorized Change Orders \$ | 0.00 |
| The Contract Sum prior to this Change Order was | 0.00 |
| The Contract Sum will be increased by this Change Order in the amount of \$ | 0.00 |
| The new Contract Sum including this Change Order will be \$ | 0.00 |
| The Contract Time will be increased by Zero (0) days | |

The Contract Time will be increased by Zero (0) days. The new date of Substantial Completion will be

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

| James AbdallahPE, Vice President PRINTED NAME AND TITLE | PRINTED NAME AND TITLE | Colin L. Read, Mayor PRINTED NAME AND TITLE |
|------------------------------------------------------------|-------------------------------|---------------------------------------------|
| SIGNATURE | SIGNATURE | SIGNATURE |
| ARCHITECT (Firm name) | CONTRACTOR (Firm name) | OWNER (Firm name) |
| Architectural & Engineering Design Associates, PC | | City of Plattsburgh |

MAIA[®] Document G702[™] – 1992

Application and Certificate for Payment

| TO OWNER: | City of Plattsburgh 41 City Hall Place Plattsburgh, NY 12901 | PROJECT: | City of Plattsburgh Green Street, Plattsb 12901 | ourgh New York | APPLICATION NO: 001 PERIOD TO: CONTRACT FOR: General Construction | Distribution to: OWNER: |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| FROM CONTRACTO | R: | VIA Architectural & Engineering Design ARCHITECT: ARCHITECT: ARCHITECT: Architectural & Engineering Design Associates, PC 1246 Route 3 PO Box 762 Plattsburgh, NY 12901 | | CONTRACT DATE: | ARCHITECT: CONTRACTOR: FIELD: OTHER : | |
| Application is a Continuation S 1. ORIGINAL CO | CTOR'S APPLICATION FOR made for payment, as shown below, in co sheet, AIA Document G703, is attached. ONTRACT SUM | onnection with the Co | \$0.00 | information and completed in ac by the Contracto | d Contractor certifies that to the best of the belief the Work covered by this Applicate cordance with the Contract Documents, that or for Work for which previous Certificates for ed from the Owner, and that current payment | tion for Payment has been all amounts have been paid or Payment were issued and |
| 3. CONTRACT S 4. TOTAL COMP 5. RETAINAGE: a. <u>0</u> 9 | SUM TO DATE (Line 1 ± 2) PLETED & STORED TO DATE (Column G | | \$0.00 | By: State of: County of: Subscribed and sw | | ate: |
| b. <u>0</u> % (Column Total Retain | % of Stored Material h F on G703) nage (Lines 5a + 5b or Total in Column I | | | Notary Public: My Commission e | | |
| (Line 4 I 7. LESS PREVIO (Line 6 f | NED LESS RETAINAGE Less Line 5 Total) OUS CERTIFICATES FOR PAYMENT from prior Certificate) | | \$0.00 | In accordance w comprising this Architect's know quality of the W ortifled to paym | 'S CERTIFICATE FOR PAYMENT with the Contract Documents, based on on-sit application, the Architect certifies to the Ow wedge, information and belief the Work has ork is in accordance with the Contract Document of the AMOUNT CERTIFIED. | vner that to the best of the progressed as indicated, the |
| 9. BALANCE TO | AYMENT DUE D FINISH, INCLUDING RETAINAGE less Line 6) | ······ | \$0.00 \$0.00 | AMOUNT CERTIFIE (Attach explanatio | ED if amount certified differs from the amount appli n the Continuation Sheet that are changed to confo | ied. Initial all figures on this |
| | DER SUMMARY approved in previous months by Owner d this Month TOTALS | ADDITIONS \$0.00 \$0.00 \$0.00 | \$0.00 | ARCHITECT: By: This Certificate is | | ate: payable only to the Contractor |
| NET CHANG | ES by Change Order | | \$0.00 | | tractor under this Contract. | mout prejudice to any rights of |

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$\operatorname{AIA}^{\circ}$ Document G703^m – 1992

Continuation Sheet

| Project . | cument, G702 TM –1992, A Application and Project C ing Contractor's signed ce | Certificate for Payı | ment, Construction | | | APPLICATION NO: APPLICATION DATE: | | 001 | |
|-------------|------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------|----------|-----------------------------------------------------|---------------------------------------------------------|-------------|---------------------------------|------------------------------------|
| | ations below, amounts ar | | neu. | | | PERIOD TO: | | | |
| | lumn I on Contracts wher | | ge for line items ma | y apply. | | | | | |
| . <u> </u> | | | | | | ARCHITECT'S PROJECT | NO: | 20005 | |
| Α | В | С | D | Е | F | G | | Н | Ι |
| ITEM NO. | DESCRIPTION OF WORK | SCHEDULED VALUE | WORK CO FROM PREVIOUS APPLICATION (D + E) | | MATERIALS PRESENTLY STORED (NOT IN D OR E) | TOTAL COMPLETED AND STORED TO DATE (D + E + F) | % (G ÷C) | BALANCE TO FINISH (C - G) | RETAINAGE (IF VARIABLE RATE) |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | | | 0.00% | | |
| | | 0.00 | 0.00 | 0.00 | | | 0.00% | | |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | | 0.00 |
| | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00% | 0.00 | 0.00 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 | 0.00 |
| | GRAND TOTAL | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | 0.00% | \$0.00 | \$0.00 |

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09-02-2020

Certificate of Substantial Completion

| PROJECT: <i>(name and address)</i> City of Plattsburgh | CONTRACT INFORMATION: Contract For: General Construction | CERTIFICATE INFORMATION: Certificate Number: 001 |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Green Street, Plattsburgh New York 12901 | Date: | Date: |
| OWNER: (name and address) City of Plattsburgh | ARCHITECT: (name and address) Architectural & Engineering Design Associates, PC | CONTRACTOR: (name and address) |
| 41 City Hall Place Plattsburgh, NY 12901 | 1246 Route 3 PO Box 762 | |
| | Plattsburgh, NY 12901 | |

The Work identified below has been reviewed and found, to the Architect's best knowledge, information, and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated below is the date established by this Certificate. *(Identify the Work, or portion thereof, that is substantially complete.)*

| Architectural & | | | |
|------------------------------|-----------|------------------------|--------------------------------|
| Engineering Design | | James AbdallahPE, Vice | |
| Associates, PC | | President | |
| ARCHITECT (Firm Name) | SIGNATURE | PRINTED NAME AND TITLE | DATE OF SUBSTANTIAL COMPLETION |

WARRANTIES

The date of Substantial Completion of the Project or portion designated above is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)

WORK TO BE COMPLETED OR CORRECTED

A list of items to be completed or corrected is attached hereto, or transmitted as agreed upon by the parties, and identified as follows: *(Identify the list of Work to be completed or corrected.)*

The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. The Contractor will complete or correct the Work on the list of items attached hereto within () days from the above date of Substantial Completion.

Cost estimate of Work to be completed or corrected: \$

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work, insurance, and other items identified below shall be as follows:

(Note: Owner's and Contractor's legal and insurance counsel should review insurance requirements and coverage.)

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

| CONTRACTOR (Firm Name) | SIGNATURE | PRINTED NAME AND TITLE | DATE |
|---------------------------------------|-----------|---------------------------------------------|------|
| City of Plattsburgh OWNER (Firm Name) | SIGNATURE | Colin L. Read, Mayor PRINTED NAME AND TITLE | DATE |

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SECTION 00 9000

NOTICE OF AWARD

THE OWNER HAS CONSIDERED THE BID SUBMITTED BY YOU FOR THE ABOVE DESCRIBED WORK IN RESPONSE TO ITS ADVERTISEMENT FOR BIDS DATED AND INSTRUCTION TO BIDDERS.

YOU ARE HEREBY NOTIFIED THAT YOUR BID HAS BEEN ACCEPTED FOR ITEMS IN THE AMOUNT OF _____DOLLARS (\$______)

YOU ARE REQUIRED BY THE INSTRUCTIONS TO BIDDERS TO EXECUTE THE AGREEMENT AND FURNISH THE REQUIRED CERTIFICATES OF INSURANCE WITHIN TEN (10) CALENDAR DAYS FROM THE DATE OF THIS NOTICE TO YOU.

YOU ARE REQUIRED TO RETURN AN ACKNOWLEDGED COPY IF THIS NOTICE OF AWARD TO THE OWNER.

DATED THIS _____DAY OF ______, 2020.

ACCEPTANCE OF NOTICE

RECEIPT OF THE ABOVE NOTICE OF AWARD

IS HEREBY ACKNOWLEDGED BY:

THIS THE DAY OF

BY_____

TITLE

EMPLOYER IDENTIFICATION NUMBER:

END OF SECTION

OWNER

BY_____

TITLE

SECTION 00 9001

NOTICE TO PROCEED

| YOU ARE HEREBY NOTIFIED TO COMMENCE THE ABOVE DES WITH THE AGREEMENT DATED, AND YOU ARE TO COMPLETE THE WORK WITHIN DAYS THEREAFTER. | ON OR BEFORE, CONSECUTIVE CALENDAR |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| THE DATE OF COMPLETION OF ALL WORK IS THEREFORE | · |
| ACCEPTANCE OF NOTICE | |
| RECEIPT OF THE ABOVE NOTICE TO PROCEED | |
| IS HEREBY ACKNOWLEDGED BY: | |
| THIS THE DAY OF | OWNER |
| | OWNER |
| ΒΥ | BY |
| TITLE | TITLE |
| EMPLOYER IDENTIFICATION NUMBER: | |

${}^{\mbox{\tiny \ensuremath{ \blacksquare} }} AIA^{\mbox{\tiny \ensuremath{ \bullet} }}$ Document G706^{$\mbox{\tiny \ensuremath{ \bullet} }}$ – 1994}

Contractor's Affidavit of Payment of Debts and Claims

| PROJECT : (Name and address) | ARCHITECT'S PROJECT NUMBER |
|-------------------------------------|-------------------------------------|
| City of Plattsburgh | 20005 |
| Green Street, Plattsburgh New | CONTRACT FOR: General Constr |
| York 12901 | |
| TO OWNER: (Name and address | CONTRACT DATED: |
| City of Plattsburgh | |
| 41 City Hall Place | |
| Plattsburgh, NY 12901 | |
| e , | |

R: truction

OWNER: ARCHITECT: CONTRACTOR: SURETY: OTHER:

STATE OF: COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose Indicate Attachment Yes No No

The following supporting documents should be attached hereto if required by the Owner:

- Contractor's Release or Waiver of Liens, 1. conditional upon receipt of final payment.
- Separate Releases or Waivers of Liens from 2. Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
- 3. Contractor's Affidavit of Release of Liens (AIA Document G706A).

CONTRACTOR: (Name and address)

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public: My Commission Expires:

MAIA[®] Document G706A[™] – 1994

Contractor's Affidavit of Release of Liens

| PROJECT : (Name and address) | ARCHITECT'S PROJECT NUMBER: | OWNER: |
|---------------------------------------------------------------------|--------------------------------|---------------|
| City of Plattsburgh Green Street, Plattsburgh New York | 20005 CONTRACT FOR: General | ARCHITECT: |
| 12901 | Construction | CONTRACTOR: 🗌 |
| TO OWNER: (<i>Name and address</i>) City of Plattsburgh | CONTRACT DATED: | SURETY: |
| 41 City Hall Place | | OTHER: |
| Plattsburgh, NY 12901 | | |

STATE OF: COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

Contractor's Release or Waiver of Liens, 1. conditional upon receipt of final payment.

2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR: (Name and address)

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public: My Commission Expires:

MAIA[®] Document G707[™] – 1994

Consent Of Surety to Final Payment

| PROJECT : (Name and add | ress) | ARCHITECT'S PROJECT NUMB | ER: 20005 | OWNER: |
|---------------------------------------------|--------------------------|-----------------------------------|------------------------------------|---------------|
| City of Plattsburgh | 1 | | , ,· | ARCHITECT: |
| Green Street, Plattsburg 12901 | h New York | CONTRACT FOR: General Con | nstruction | |
| 12901 | | | | |
| TO OWNER: (Name and ad | ldress) | CONTRACT DATED: | | SURETY: 🗌 |
| City of Plattsburgh | | | | OTHER: 🗌 |
| 41 City Hall Place Plattsburgh, NY 12901 | | | | |
| | | | | |
| | | | | |
| In accordance with the pro | visions of the Contra | ct between the Owner and the C | contractor as indicated above, the | |
| (Insert name and address of | of Surety) | | | |
| | | | | |
| | | | | |
| | | | | , SURETY, |
| on bond of (Insert name and address of | of Contractor) | | | |
| (insert nume und dadress o |) Comracior) | | | |
| | | | | |
| | | | | |
| hereby approves of the fina | al payment to the Cor | tractor, and agrees that final pa | yment to the Contractor shall | , CONTRACTOR, |
| not relieve the Surety of an | ny of its obligations to | | 5 | |
| (Insert name and address of | of Owner) | | | |
| City of Plattsburgh | | | | |
| 41 City Hall Place | | | | |
| Plattsburgh, NY 12901 | | | | |
| as set forth in said Surety's | bond | | | , OWNER, |
| us set fortil ill suid Sufety s | oond. | | | |
| | | | | |
| IN WITNESS WHEREOF | the Surety has here | into set its hand on this date: | | |
| (Insert in writing the month | | | | |
| | | | | |
| | | <u></u> | ırety) | |
| | | (54 | | |
| | | | | |
| | | (Si | gnature of authorized representat | ive) |
| | | | | |
| Attest: | | | | |

(Seal):

(Printed name and title)

SECTION 01 1000 SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: City of Plattsburgh DRI Downtown Grant Program Proposed Farmers Market
- B. Owner's Name: City of Plattsburgh.
- C. Architect's Name: Architectural & Engineers Design Associates, P.C..
- D. The Project consists of the renovation of existing facility & construction of The Farmers Market.

1.02 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 5200 - Agreement Form.

1.03 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings and specified in Section 02 4100.
- B. Scope of alterations work is indicated on drawings.

1.04 WORK BY OWNER

- A. Owner will supply and install the following:
- B. Owner will supply the following for installation by Contractor:

1.05 OWNER OCCUPANCY

- A. Owner intends to occupy the Project upon Substantial Completion.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.06 CONTRACTOR USE OF SITE AND PREMISES

- A. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.

SECTION 01 2000 PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.

1.02 SCHEDULE OF VALUES

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- D. Forms filled out by hand will not be accepted.
- E. Execute certification by signature of authorized officer.
- F. Submit one electronic and three hard-copies of each Application for Payment.

1.04 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within _____ days.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
- E. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.05 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

SECTION 01 2500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Section 00 2113 Instructions to Bidders: Restrictions on timing of substitution requests.
- B. Section 01 3000 Administrative Requirements: Submittal procedures, coordination.

1.03 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
 - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
 - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
 - a. Substitution requests offering advantages solely to the Contractor will not be considered.
- B. Substitutions: See General Conditions for definition.

1.04 REFERENCE STANDARDS

- A. CSI/CSC Form 1.5C Substitution Request (During the Bidding/Negotiating Stage); Current Edition.
- B. CSI/CSC Form 13.1A Substitution Request (After the Bidding/Negotiating Phase); Current Edition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
 - 4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
 - 5. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
 - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
- D. Limit each request to a single proposed substitution item.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Instructions to Bidders specifies time restrictions for submitting requests for substitutions during the bidding period, and the documents required.
- B. Submittal Form (before award of contract):
 - 1. Submit substitution requests by completing CSI/CSC Form 1.5C Substitution Request (During the Bidding/Negotiating Stage). See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submittal Form (after award of contract):
 - 1. Submit substitution requests by completing CSI/CSC Form 13.1A Substitution Request. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. Architect will consider requests for substitutions only within 15 days after date of Agreement.
- C. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- D. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
 - 1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
 - 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
 - 3. Bear the costs engendered by proposed substitution of:
 - a. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.
- E. Substitutions will not be considered under one or more of the following circumstances:
 1. Without a separate written request.
 - 2. When acceptance will require revisions to Contract Documents.

3.04 RESOLUTION

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
 - 1. Architect's decision following review of proposed substitution will be noted on the submitted form.

3.05 ACCEPTANCE

A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.06 CLOSEOUT ACTIVITIES

A. See Section 01 7800 - Closeout Submittals, for closeout submittals.

SECTION 01 3000 ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Coordination drawings.
- F. Submittals for review, information, and project closeout.
- G. Number of copies of submittals.
- H. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 00 7200 General Conditions: Duties of the Construction Manager.
- B. Section 01 7800 Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 GENERAL ADMINISTRATIVE REQUIREMENTS

A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.

1.04 PROJECT COORDINATOR

- A. Project Coordinator: Construction Manager.
- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for delivery & equipment access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 1000 Summary.
- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to Architect through the Project Coordinator:
 - 1. Requests for Interpretation.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Progress schedules.
 - 9. Coordination drawings.
 - 10. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Schedule meeting after Notice of Award.
- B. Attendance Required:
 - 1. Owner.
 - 2. Architect.
 - 3. Contractor.
- C. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing the parties to Contract, Owner and Architect.
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 7. Scheduling.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- C. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to work.
- D. Project Coordinator will record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE

A. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

- B. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- C. Within 10 days after joint review, submit complete schedule.
- D. Submit updated schedule with each Application for Payment.

3.04 COORDINATION DRAWINGS

- A. Provide information required by Project Coordinator for preparation of coordination drawings.
- B. Review drawings prior to submission to Architect.
- C. Detailed project coordination shop drawings will be required by GC and MEP's showing all equipment and devices located in and/or above the ceilings, including elevations and sizes of such. No new installation work may proceed until all drawings are received, reviewed and approved by all parties

3.05 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.06 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

3.07 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 Closeout Submittals:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.08 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Documents for Review:
 - 1. Small Size Sheets, Not Larger Than 8-1/2 by 11 inches (215 by 280 mm): Submit the number of copies that Contractor requires, plus two copies that will be retained by Architect.
 - 2. Larger Sheets, Not Larger Than 36 by 48 inches (910 by 1220 mm): Submit the number of opaque reproductions that Contractor requires, plus two copies that will be retained by Architect.
- C. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. Retained samples will not be returned to Contractor unless specifically so stated.

3.09 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Transmit using approved form.
 - 2. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.

SECTION 01 3216

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.02 REFERENCE STANDARDS

- A. AGC (CPSM) Construction Planning and Scheduling Manual; 2004.
- B. M-H (CPM) CPM in Construction Management Project Management with CPM; 2015.

1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, General Construction contract holder shall submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

1.04 QUALITY ASSURANCE

A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with one years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.05 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Sheet Size: Multiples of 8-1/2 x 11 inches (216 x 280 mm).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Include conferences and meetings in schedule.
- D. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- E. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, products identified under Allowances, and dates reviewed submittals will be required from Architect. Indicate decision dates for selection of finishes.
- F. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.
- B. Identify the first work day of each week.

3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with Architect at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 10 days.

3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- D. Indicate changes required to maintain Date of Substantial Completion.
- E. Submit reports required to support recommended changes.

3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

SECTION 01 4000 QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. Testing and inspection agencies and services.
- C. Control of installation.
- D. Defect Assessment.

1.02 REFERENCE STANDARDS

- ASTM C1021 Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2014).
- B. ASTM C1077 Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2017.
- C. ASTM C1093 Standard Practice for Accreditation of Testing Agencies for Masonry; 2015a, with Editorial Revision (2016).
- D. ASTM D3740 Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2019.
- E. ASTM E329 Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2018.
- F. ASTM E543 Standard Specification for Agencies Performing Nondestructive Testing; 2015.
- G. IAS AC89 Accreditation Criteria for Testing Laboratories; 2018.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
 - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.04 TESTING AND INSPECTION AGENCIES AND SERVICES

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.

- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TESTING AND INSPECTION

- A. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by Architect.
 - 6. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.
- C. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 - 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 - 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.03 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not complying with specified requirements.

SECTION 01 5000

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and fencing.
- C. Security requirements.
- D. Vehicular access and parking.
- E. Waste removal facilities and services.
- F. Project identification sign.

1.02 RESPONSIBILITY

A. Unless indicated to be provided by Owner it shall be provided by Contractor for temporary sanitary facilities, waste removal and project sign.

1.03 TEMPORARY UTILITIES - SEE SECTION 01 5100

- A. Owner will provide the following:
 - 1. Electrical power and metering, consisting of connection to existing facilities.

1.04 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

1.05 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 FENCING

A. Provide 6 foot (1.8 m) high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.07 SECURITY - SEE SECTION 01 3553

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with Owner's security program.

1.08 VEHICULAR ACCESS AND PARKING - SEE SECTION 01 5500

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.09 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.

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- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.10 PROJECT SIGNS - SEE SECTION 01 5813

1.11 PROJECT IDENTIFICATION

A. No other signs are allowed without Owner permission except those required by law.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

SECTION 01 6000 PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations.
- E. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 01 2500 Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 4000 Quality Requirements: Product quality monitoring.
- C. Section 01 7419 Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
 - 1. Made outside the United States, its territories, Canada, or Mexico.
 - 2. Made using or containing CFC's or HCFC's.
 - 3. Containing lead, cadmium, or asbestos.
- C. Where other criteria are met, Contractor shall give preference to products that:
 - 1. Are extracted, harvested, and/or manufactured closer to the location of the project.
 - 2. Have longer documented life span under normal use.
 - 3. Result in less construction waste. See Section 01 7419

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

A. See Section 01 2500 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- F. Comply with manufacturer's warranty conditions, if any.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- H. Prevent contact with material that may cause corrosion, discoloration, or staining.
- I. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- J. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

SECTION 01 7000

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Pre-installation meetings.
- D. Surveying for laying out the work.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of Owner personnel.
- H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- I. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 3000 Administrative Requirements: Submittals procedures, Electronic document submittal service.
- C. Section 01 4000 Quality Requirements: Testing and inspection procedures.
- D. Section 01 7800 Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
 - 3. Submit surveys and survey logs for the project record.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 QUALIFICATIONS

A. For surveying work, employ a land surveyor registered in New York State and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

1.05 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- D. Perform dewatering activities, as required, for the duration of the project.

- E. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- F. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
- H. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.06 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

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C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of examination, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Architect of any discrepancies discovered.
- C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- D. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- F. Utilize recognized engineering survey practices.
- G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations; and _____.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, ground floor elevations, and ______.
- H. Periodically verify layouts by same means.
- I. Maintain a complete and accurate log of control and survey work as it progresses.

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.

- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
 - 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.
 - 3. Relocate items indicated on drawings.
 - 4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 - 5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 - 4. Verify that abandoned services serve only abandoned facilities.
 - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
- G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
 - 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
- H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- I. Refinish existing surfaces as indicated:
 - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.

- 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- J. Clean existing systems and equipment.
- K. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- L. Do not begin new construction in alterations areas before demolition is complete.
- M. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.
- J. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.08 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.09 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.
- G. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- H. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.10 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- F. Clean filters of operating equipment.
- G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.
- H. Clean site; sweep paved areas, rake clean landscaped surfaces.
- I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.11 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

- G. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- H. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

3.12 MAINTENANCE

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

SECTION 01 7800 CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 00 7200 General Conditions and 00 7300 Supplementary Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01 3000 Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01 7000 Execution and Closeout Requirements: Contract closeout procedures.
- D. Individual Product Sections: Specific requirements for operation and maintenance data.
- E. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 2. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
 - 3. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.

- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish first floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 - 1. Product data, with catalog number, size, composition, and color and texture designations.
 - 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 - 1. Description of unit or system, and component parts.
 - 2. Identify function, normal operating characteristics, and limiting conditions.
 - 3. Include performance curves, with engineering data and tests.
 - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

- D. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- E. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- F. Provide servicing and lubrication schedule, and list of lubricants required.
- G. Include manufacturer's printed operation and maintenance instructions.
- H. Include sequence of operation by controls manufacturer.
- I. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Provide control diagrams by controls manufacturer as installed.
- K. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- L. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- M. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- N. Include test and balancing reports.
- O. Additional Requirements: As specified in individual product specification sections.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- J. Arrangement of Contents: Organize each volume in parts as follows:
 - 1. Project Directory.
 - 2. Table of Contents, of all volumes, and of this volume.
 - 3. Operation and Maintenance Data: Arranged by system, then by product category.
 - a. Source data.
 - b. Product data, shop drawings, and other submittals.
 - c. Operation and maintenance data.

- d. Field quality control data.
- e. Photocopies of warranties and bonds.

3.06 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

SECTION 02 4100 DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of built site elements.
- B. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

- A. Section 00 3100 Available Project Information: Portions of Existing buildings to be demolished as asbestos-containing materials. See Appendix 'B'
 - 1. An asbestos survey could not be performed since the properties are structurally unsound and are condemned. They must be demolished in a manner which will mitigate any asbestos propogation into the surrounding community and air. The methods of mitigation must be in accordance with New York State law.
 - 2. Asbestos abatement and removal projects are regulated by the New York State Department of Labor under Industrial Code Rule 56. Code Rule 56 covers installation, removal, encapsulation, application or enclosure of asbestos material.
 - Questions concerning asbestos abatement projects should be directed to the New York State Department of Labor, Engineering Services Unit, Albany, New York 12240 at (518) 457-1536.
 - 4. After the asbestos waste has been abated, the waste must be transported to a solid waste landfill. This process is regulated by 6 NYCRR Part 364 Waste Transporter Permits. The areas covered by Part 364 include concerns about asbestos waste transportation, transport permits, and asbestos transportation tracking.
 - 5. Questions concerning asbestos transportation should be directed to the New York State Department of Environmental Conservation, Division of Materials Management, Part 364 Waste Transporter Permit Program at (518) 402-8792.
 - 6. Asbestos waste disposal is regulated by 6 NYCRR Part 360 Solid Waste Management Facilities. The areas covered by Part 360 include a definition of asbestos waste, transfer stations, and land disposal issues.
 - 7. Questions concerning asbestos disposal should be directed to the New York State Department of Environmental Conservation, Division of Materials Management, Bureau of Solid Waste Management, 625 Broadway, Albany, NY 12233 at (518) 402-8678.
- B. Section 01 1000 Summary: Limitations on Contractor's use of site and premises.
- C. Section 01 1000 Summary: Description of items to be salvaged or removed for re-use by Contractor.
- D. Section 01 5000 Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- E. Section 01 6000 Product Requirements: Handling and storage of items removed for salvage and relocation.
- F. Section 01 7000 Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- G. Section 31 2323 Fill: Filling holes, pits, and excavations generated as a result of removal operations.

1.03 REFERENCE STANDARDS

A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2019.

PART 3 EXECUTION

2.01 SCOPE

- A. Remove portions of the existing building as designated on the plans.
- B. Remove paving and curbs as required to accomplish new work.
- C. Remove other items indicated, for salvage and relocation.

2.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Comply with applicable requirements of NFPA 241.
 - 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 4. Provide, erect, and maintain temporary barriers and security devices.
 - 5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 7. Do not close or obstruct roadways or sidewalks without permit.
 - 8. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
- D. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

2.03 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

2.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.

- 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 3. Verify that abandoned services serve only abandoned facilities before removal.
 - 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.

2.05 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

SECTION 03 0100 MAINTENANCE OF CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cleaning of existing concrete surfaces.
- B. Repair of exposed structural, shrinkage, and settlement cracks.
- C. Repair of deteriorated concrete.
- D. Scope of Work: As indicated on drawings.

1.02 REFERENCE STANDARDS

A. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair; 2013.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Indicate product standards, physical and chemical characteristics, technical specifications, limitations, maintenance instructions, and general recommendations regarding each material.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS

A. Detergent: Non-ionic detergent.

2.02 CEMENTITIOUS PATCHING AND REPAIR MATERIALS

- A. Manufacturers:
 - 1. ARDEX Engineered Cements: www.ardexamericas.com/#sle.
 - 2. The QUIKRETE Companies: www.quikrete.com/#sle.
 - 3. Substitutions: See Section 01 6000 Product Requirements.
- B. Cementitious Repair Mortar, Trowel Grade: One- or two-component, factory-mixed, polymer-modified cementitious mortar.
 - 1. In-place material resistant to freeze/thaw conditions.
 - 2. Mixed with water or latex type bonding agent in proportions as recommended by manufacturer.
 - 3. Products:
 - a. ARDEX Engineered Cements; ARDEX Feather Finish: www.ardexamericas.com/#sle.
 - b. Substitutions: See Section 01 6000 Product Requirements.

2.03 REBAR EPOXY PAINT:

- A. Manufacturers:
 - 1. Rust-Oleum, Industrial Choice
 - a. RB1600 System Green Rebar Epoxy.
 - 2. Substitutions: See Section 01 6000 Product Requirements.

2.04 EPOXY PATCHING AND REPAIR MATERIALS

- A. Manufacturers:
 - 1. Simpson Strong Tie Crack-Pac: www.simpsonstrongtie.com
 - 2. Substitutions: See Section 01 6000 Product Requirements.
- B. Epoxy Injection Adhesive:

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work.

B. Beginning of installation means acceptance of substrate.

3.02 PREPARATION

A. Prepare concrete surfaces to be repaired according to ICRI 310.2R.

3.03 CLEANING EXISTING CONCRETE

- A. Clean concrete surfaces of dirt or other contamination using the gentlest method that is effective.
 - 1. Try the gentlest method first, then, if not clean enough, use a less gentle method taking care to watch for impending damage.
 - 2. Clean out cracks and voids using same methods.
- B. The following are acceptable cleaning methods, in order from gentlest to less gentle:
 - 1. Water washing using low-pressure, maximum of 100 psi, and, if necessary, brushes with natural or synthetic bristles.
 - 2. Increasing the water washing pressure to maximum of 400 psi.
 - 3. Adding detergent to washing water; with final water rinse to remove residual detergent.
 - 4. Steam-generated low-pressure hot-water washing.

3.04 CRACK REPAIR USING EPOXY ADHESIVE INJECTION

- A. Repair exposed cracks.
- B. Follow epoxy adhesive manufacturer's written installation instructions.
- C. Provide temporary entry ports spaced to accomplish movement of fluids between ports; no deeper than the depth of the crack to be filled or port size diameter no greater than the thickness of the crack. Provide temporary seal at concrete surface to prevent leakage of adhesive.
- D. Inject adhesive into ports under pressure using equipment appropriate for particular application.
- E. Begin injection at lower entry port and continue until adhesive appears in adjacent entry port. Continue from port to port until entire crack is filled.
- F. Remove temporary seal and excess adhesive.
- G. Clean surfaces adjacent to repair and blend finish.

SECTION 03 1000 CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Formwork for cast-in place concrete, with shoring, bracing and anchorage.
- B. Form stripping.

1.02 RELATED REQUIREMENTS

- A. Section 03 2000 Concrete Reinforcing.
- B. Section 03 3000 Cast-in-Place Concrete.
- C. Section 31 2316 Excavation: Shoring and underpinning for excavation.

1.03 REFERENCE STANDARDS

- A. ACI 301 Specifications for Structural Concrete; 2016.
- B. ACI 318 Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).

PART 2 PRODUCTS

2.01 FORMWORK - GENERAL

- A. Provide concrete forms, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.
- B. Design and construct concrete that complies with design with respect to shape, lines, and dimensions.
- C. Comply with applicable state and local codes with respect to design, fabrication, erection, and removal of formwork.

SECTION 03 2000 CONCRETE REINFORCING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Reinforcing steel for cast-in-place concrete.
- B. Supports and accessories for steel reinforcement.

1.02 RELATED REQUIREMENTS

- A. Section 03 1000 Concrete Forming and Accessories.
- B. Section 03 3000 Cast-in-Place Concrete.

1.03 REFERENCE STANDARDS

- A. ACI 301 Specifications for Structural Concrete; 2016.
- B. ACI 318 Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).
- C. ACI SP-66 ACI Detailing Manual; 2004.
- D. ASTM A184/A184M Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement; 2019.
- E. ASTM A615/A615M Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2018.
- F. ASTM A1064/A1064M Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2018a.
- G. CRSI (DA4) Manual of Standard Practice; 2009.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Comply with requirements of ACI SP-66. Include bar schedules, shapes of bent bars, spacing of bars, and location of splices.
- C. Manufacturer's Certificate: Certify that reinforcing steel and accessories supplied for this project meet or exceed specified requirements.

PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) (420 MPa).
 1. Plain billet-steel bars.
- B. Stirrup Steel: ASTM A1064/A1064M steel wire, unfinished.
- C. Steel Welded Wire Reinforcement (WWR): Galvanized, deformed type; ASTM A1064/A1064M.
 - 1. Form: Flat Sheets.
 - 2. WWR Style: As indicated on drawings.
- D. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gage, 0.0508 inch (1.29 mm).
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

2.02 FABRICATION

- A. Fabricate concrete reinforcing in accordance with CRSI (DA4) Manual of Standard Practice.
- B. Locate reinforcing splices not indicated on drawings at point of minimum stress.

PART 3 EXECUTION

3.01 PLACEMENT

- A. Place, support and secure reinforcement against displacement. Do not deviate from required position.
- B. Do not displace or damage vapor barrier.
- C. Accommodate placement of formed openings.
- D. Maintain concrete cover around reinforcing as follows:
 - 1. As Indicated on Drawings.
- E. Comply with applicable code for concrete cover over reinforcement.

SECTION 03 3000 CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Floors and slabs on grade.
- B. Joint devices associated with concrete work.
- C. Miscellaneous concrete elements, including equipment pads, equipment pits, light pole bases, flagpole bases, thrust blocks, and manholes.
- D. Concrete curing.

1.02 RELATED REQUIREMENTS

- A. Section 03 2000 Concrete Reinforcing.
- B. Section 03 3511 Concrete Floor Finishes: Densifiers, hardeners, applied coatings, and polishing.
- C. Section 07 9200 Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.
- D. Section 32 1313 Concrete Paving: Sidewalks, curbs and gutters.

1.03 REFERENCE STANDARDS

- A. ACI 117 Specifications for Tolerances for Concrete Construction and Materials; 2010 (Reapproved 2015).
- B. ACI 211.1 Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).
- C. ACI 301 Specifications for Structural Concrete; 2016.
- D. ACI 302.1R Guide to Concrete Floor and Slab Construction; 2015.
- E. ACI 304R Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- F. ACI 305R Guide to Hot Weather Concreting; 2010.
- G. ACI 306R Guide to Cold Weather Concreting; 2016.
- H. ACI 308R Guide to External Curing of Concrete; 2016.
- I. ACI 318 Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).
- J. ASTM A615/A615M Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2018.
- K. ASTM A884/A884M Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement; 2014.
- L. ASTM A1064/A1064M Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2018a.
- M. ASTM C33/C33M Standard Specification for Concrete Aggregates; 2018.
- N. ASTM C39/C39M Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2018.
- O. ASTM C94/C94M Standard Specification for Ready-Mixed Concrete; 2019a.
- P. ASTM C143/C143M Standard Test Method for Slump of Hydraulic-Cement Concrete; 2015a.
- Q. ASTM C150/C150M Standard Specification for Portland Cement; 2018.
- R. ASTM C171 Standard Specification for Sheet Materials for Curing Concrete; 2016.

- S. ASTM C260/C260M Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).
- T. ASTM C330/C330M Standard Specification for Lightweight Aggregates for Structural Concrete; 2017a.
- U. ASTM C494/C494M Standard Specification for Chemical Admixtures for Concrete; 2017.
- V. ASTM C618 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2019.
- W. ASTM C685/C685M Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2017.
- X. ASTM C1240 Standard Specification for Silica Fume Used in Cementitious Mixtures; 2015.
- Y. ASTM D994/D994M Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type); 2011 (Reapproved 2016).
- Z. ASTM D1751 Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types); 2018.
- AA. ASTM E11 Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves; 2017.
- AB. ASTM E1155 Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers; 2014.
- AC. ASTM E1643 Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2018a.
- AD. ASTM E1745 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2017.
- AE. ICC-ES AC380 Acceptance Criteria for Termite Physical Barrier Systems; 2014, with Editorial Revision (2017).

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
 - 1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.
- C. Mix Design: Submit proposed concrete mix design.
 - 1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 Concrete Mixtures.
 - 2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 Concrete Quality, Mixing and Placing.
 - 3. Indicate proposed mix design complies with fiber reinforcing manufacturer's written recommendations.
- D. Samples: Submit samples of underslab vapor retarder to be used.
- E. Test Reports: Submit report for each test or series of tests specified.
- F. Manufacturer's Installation Instructions: For concrete accessories, indicate installation procedures and interface required with adjacent construction.
- G. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.
- B. Follow recommendations of ACI 305R when concreting during hot weather.
- C. Follow recommendations of ACI 306R when concreting during cold weather.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 - 1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.
 - 2. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.
 - 3. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches (38 mm) of concrete surface.

2.02 REINFORCEMENT MATERIALS

- A. Steel Welded Wire Reinforcement (WWR): Galvanized, plain type, ASTM A1064/A1064M.
 - 1. Form: Flat Sheets.
 - 2. WWR Style: As indicated on drawings.
 - 3. All welded wire fabric shall be plain, cold drawn, electrically welded fabric conforming to requirements for ASTM spec. A185, using bright basic wire meeting ASTM spec. A82.
- B. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gage, 0.0508 inch (1.29 mm).
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150/C150M, Type I Normal Portland type.
 - 1. Acquire cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C33/C33M.
 - 1. Acquire aggregates for entire project from same source.
 - 2. All Aggregrate for use in concrete shall be 100% locally produced, being mined and processed within 100 miles of the project site.
- C. Lightweight Aggregate: ASTM C330/C330M.
- D. Fly Ash: ASTM C618, Class C or F.
- E. Calcined Pozzolan: ASTM C618, Class N.
- F. Silica Fume: ASTM C1240, proportioned in accordance with ACI 211.1.
- G. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.
- H. Structural Fiber Reinforcement: ASTM C1116/C1116M.

2.04 ADMIXTURES

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- B. Air Entrainment Admixture: ASTM C260/C260M.
- C. High Range Water Reducing and Retarding Admixture: ASTM C494/C494M Type G.
- D. Accelerating Admixture: ASTM C494/C494M Type C.
- E. Water Reducing Admixture: ASTM C494/C494M Type A.

2.05 ACCESSORY MATERIALS

- A. Underslab Vapor Retarder: Sheet material complying with ASTM E1745, Class A; stated by manufacturer as suitable for installation in contact with soil or granular fill under concrete slabs. The use of single ply polyethylene is prohibited.
 - 1. Installation: Comply with ASTM E1643.
 - 2. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations.

2.06 BONDING AND JOINTING PRODUCTS

- A. Slab Isolation Joint Filler: 1/2 inch (13 mm) thick, height equal to slab thickness, with removable top section that will form 1/2 inch (13 mm) deep sealant pocket after removal.
- B. Termite-Excluding Slab Isolation Joint Filler: 1/2 inch (13 mm) thick, composite sheet of elastomeric membrane, embedded stainless steel termite-exclusion screen, adhesive on both sides, and a disposable, treated release sheet.
 - 1. Termite Resistance: 100 percent when tested in accordance with ICC-ES AC380.
 - 2. Stainless Steel Mesh: ASTM E11; opening size 0.018 inch (0.44 mm), maximum.
- C. Slab Construction Joint Devices: Combination keyed joint form and screed, galvanized steel, with rectangular or round knockout holes for conduit or rebar to pass through joint form at 6 inches (150 mm) on center; ribbed steel stakes for setting.

2.07 CURING MATERIALS

2.08 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.
- D. Slabs & Sidewalks:
 - 1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch (27.6 MPa).
- E. Footings & Foundations Walls:
 - 1. Compressive Strength. when tested in accordance with ASTM C39/C39M at 28 days: 3,500 pounds per square inch.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
- B. Verify that forms are clean and free of rust before applying release agent.
- C. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.
- D. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
- E. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Lap joints minimum 6 inches (150 mm). Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.

3.03 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.
- B. Place concrete for floor slabs in accordance with ACI 302.1R.
- C. Slabs on grade shall be placed over a porous 8 inch layer of compacted drainage fill (minimum), unless otherwise shown on plans.

- D. Slabs shall be placed in alternate strips, each strip not to exceed 20 feet wide by 80 feet long. Joint panels not to exceed 10 feet in length or width. Joint spacing increases to 20 feet where No.3 Bars at 16 O.C. are used.
- E. Notify Architect not less than 24 hours prior to commencement of placement operations.
- F. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- G. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
- H. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.
- I. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.04 SLAB JOINTING

- A. Locate joints as indicated on drawings.
- B. Anchor joint fillers and devices to prevent movement during concrete placement.
- C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.
 - 1. Install wherever necessary to separate slab from other building members, including columns, walls, equipment foundations, footings, stairs, manholes, sumps, and drains.
- D. Saw Cut Contraction Joints: Saw cut joints before concrete begins to cool, within 4 to 12 hours after placing; use 3/16 inch (5 mm) thick blade and cut at least 1 inch (25 mm) deep but not less than one quarter (1/4) the depth of the slab.
- E. Construction Joints: Where not otherwise indicated, use metal combination screed and key form, with removable top section for joint sealant.

3.05 FLOOR FLATNESS AND LEVELNESS TOLERANCES

A. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.06 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.
- B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch (6 mm) or more in height.
- C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch (6 mm) or more in height. Provide finish as follows:
 - 1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.
 - 2. Grout Cleaned Finish: Wet areas to be cleaned and apply grout mixture by brush or spray; scrub immediately to remove excess grout. After drying, rub vigorously with clean burlap, and keep moist for 36 hours.
- D. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
 - 1. Other Surfaces to Be Left Exposed: Trowel as described in ACI 302.1R, minimizing burnish marks and other appearance defects.

3.07 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

- C. Surfaces Not in Contact with Forms:
 - 1. Slabs and Floors To Receive Adhesive-Applied Flooring: Curing compounds and other surface coatings are usually considered unacceptable by flooring and adhesive manufacturers. If such materials must be used, either obtain the approval of the flooring and adhesive manufacturers prior to use or remove the surface coating after curing to flooring manufacturer's satisfaction.
 - 2. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
 - 3. Final Curing: Begin after initial curing but before surface is dry.

3.08 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.
- B. Provide free access to concrete operations at project site and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
- D. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.
- E. Compressive Strength Tests: ASTM C39/C39M, for each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cubic yards (76 cu m) or less of each class of concrete placed.
- F. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- G. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

3.09 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Architect. The cost of additional testing shall be borne by Contractor when defective concrete is identified.

3.10 PROTECTION

A. Do not permit traffic over unprotected concrete floor surface until fully cured.

SECTION 06 1000 ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural dimension lumber framing.
- B. Non-structural dimension lumber framing.
- C. Sheathing.
- D. Roofing nailers.
- E. Roofing cant strips.
- F. Preservative treated wood materials.
- G. Miscellaneous framing and sheathing.
- H. Concealed wood blocking, nailers, and supports.
- I. Miscellaneous wood nailers, furring, and grounds.

1.02 RELATED REQUIREMENTS

A. Section 07 6200 - Sheet Metal Flashing and Trim: Sill flashings.

1.03 REFERENCE STANDARDS

- A. AWC (WFCM) Wood Frame Construction Manual for One- and Two-Family Dwellings; 2015.
- B. ASTM A153/A153M Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- C. ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2018.
- D. ASTM C1396/C1396M Standard Specification for Gypsum Board; 2017.
- E. AWPA U1 Use Category System: User Specification for Treated Wood; 2018.
- F. PS 1 Structural Plywood; 2009.
- G. PS 20 American Softwood Lumber Standard; 2015.
- H. SPIB (GR) Grading Rules; 2014.

1.04 DELIVERY, STORAGE, AND HANDLING

A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- 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. Provide sustainably harvested wood; see Section 01 6000 Product Requirements for requirements.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Stud Framing (2 by 2 through 2 by 6 (50 by 50 mm through 50 by 150 mm)):

- 1. Species: Any allowed under referenced grading rules.
- 2. Species: Southern Pine.
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16 (50 by 150 mm through 100 by 400 mm)):
 - 1. Machine stress-rated (MSR) as follows:
 - a. Fb-single (minimum extreme fiber stress in bending): 1350 psi (9,300 kPa).
 - b. E (minimum modulus of elasticity): 1,300,000 psi (8960 MPa).
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 EXPOSED DIMENSION LUMBER

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings.
- C. Surfacing: S4S.
- D. Moisture Content: S-dry or MC19.
- E. Stud Framing (2 by 2 through 2 by 6 (50 by 50 through 50 by 150 mm)):
 - 1. Species: Southern Pine.
 - 2. Grade: No. 2 or Better.
- F. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16 (50 by 150 through 100 by 400 mm)):
 - 1. Species: Southern Pine.
 - 2. Grade: No. 2 or Better.

2.04 CONSTRUCTION PANELS

A. Roof Sheathing: Oriented strand board wood structural panel; PS 2.

- 1. Grade: Structural 1 Sheathing.
- 2. Bond Classification: Exposure 1.
- 3. Performance Category: 5/8 PERF CAT.
- 4. Span Rating: 40/20.
- 5. Edges: Tongue and groove.
- 6. Exposure Time: Sheathing will not delaminate or require sanding due to moisture absorption from exposure to weather for up to 500 days.
- 7. Provide fastening guide on top panel surface with separate markings indicating fastener spacing for 16 inches (406 mm) and 24 inches (610 mm) on center, respectively.

2.05 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 - 2. All hurricane clips at wood trusses to be equal to Simpson Strong-Tie model H1.
- B. Joist Hangers: Hangers used for flush framing shall be approved by the engineer prior to use.
- C. Sill Gasket on Top of Foundation Wall: 1/4 inch (6 mm) thick, plate width, closed cell plastic foam from continuous rolls.
- D. Sill Flashing: As specified in Section 07 6200.

2.06 FACTORY WOOD TREATMENT

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

- 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
- B. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber exposed to weather.
 - c. Treat lumber in contact with roofing, flashing, or waterproofing.
 - d. Treat lumber in contact with masonry or concrete.
 - e. Treat lumber less than 18 inches (450 mm) above grade.

PART 3 EXECUTION

3.01 PREPARATION

- A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches (100 mm) and seal.
- B. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.

3.02 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.03 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.
- E. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.04 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- C. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
- D. Provide the following specific non-structural framing and blocking:
 - 1. Grab bars.
 - 2. Towel and bath accessories.

3.05 INSTALLATION OF CONSTRUCTION PANELS

- A. Subflooring/Underlayment Combination: Glue and nail to framing; staples are not permitted.
- B. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 - 1. At long edges use sheathing clips where joints occur between roof framing members.
 - 2. At long edges provide solid edge blocking where joints occur between roof framing members.
 - 3. Nail panels to framing; staples are not permitted.

3.06 SITE APPLIED WOOD TREATMENT

- A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
- B. Allow preservative to dry prior to erecting members.

3.07 TOLERANCES

- A. Framing Members: 1/4 inch (6 mm) from true position, maximum.
- B. Variation from Plane (Other than Floors): 1/4 inch in 10 feet (2 mm/m) maximum, and 1/4 inch in 30 feet (7 mm in 10 m) maximum.

SECTION 06 1753 SHOP-FABRICATED WOOD TRUSSES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated wood trusses for roof framing.
- B. Bridging, bracing, and anchorage.

1.02 REFERENCE STANDARDS

- A. TPI 1 National Design Standard for Metal-Plate-Connected Wood Truss Construction; 2014.
- B. TPI BCSI 1 Building Component Safety Information Booklet: The Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses; 2018.
- C. TPI DSB-89 Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses; 1989.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Show truss configurations, sizes, spacing, size and type of plate connectors, cambers, framed openings, bearing and anchor details, and bridging and bracing.
 1. Provide shop drawings stamped or sealed by design engineer.

1.04 QUALITY ASSURANCE

- A. Designer Qualifications: Perform design by or under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in New York State.
- B. Fabricator Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Handle and erect trusses in accordance with TPI BCSI 1.
- B. Store trusses in vertical position resting on bearing ends.

PART 2 PRODUCTS

2.01 TRUSSES

A. Wood Trusses: Designed and fabricated in accordance with TPI 1 and TPI DSB-89 to achieve structural requirements indicated.

2.02 MATERIALS

- A. Lumber:
 - 1. Moisture Content: Between 7 and 9 percent.
 - 2. Lumber fabricated from old growth timber is not permitted.
 - 3. Provide sustainably harvested lumber, certified or labeled as specified in Section 01 6000.
- B. Truss Bridging: Type, size and spacing recommended by truss manufacturer.

2.03 ACCESSORIES

- A. Wood Blocking, Bridging, Plates, and Miscellaneous Framing: Softwood lumber, any species, construction grade, 19 percent maximum and 7 percent minimum moisture content.
- B. Fasteners: Electrogalvanized steel, type to suit application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that supports and openings are ready to receive trusses.

3.02 PREPARATION

A. Coordinate placement of bearing items.

3.03 ERECTION

- A. Install trusses in accordance with manufacturer's instructions and TPI DSB-89 and TPI BCSI 1; maintain a copy of each TPI document on site until installation is complete.
- B. Set members level and plumb, in correct position.
- C. Install permanent bridging and bracing.

3.04 TOLERANCES

A. Framing Members: 1/2 inch (12 mm) maximum, from true position.

3.05 SCHEDULES

A. Main Roof: See drawings for span and overhang.

SECTION 06 2000 FINISH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Finish carpentry items.
- B. Wood door frames, glazed frames.
- C. Wood casings and moldings.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Support framing, grounds, and concealed blocking.

1.03 REFERENCE STANDARDS

- A. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2019b.
- B. AWMAC/WI (NAAWS) North American Architectural Woodwork Standards, U.S. Version 3.1; 2016, with Errata (2018).
- C. HPVA HP-1 American National Standard for Hardwood and Decorative Plywood; 2016.
- D. PS 20 American Softwood Lumber Standard; 2015.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements for submittal procedures.
- B. Product Data:
 - 1. Provide instructions for attachment hardware and finish hardware.

1.05 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect from moisture damage.

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

- A. Interior Woodwork Items:
 - 1. Moldings, Bases, Casings, and Miscellaneous Trim: Clear white pine; prepare for paint finish.
 - 2. Door, Glazed Light, and Pocket Door Frames: White birch; prepare for paint finish.
 - 3. Window Sills: Clear fir; prepare for transparent finish.

2.02 WOOD-BASED COMPONENTS

A. Provide sustainably harvested wood, certified or labeled as specified in Section 01 6000 -Product Requirements.

2.03 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.
- B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

3.02 INSTALLATION

- A. Set and secure materials and components in place, plumb and level.
- B. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch (0.79 mm). Do not use additional overlay trim to conceal larger gaps.

3.03 SITE APPLIED WOOD TREATMENT

- A. Apply preservative treatment in accordance with manufacturer's instructions.
- B. Brush apply one coats of preservative treatment on wood in contact with cementitious materials. Treat site-sawn cuts.
- C. Allow preservative to dry prior to erecting members.

3.04 TOLERANCES

- A. Maximum Variation from True Position: 1/16 inch (1.6 mm).
- B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch (0.79 mm).

SECTION 06 8316

FIBERGLASS REINFORCED PANELING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fiberglass reinforced plastic panels.
- B. Trim.

1.02 RELATED REQUIREMENTS

- A. Section 01 6116 Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 09 7800 Interior Wall Paneling: Decorative FRP wall paneling.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fiberglass Reinforced Plastic Panels:
 - 1. Crane Composites, Inc; ____: www.cranecomposites.com/#sle.
 - 2. Substitutions: See Section 01 6000 Product Requirements.

2.02 PANEL SYSTEMS

- A. Wall Panels:
 - 1. Panel Size: 4 by 8 feet (1.2 by 2.4 m).
 - 2. Panel Thickness: 0.10 inch (2.5 mm).
 - 3. Surface Design: Embossed.
 - 4. Color: White.
 - 5. Attachment Method: Adhesive only, with trim and sealant in joints.

2.03 MATERIALS

- A. Panels: Fiberglass reinforced plastic (FRP), complying with ASTM D5319.
 - 1. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.
- B. Trim: Vinyl; color coordinating with panel.
- C. Sealant: Type recommended by panel manufacturer; white.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions and substrate flatness before starting work.
- B. Verify that substrate conditions are ready to receive the work of this section.

3.02 INSTALLATION - WALLS

- A. Install panels in accordance with manufacturer's instructions.
- B. Cut and drill panels with carbide tipped saw blades, drill bits, or snips.
- C. Apply adhesive to the back side of the panel using trowel as recommended by adhesive manufacturer.
- D. Apply panels to wall with seams plumb and pattern aligned with adjoining panels.
- E. Install panels with manufacturer's recommended gap for panel field and corner joints.
- F. Place trim on panel before fastening edges, as required.
- G. Fill channels in trim with sealant before attaching to panel.
- H. Install trim with adhesive and screws or nails, as required.
- I. Seal gaps at floor, ceiling, and between panels with applicable sealant to prevent moisture intrusion.

J. Remove excess sealant after paneling is installed and prior to curing.

SECTION 07 2100 THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Board insulation and integral vapor retarder at cavity wall construction, perimeter foundation wall, underside of floor slabs, over roof deck, over roof sheathing, exterior wall behind F.R.P. wall finish, and interior wall with facer providing exposed finish.
- B. Batt insulation and vapor retarder in exterior wall, ceiling, and roof construction.
- C. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 Rough Carpentry: Supporting construction for batt insulation.
- B. Section 07 2500 Weather Barriers: Separate air barrier and vapor retarder materials.

1.03 REFERENCE STANDARDS

- A. ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2018.
- B. ASTM C612 Standard Specification for Mineral Fiber Block and Board Thermal Insulation; 2014 (Reapproved 2019).
- C. ASTM C665 Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.
- D. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2019b.
- E. ASTM E136 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C; 2019.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.

1.05 FIELD CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.01 APPLICATIONS

- A. Insulation at Perimeter of Foundation: Extruded polystyrene (XPS) board.
- B. Insulation in Wood Framed Walls: Batt insulation with integral vapor retarder.
- C. Insulation in Wood Framed Ceiling Structure: Batt insulation with integral vapor retarder.

2.02 FOAM BOARD INSULATION MATERIALS

- A. Extruded Polystyrene (XPS) Board Insulation: Complies with ASTM C578 with either natural skin or cut cell surfaces.
 - 1. Flame Spread Index (FSI): Class A 0 to 25, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
 - 3. R-value (RSI-value); 1 inch (25 mm) of material at 72 degrees F (22 C): 10, minimum.
 - 4. Thickness: Indicated on Drawings.
 - 5. Board Edges: Square.

2.03 FIBERBOARD INSULATION MATERIALS

A. Mineral Fiberboard Insulation: Rigid mineral fiber, in accordance with ASTM C612.

- 1. Facing: None, unfaced.
- 2. Flame Spread Index: 25 or less, when tested with facing, if any, in accordance with ASTM E84.
- 3. Smoke Developed Index: 50 or less, when tested with facing, if any, in accordance with ASTM E84.
- 4. Board Thickness indicated in drawings.
- 5. Board Edges: Square.

2.04 BATT INSULATION MATERIALS

- A. Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
 - 1. Flame Spread Index: 75 or less, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
 - 3. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
 - 4. Formaldehyde Content: Zero.
 - 5. Thickness: indicated in drawings.
 - 6. Thermal resistance: indicated in drawings.
 - 7. Manufacturers:
 - a. CertainTeed Corporation; ____: www.certainteed.com/#sle.
 - b. Johns Manville; ____: www.jm.com/#sle.
 - c. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation: www.ocbuildingspec.com/#sle.
 - d. Substitutions: See Section 01 6000 Product Requirements.

2.05 ACCESSORIES

A. Sheet Vapor Retarder: Specified in Section 07 2500.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
- B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.02 BOARD INSTALLATION AT FOUNDATION PERIMETER

- A. Install boards horizontally on foundation perimeter.
- B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.03 BOARD INSTALLATION AT EXTERIOR WALLS

- A. Install boards horizontally on walls.
- B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.04 BATT INSTALLATION

- A. Install insulation and vapor retarder in accordance with manufacturer's instructions.
- B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

3.05 PROTECTION

A. Do not permit installed insulation to be damaged prior to its concealment.

SECTION 07 2126 BLOWN INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Ceiling and Attic: Blown insulation pneumatically placed into joist spaces through access holes.

1.02 REFERENCE STANDARDS

- A. ASTM C764 Standard Specification for Mineral Fiber Loose-Fill Thermal Insulation; 2019.
- B. ASTM C1015 Standard Practice for Installation of Cellulosic and Mineral Fiber Loose-Fill Thermal Insulation; 2017.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Blown Insulation:
 - 1. CertainTeed Corporation; ____: www.certainteed.com/#sle.
 - 2. GreenFiber; ____: www.greenfiber.com/#sle.
 - 3. Johns Manville; ____: www.jm.com/#sle.
 - 4. Substitutions: See Section 01 6000 Product Requirements.

2.02 MATERIALS

- A. Applications: Provide blown insulation in ceiling as indicated on drawings.
- B. Provide blown insulation in accordance with requirements of Section 01 6116 Volatile Organic Compound (VOC) Content Restrictions.
- C. Thickness: as indicated on drawings.
- D. R value: as indicated on drawings.

2.03 ACCESSORIES

- A. Roof Ventilation Baffles: Prefabricated ventilation channels for placement under roof sheathing with baffles to prevent wind-washing.
 - 1. Material: Polyvinyl chloride (PVC).
 - 2. Roof Joist/Truss Spacing: 16 inch (406 mm) on center, nominal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install insulation and ventilation baffle in accordance with ASTM C1015 and manufacturer's instructions.
- B. Completely fill intended spaces leaving no gaps or voids.

3.02 CLEANING

A. Remove loose insulation residue.

3.03 SCHEDULES

A. Attic Spaces: Pour insulation between ceiling joists to achieve an R-value of 19 (RSI-value of 3.34).

SECTION 07 2500 WEATHER BARRIERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Vapor Retarders: Materials to make exterior walls, joints between exterior walls and roof, joints around frames of openings in exterior walls, and _____ water vapor resistant and air tight.
- B. Air Barriers: Materials that form a system to stop passage of air through exterior walls, joints between exterior walls and roof, joints around frames of openings in exterior walls, and _____.

1.02 RELATED REQUIREMENTS

A. Section 07 2100 - Thermal Insulation: Vapor retarder installed in conjunction with batt insulation.

1.03 DEFINITIONS

- A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, or vapor retarders.
- B. Vapor Retarder: Air tight barrier made of material that is relatively water vapor impermeable, to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
 - 1. Water Vapor Permeance: For purposes of conversion, 57.2 ng/(Pa s sq m) = 1 perm.

1.04 REFERENCE STANDARDS

- A. ASTM D1970/D1970M Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2019.
- B. ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials; 2016.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on material characteristics.
- C. Shop Drawings: Provide drawings of special joint conditions.

1.06 FIELD CONDITIONS

A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

PART 2 PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES

- A. Interior Vapor Retarder:
 - 1. On inside face of studs of exterior walls, under cladding, use mechanically fastened vapor retarder sheet.
 - 2. On inside face of masonry and concrete walls use vapor retarder coating.

2.02 VAPOR RETARDER MATERIALS (AIR BARRIER AND WATER-RESISTIVE)

- A. Vapor Retarder Sheet
 - 1. Thickness: 45 mil, 0.045 inch (1.143 mm).
 - 2. Water Vapor Permeance: 0.1 perm (5.7 ng/(Pa s sq m)), maximum, when tested in accordance with ASTM E96/E96M.
 - 3. Seam Lap and Perimeter Adhesive: Elastomeric, same composition as sheet or other compatible material.

2.03 ACCESSORIES

- A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.
- B. Flexible Flashing: Self-adhesive sheet flashing complying with ASTM D1970/D1970M, except slip resistance requirement is waived if not installed on a roof.

- C. Vapor Retarder Tape: Coated polyester film with acrylic adhesive backing; pressure sensitive.
- D. Thinners and Cleaners: As recommended by material manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces and conditions are ready to accept the work of this section.

3.02 PREPARATION

A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.

3.03 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Vapor Retarders: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- C. Mechanically Fastened Sheets Vapor Retarder On Interior:
 - 1. When insulation is to be installed in assembly, install vapor retarder over insulation.
 - 2. Seal seams, laps, perimeter edges, penetrations, tears, and cuts with self-adhesive tape, making air tight seal.
 - 3. Locate laps at a framing member; at laps fasten one sheet to framing member then tape overlapping sheet to first sheet.
 - 4. Seal entire perimeter to structure, window and door frames, and other penetrations.
 - 5. Where conduit, pipes, wires, ducts, outlet boxes, and other items are installed in insulation cavity, pass vapor retarder sheet behind item but over insulation and maintain air tight seal.

3.04 PROTECTION

A. Do not leave materials exposed to weather longer than recommended by manufacturer.

SECTION 07 4113 METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Structural roofing system of preformed steel panels.

1.02 REFERENCE STANDARDS

- A. AAMA 2605 Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- B. ASTM E1592 Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).

PART 2 PRODUCTS

2.01 STRUCTURAL METAL ROOF PANELS

- A. Metal Roofing Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
 - 1. Metal roof panels equal to MBCI Lokseam
 - 2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
 - 3. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F (56 degrees C).
- B. Metal Panels: Factory-formed panels with factory-applied finish.
 - 1. Steel Panels:
 - a. Signature 200 finish selected from manufacturer's standard colors
 - b. Steel Thickness: Minimum 24 gage (0.024 inch) (0.61 mm).
 - 2. Profile: Batten seam, with integral batten-shaped lap seam; concealed fastener system.
 - 3. Texture: Smooth.
 - 4. Width: Maximum panel coverage of 18 inches (457 mm).

2.02 ATTACHMENT SYSTEM

A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.03 FINISHES

A. Fluoropolymer Coil Coating System: Manufacturer's standard multi-coat aluminum coil coating system complying with AAMA 2605, including at least 70 percent polyvinylidene fluoride (PVDF) resin, and at least 80 percent of coil coated aluminum surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch (0.023 mm); color and gloss to match sample.

2.04 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 - 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 - 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to assure that the completed roof will be free of leaks.
- B. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by roof panel manufacturer.
- C. Where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions. Anchor all components of roofing system securely in place while allowing for thermal and structural movement.
 - 1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
 - 2. Minimize field cutting of panels. Where field cutting is absolutely required, use methods that will not distort panel profiles. Use of torches for field cutting is absolutely prohibited.
- B. Accessories: Install all components required for a complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.
- C. Roof Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.

3.04 PROTECTION

- A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.
- B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

SECTION 07 4113 METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Structural roofing system of preformed steel panels.

1.02 REFERENCE STANDARDS

- A. AAMA 2605 Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- B. ASTM E1592 Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).

PART 2 PRODUCTS

2.01 STRUCTURAL METAL ROOF PANELS

- A. Metal Roofing Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
 - 1. Metal roof panels equal to MBCI Lokseam
 - 2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
 - 3. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F (56 degrees C).
- B. Metal Panels: Factory-formed panels with factory-applied finish.
 - 1. Steel Panels:
 - a. Signature 200 finish selected from manufacturer's standard colors
 - b. Steel Thickness: Minimum 24 gage (0.024 inch) (0.61 mm).
 - 2. Profile: Batten seam, with integral batten-shaped lap seam; concealed fastener system.
 - 3. Texture: Smooth.
 - 4. Width: Maximum panel coverage of 18 inches (457 mm).
 - 5. Installation per manufacturer's specifications

2.02 ATTACHMENT SYSTEM

A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.03 FINISHES

A. Fluoropolymer Coil Coating System: Manufacturer's standard multi-coat aluminum coil coating system complying with AAMA 2605, including at least 70 percent polyvinylidene fluoride (PVDF) resin, and at least 80 percent of coil coated aluminum surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch (0.023 mm); color and gloss to match sample.

2.04 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 - 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 - 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to assure that the completed roof will be free of leaks.
- B. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by roof panel manufacturer.
- C. Where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions. Anchor all components of roofing system securely in place while allowing for thermal and structural movement.
 - 1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
 - 2. Minimize field cutting of panels. Where field cutting is absolutely required, use methods that will not distort panel profiles. Use of torches for field cutting is absolutely prohibited.
- B. Accessories: Install all components required for a complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.
- C. Roof Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.

3.04 PROTECTION

- A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.
- B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

SECTION 07 4213 METAL WALL PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Manufactured metal panels for exterior wall panels, with insulation, related flashings, and accessory components.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 Rough Carpentry: Wall panel substrate.
- B. Section 06 1000 Rough Carpentry: Water-resistive barrier under wall panels.
- C. Section 07 2100 Thermal Insulation.
- D. Section 07 2500 Weather Barriers: Weather barrier under wall panels.
- E. Section 09 2116 Gypsum Board Assemblies: Wall panel substrate.

1.03 REFERENCE STANDARDS

- A. ASCE 7 Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- B. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
- B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
- C. Prevent contact with materials that may cause discoloration or staining of products.

PART 2 PRODUCTS

2.01 MANUFACTURED METAL PANELS

- A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.
 - 1. Provide exterior wall panels, interior liner panels, soffit panels, and subgirt framing assembly.
 - 2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
 - 3. Maximum Allowable Deflection of Panel: L/180 for length(L) of span.
 - 4. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
 - 5. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
 - 6. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.
 - 7. Corners: Factory-fabricated in one continuous piece with minimum 2 inch (51 mm) returns.
- B. Exterior Wall Panels:
 - 1. Profile: Vertical; style as indicated.
 - 2. Metal wall panels are to be equal to MBCI PBU
 - 3. Side Seams: Double-interlocked, tight-fitting, sealed with continuous gaskets.
 - 4. Material: Prefinishes steel sheets 26 gauge minimum thickness

- 5. Panel Width: 36 inches (9296 mm).
- 6. Exposed fastener.
- 7. Color: Signature 200 finishes selected from manufacturer's standard colors
- 8. Installation per manufacturer's specifications
- C. Internal and External Corners: Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut and factory mitered to required angles.
- D. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles.
- E. Anchors: Galvanized steel.

2.02 FINISHES

- A. Exposed Surface Finish: Panel manufacturer's standard polyvinylidene fluoride (PVDF) coating, top coat over epoxy primer.
- B. Panel Backside Finish: Panel manufacturer's standard siliconized polyester wash coat.

2.03 ACCESSORIES

- A. Concealed Sealants: Non-curing butyl sealant or tape sealant.
- B. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized. Fastener cap same color as exterior panel.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that building framing members are ready to receive panels.
- B. Verify that weather barrier has been installed over substrate completely and correctly.

3.02 INSTALLATION

A. Install panels on walls and soffits in accordance with manufacturer's instructions.

3.03 TOLERANCES

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch (1.6 mm).
- B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch (6.4 mm).

3.04 CLEANING

- A. Remove site cuttings from finish surfaces.
- B. Remove protective material from wall panel surfaces.
- C. See Section 01 7419 Construction Waste Management and Disposal, for additional requirements.
- D. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.

SECTION 07 6200

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, sheet metal roofing, exterior penetrations, and other items indicated in Schedule.
- B. Sealants for joints within sheet metal fabrications.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 Rough Carpentry: Wood blocking for batten seams.
- B. Section 07 7100 Roof Specialties: Manufactured copings, flashings, and expansion joint covers.
- C. Section 07 7123 Manufactured Gutters and Downspouts.
- D. Section 07 9200 Joint Sealants: Sealing non-lap joints between sheet metal fabrications and adjacent construction.

1.03 REFERENCE STANDARDS

- A. AAMA 611 Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- B. AAMA 2603 Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- C. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- D. ASTM B209M Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2014.
- E. ASTM C920 Standard Specification for Elastomeric Joint Sealants; 2018.
- F. ASTM D4586/D4586M Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2018).
- G. SMACNA (ASMM) Architectural Sheet Metal Manual; 2012.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Aluminum: ASTM B209 (ASTM B209M); 20 gage, (0.032 inch) (0.81 mm) thick; anodized finish of color as selected.
 - 1. Color Anodized Finish: AAMA 611 AA-M12C22A42/44 Class I integrally or electrolytically colored anodic coating not less than 0.7 mils (0.018 mm) thick.

2.02 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- E. Fabricate corners from one piece with minimum 18 inch (450 mm) long legs; seam for rigidity, seal with sealant.
- F. Fabricate flashings to allow toe to extend 2 inches (50 mm) over roofing gravel. Return and brake edges.

SECTION 07 7123

MANUFACTURED GUTTERS AND DOWNSPOUTS

PART 1 GENERAL

1.01 RELATED REQUIREMENTS

- A. Section 07 6100 Sheet Metal Roofing.
- B. Section 07 6200 Sheet Metal Flashing and Trim.
- C. Section 09 9113 Exterior Painting: Field painting of metal surfaces.

1.02 REFERENCE STANDARDS

- A. AAMA 611 Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- AAMA 2603 Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- C. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- D. ASTM B209M Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2014.
- E. SMACNA (ASMM) Architectural Sheet Metal Manual; 2012.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Comply with SMACNA (ASMM) for sizing components for rainfall intensity determined by a storm occurrence of 1 in 5 years.
- B. Comply with applicable code for size and method of rain water discharge.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope to drain.
- B. Prevent contact with materials that could cause discoloration, staining, or damage.

PART 2 PRODUCTS

2.01 MATERIALS

A. Pre-Finished Aluminum Sheet: ASTM B209 (ASTM B209M); 0.032 inch (0.8 mm) thick.
1. Color: As selected from manufacturer's standard colors.

2.02 COMPONENTS

- A. Gutters: SMACNA rectangular style profile.
- B. Downspouts: SMACNA Rectangular profile.
- C. Anchors and Supports: Profiled to suit gutters and downspouts.
 - 1. Anchoring Devices: In accordance with SMACNA requirements.
 - 2. Gutter Supports: Brackets.
 - 3. Downspout Supports: Brackets.
- D. Fasteners: Galvanized steel, with soft neoprene washers.

2.03 ACCESSORIES

- A. Insect/leaf/debis screen
 - 1.

2.04 FABRICATION

- A. Fabricate with required connection pieces.
- B. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints.
- C. Hem exposed edges of metal.
- D. Fabricate gutter and downspout accessories; seal watertight.

2.05 FINISHES

A. Class I Clear Anodized Finish: AAMA 611 AA-M12C22A41; clear anodic coating not less than 0.7 mils (0.018 mm) thick.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.
- B. Sheet Metal: Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts and accessories.
- C. Slope gutters 1/8 inch per foot.

SECTION 08 1113

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated hollow metal doors and frames.
- B. Thermally insulated hollow metal doors with frames.

1.02 RELATED REQUIREMENTS

- A. Section 08 7100 Door Hardware.
- B. Section 09 9113 Exterior Painting: Field painting.
- C. Section 09 9123 Interior Painting: Field painting.

1.03 REFERENCE STANDARDS

- A. ADA Standards Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ANSI/SDI A250.3 Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames; 2007 (R2011).
- C. ANSI/SDI A250.4 Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2011.
- D. ANSI/SDI A250.8 Specifications for Standard Steel Doors and Frames (SDI-100); 2017.
- E. ANSI/SDI A250.10 Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2011.
- F. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.
- G. ASTM A1008/A1008M Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable; 2018.
- H. ASTM A1011/A1011M Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2018a.
- I. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).
- J. ICC A117.1 Accessible and Usable Buildings and Facilities; 2017.
- K. ITS (DIR) Directory of Listed Products; current edition.
- L. NAAMM HMMA 840 Guide Specifications For Receipt, Storage and Installation of Hollow Metal Doors and Frames; 2007.
- M. NAAMM HMMA 861 Guide Specifications for Commercial Hollow Metal Doors and Frames; 2014.
- N. NFPA 80 Standard for Fire Doors and Other Opening Protectives; 2019.
- O. NFPA 252 Standard Methods of Fire Tests of Door Assemblies; 2017.
- P. SDI 117 Manufacturing Tolerances for Standard Steel Doors and Frames; 2013.
- Q. UL (DIR) Online Certifications Directory; Current Edition.
- R. UL 10C Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.
- S. UL 1784 Standard for Air Leakage Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

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- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Hollow Metal Doors and Frames:
 - 1. Ceco Door, an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Substitutions: See Section 01 6000 Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

- A. Requirements for Hollow Metal Doors and Frames:
 - Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

- A. Door Finish: Factory finished.
- B. Type ____, Exterior Doors: Thermally insulated.
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 1 Standard-duty.
 - b. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 1 Full Flush.
 - d. Door Face Metal Thickness: 20 gage, 0.032 inch (0.8 mm), minimum.
 - 2. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
 - 3. Sizes and configuration as indicated on drawings.
 - 4. Weatherstripping: Refer to Section 08 7100.

2.04 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory finished.
- C. Exterior Door Frames: Knock-down type.
 - 1. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A40/ZF120 coating.
 - 2. Frame Metal Thickness: 18 gage, 0.042 inch (1.0 mm), minimum.
 - 3. Weatherstripping: Separate, see Section 08 7100.

2.05 FINISHES

A. Factory Finish: Complying with ANSI/SDI A250.3, manufacturer's standard coating.1. Color: As indicated on drawings.

2.06 ACCESSORIES

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 PREPARATION

A. Coat inside of frames with bituminous coating to a thickness of 1/16 inch (1.6 mm).

3.03 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Install door hardware as specified in Section 08 7100.
- D. Touch up damaged factory finishes.

3.04 TOLERANCES

- A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.
- B. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.

3.05 ADJUSTING

A. Adjust for smooth and balanced door movement.

3.06 SCHEDULE

A. Refer to Door and Frame Schedule on the drawings.

SECTION 08 3323 OVERHEAD COILING DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Overhead coiling doors, operating hardware, non-fire-rated and exterior; manually or electrically operated.

1.02 RELATED REQUIREMENTS

- A. Section 08 7100 Door Hardware: Cylinder cores and keys.
- B. Section 09 9113 Exterior Painting: Field paint finish.
- C. Section 09 9123 Interior Painting: Field paint finish.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.
- B. NFPA 105 Standard for Smoke Door Assemblies and Other Opening Protectives; 2019.
- C. UL 1784 Standard for Air Leakage Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide general construction, electrical equipment, and component connections and details.
- C. Manufacturer's Installation Instructions: Indicate installation sequence and procedures, adjustment and alignment procedures, and _____.
- D. Maintenance Data: Indicate lubrication requirements and frequency, periodic adjustments required, and _____.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Overhead Coiling Doors:
 - 1. Wayne-Dalton, a Division of Overhead Door Corporation; ____: www.wayne-dalton.com/#sle.
 - 2. Substitutions: See Section 01 6000 Product Requirements.

2.02 COILING DOORS

- A. Exterior Coiling Doors: Steel slat curtain.
 - 1. Capable of withstanding positive and negative wind loads of 20 psf (940 Pa), without undue deflection or damage to components.
 - 2. Sandwich slat construction with insulated core of foamed-in-place polyurethane insulation; minimum R-value of 8.1 (RSI-value of 1.43).
 - 3. Finish: Galvanized.
 - 4. Manual hand chain lift operation.
 - 5. Mounting: Within framed opening.
 - 6. Locking Devices: Lock and latch handle on outside.

2.03 MATERIALS AND COMPONENTS

- A. Curtain Construction: Interlocking slats.
 - 1. Slat Ends: Alternate slats fitted with end locks to act as wearing surface in guides and to prevent lateral movement.
 - 2. Curtain Bottom: Fitted with angles to provide reinforcement and positive contact in closed position.

- 3. Weatherstripping for Exterior Doors: Moisture and rot proof, resilient type, located at jamb edges, bottom of curtain, and where curtain enters hood enclosure of exterior doors.
- 4. Smoke Seals: Provide brush or gasket type weatherstripping seals to prevent passage of smoke and hot gases in compliance with UL 1784 testing requirements.
- B. Steel Slats: Minimum thickness, ____ gage, ____ inch (____ mm); ASTM A653/A653M galvanized steel sheet.
 - 1. Galvanizing: Minimum G90 (Z275) coating.
- C. Guide Construction: Continuous, of profile to retain door in place with snap-on trim, mounting brackets of same metal.
- D. Lock Hardware:
 - 1. Latch Handle: Manufacturer's standard.
 - 2. Manual Chain Lift: Provide padlockable chain keeper on guide.
- E. Roller Shaft Counterbalance: Steel pipe and helical steel spring system, capable of producing torque sufficient to ensure smooth operation of curtain from any position and capable of holding position at mid-travel; with adjustable spring tension; requiring 25 lb (10 kg) nominal force to operate.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that opening sizes, tolerances and conditions are acceptable.

3.02 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Install smoke door assemblies in accordance with NFPA 105.
- C. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
- D. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.
- E. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- F. Install enclosure and perimeter trim.

3.03 TOLERANCES

A. Maintain dimensional tolerances and alignment with adjacent work.

3.04 ADJUSTING

A. Adjust operating assemblies for smooth and noiseless operation.

3.05 CLEANING

- A. Clean installed components.
- B. Remove labels and visible markings.

SECTION 08 5191 STEEL WINDOW RESTORATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cleaning/sanding and preparation for refinishing of existing metal windows.
- B. Install glazing at empty panels within metal windows.
- C. Finish-paint, complete window frame/sub-frame.

1.02 RELATED REQUIREMENTS

- A. Section 07 2500 Weather Barriers: Sealing frames to weather barrier installed on adjacent construction.
- B. Section 07 9200 Joint Sealants: Sealing joints between frames and adjacent construction.
- C. Section 08 8000 Glazing.

1.03 PRICE AND PAYMENT PROCEDURES

A. Unit Prices: See Section 01 2200 - Unit Prices, for additional unit price requirements.

1.04 REFERENCE STANDARDS

- A. SSPC-PA 1 Shop, Field and Maintenance Painting, Steel Structure Painting Manual, vol. 2
- B. SSPC-SP 6 Joint Surface Preparation Standard
- C. AAMA/WDMA/CSA 101/I.S.2/A440 North American Fenestration Standard/Specification for windows, doors, and skylights; 2017.
- D. ASTM A123/A123M Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- E. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.
- F. ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2016).

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Fabricator's Qualification Statement.
- C. Installer's Qualification Statement.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.
- B. Comply with all local, state and federal authorities having jurisdiction with regard to preservation regulations and hazardous materials and disposal regulations

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect factory finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

1.08 FIELD CONDITIONS

- A. This contractor is responsible to schedule work in a manner necessary to work within optimum temperatures and humidity levels and protect partially complete work from inclement weather
- B. Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C).
- C. Maintain this minimum temperature during and after installation of sealants.

1.09 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

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- B. All work is to be warranted against defects in material or workmanship for a period of 5 year(s). Include coverage for degradation of color finish.
- C. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MATERIALS

- A. GLASS AND GLAZING MATERIALS
 - 1. Glazing to match existing
 - 2. Glazing Compound
 - 3. Glazing Points

B. HARDWARE

- 1. Existing hardware is to be refinished with frame
- 2. If required, replacement hardware shall match original in design, material, and finish.
- 3. Factory-glaze window units.
- C. FINISHES
 - 1. Finish coat paint color and sheen will be selected by the Owner from a manufacturer's full range of colors. Primer coats shall each have a slight variation of color to distinguish them from the preceding coat.
 - 2. All coatings, primer and finish coats, applied in the shop or field shall be obtained from a single manufacturer.

2.02 ACCESSORIES

- A. Filler compounds shall be epoxy resin binder with metallic (iron or steel) filler particles.
- B. The sealant shall be architectural grade polyurethane sealant.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify window frame and adjoining materials are ready to receive work of this section.

3.02 PREPARATION

- A. Remove loose and flaking paint, glazing compound and all corrosion.
- B. Sand/grind, or other approved mechanical/chemical removal process, to completely remove existing finish and any surface corrosion.
- C. Inspect frame and all hardware.
- D. Prime with a rust-inhibiting primer immediately after cleaning to prevent continued corrosion

3.03 INSTALLATION

- A. GLAZING
 - 1. Existing intact original glass shall be reused. Any removed lights shall be reused in their original frames and positions.
 - 2. Replacement glass
 - a. Missing or broken glass shall be replaced with new glass.
 - 3. Point and apply glazing compound to all window unit
- B. REFINISHING COATING
 - 1. Each primer coat applied shall produce a dry film thickness of 2.0 to 2.5 mils. Install windows in accordance with ASTM E2112.
 - 2. Each finish coat shall produce a minimum dry film thickness of 2.0 to 3.5 mils.
 - 3. Marred or otherwise damaged coatings shall be touched-up with the specified coating system (primer and finish coats) as required.
 - a. Primer Coats: Two (2) coats shall be applied to provide a minimum 5-mil dry film thickness.

b. Finish Coats: The Contractor shall provide 4 - 9 mil dry film thickness by applying one or more coats as necessary to achieve specified film thickness.

3.04 TOLERANCES

- A. Maximum Variation of "finish" shall be reviewed and approved by owner/architect prior to start of work.
- B. Repaired surfaces shall have a uniform appearance as viewed from ten (10) feet away.

3.05 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for additional requirements.
- B. See Section 01 4000 Quality Requirements, for independent field testing and inspection requirements, and requirements for monitoring quality of specified product installations.
- C. Repair or replace fenestration components that have failed designated field testing, and retest to verify performance complies with specified requirements.

3.06 ADJUSTING

A. Adjust hardware/window frame for secure weather tight closure.

3.07 CLEANING

- A. Wash surfaces by method recommended and acceptable; rinse and wipe surfaces clean at both interior and exterior.
- B. Remove excess glazing sealant by method acceptable to sealant manufacturer.

3.08 PROTECTION

A. Do not permit continuing construction activities near unprotected finish surfaces.

SECTION 08 7100 DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for hollow metal and overhead doors.
- B. Weatherstripping and gasketing.

1.02 RELATED REQUIREMENTS

- A. Section 08 1113 Hollow Metal Doors and Frames.
- B. Section 08 3323 Overhead Coiling Doors: Door hardware, except cylinders.
- C. Section 08 3326 Overhead Coiling Grilles: Door hardware, except cylinders.
- D. Section 10 1400 Signage: Additional signage requirements.

1.03 REFERENCE STANDARDS

- A. ADA Standards Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. BHMA A156.1 American National Standard for Butts and Hinges; 2016.
- C. BHMA A156.2 American National Standard for Bored and Preassembled Locks & Latches; 2017.
- D. BHMA A156.3 American National Standard for Exit Devices; 2014.
- E. BHMA A156.4 American National Standard for Door Controls Closers; 2013.
- F. BHMA A156.5 American National Standard for Cylinders and Input Devices for Locks; 2014.
- G. BHMA A156.6 American National Standard for Architectural Door Trim; 2015.
- H. BHMA A156.7 American National Standard for Template Hinge Dimensions; 2016.
- I. BHMA A156.8 American National Standard for Door Controls Overhead Stops and Holders; 2015.
- J. BHMA A156.15 American National Standard for Release Devices Closer Holder, Electromagnetic and Electromechanical; 2015.
- K. BHMA A156.16 American National Standard for Auxiliary Hardware; 2018.
- L. BHMA A156.18 American National Standard for Materials and Finishes; 2016.
- M. BHMA A156.21 American National Standard for Thresholds; 2014.
- N. BHMA A156.22 American National Standard for Door Gasketing and Edge Seal Systems Sponsor; 2017.
- O. BHMA A156.30 American National Standard for High Security Cylinders; 2014.
- P. BHMA A156.36 American National Standard for Auxiliary Locks; 2016.
- Q. ICC A117.1 Accessible and Usable Buildings and Facilities; 2017.
- R. NFPA 80 Standard for Fire Doors and Other Opening Protectives; 2019.
- S. UL 437 Standard for Key Locks; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.
- C. Shop Drawings Door Hardware Schedule: Submit detailed listing that includes each item of hardware to be installed on each door. Use door numbering scheme as included in Contract Documents.
 - 1. Provide complete description for each door listed.

- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- F. Keying Schedule:
 - 1. Submit three (3) copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.
- G. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

1.06 WARRANTY

- A. See Section 01 7800 Closeout Submittals, for additional warranty requirements.
- B. Warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion.
 - 1. Locksets and Cylinders: Three years, minimum.
 - 2. Other Hardware: Two years, minimum.

PART 2 PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

- A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
- B. Provide individual items of single type, of same model, and by same manufacturer.
- C. Provide door hardware products that comply with the following requirements:
 - 1. Applicable provisions of federal, state, and local codes.
 - 2. Accessibility: ADA Standards and ICC A117.1.

2.02 HINGES

- A. Manufacturers:
 - 1. Stanley, dormakaba Group; _____: www.stanleyhardwarefordoors.com/#sle.
 - 2. Substitutions: See Section 01 6000 Product Requirements.
- B. Hinges: Comply with BHMA A156.1, Grade 1.
 - 1. Provide hinges on every swinging door.
 - 2. Provide following quantity of butt hinges for each door:
 - a. Doors From 60 inches (1.5 m) High up to 90 inches (2.3 m) High: Three hinges.
 - b. Doors 90 inches (2.3 m) High up to 120 inches (3 m) High: Four hinges.

2.03 LOCK CYLINDERS

- A. Manufacturers:
- B. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
 - 1. Provide high security mechanical type cylinders, Grade 1, with six-pin core in compliance with BHMA A156.30 or UL 437 at locations indicated.
 - 2. Provide cylinders from same manufacturer as locking device.
 - 3. Provide cams and/or tailpieces as required for locking devices.

2.04 CYLINDRICAL LOCKS

- A. Manufacturers:
 - 1. Corbin Russwin, Sargent, or Yale; an Assa Abloy Group company; _____: www.assaabloydss.com/#sle.
 - 2. Substitutions: See Section 01 6000 Product Requirements.

B. Cylindrical Locks (Bored): Comply with BHMA A156.2, Grade 1, 4000 Series.1. See door schedule for hardware indicated.

2.05 DOOR PULLS AND PUSH PLATES

2.06 DOOR PULLS AND PUSH BARS

- A. Manufacturers:
 - 1. Hager Companies; ____: www.hagerco.com/#sle.
- B. Door Pulls and Push Bars: Comply with BHMA A156.6.
 - 1. Bar Type: Bar set, unless otherwise indicated.
 - 2. Material: Aluminum, unless otherwise indicated.

2.07 CLOSERS

- A. Closers: Comply with BHMA A156.4, Grade 1.
 - 1. Type: Surface mounted to door.
 - 2. Provide door closer on each exterior door.

2.08 PROTECTION PLATES

- A. Manufacturers:
- B. Protection Plates: Comply with BHMA A156.6.
- C. Edges: Beveled, on four sides unless otherwise indicated.
- D. Fasteners: Countersunk screw fasteners.

2.09 THRESHOLDS

- A. Manufacturers:
 - 1. National Guard Products, Inc; ____: www.ngpinc.com/#sle.
 - 2. Substitutions: See Section 01 6000 Product Requirements.

2.10 WEATHERSTRIPPING AND GASKETING

- A. Manufacturers:
- B. Weatherstripping and Gasketing: Comply with BHMA A156.22.
 - 1. Head and Jamb Type: Adjustable.
 - 2. Door Sweep Type: Encased in retainer.
 - 3. Material: Aluminum, with brush weatherstripping.

2.11 SILENCERS

A. Manufacturers:

1.

- B. Silencers: Provide at equal locations on door frame to mute sound of door's impact upon closing.
 - 1. Single Door: Provide three on strike jamb of frame.
 - 2. Pair of Doors: Provide two on head of frame, one for each door at latch side.
 - 3. Material: Rubber, gray color.

2.12 FINISHES

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.

3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Install hardware on fire-rated doors and frames in accordance with applicable codes and NFPA 80.

- C. Use templates provided by hardware item manufacturer.
- D. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.
- E. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal; anchor thresholds with stainless steel countersunk screws.

3.03 ADJUSTING

- A. Adjust work under provisions of Section 01 7000 Execution and Closeout Requirements.
- B. Adjust hardware for smooth operation.
- C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.04 PROTECTION

- A. Protect finished Work under provisions of Section 01 7000 Execution and Closeout Requirements.
- B. Do not permit adjacent work to damage hardware or finish.

SECTION 09 2116 GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Gypsum sheathing.
- C. Gypsum wallboard.
- D. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 Rough Carpentry: Building framing and sheathing.
- B. Section 06 1000 Rough Carpentry: Wood blocking product and execution requirements.

1.03 REFERENCE STANDARDS

- A. AISI S100-12 North American Specification for the Design of Cold-Formed Steel Structural Members; 2012.
- B. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.
- C. ASTM C475/C475M Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017.
- D. ASTM C514 Standard Specification for Nails for the Application of Gypsum Board; 2004 (Reapproved 2014).
- E. ASTM C557 Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2017).
- F. ASTM C645 Standard Specification for Nonstructural Steel Framing Members; 2018.
- G. ASTM C754 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2018.
- H. ASTM C840 Standard Specification for Application and Finishing of Gypsum Board; 2019b.
- I. ASTM C954 Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2018.
- J. ASTM C1002 Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2018.
- K. ASTM C1047 Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base; 2019.
- L. ASTM C1325 Standard Specification for Fiber-Mat Reinforced Cementitious Backer Units; 2019.
- M. ASTM C1396/C1396M Standard Specification for Gypsum Board; 2017.
- N. ASTM C1658/C1658M Standard Specification for Glass Mat Gypsum Panels; 2019.
- O. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2016.
- P. GA-216 Application and Finishing of Gypsum Panel Products; 2016.
- Q. GA-600 Fire Resistance Design Manual; 2015.
- R. UL 752 Standard for Bullet-Resisting Equipment; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

- B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.
- C. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

2.02 BOARD MATERIALS

- A. Manufacturers Gypsum-Based Board:
 - 1. CertainTeed Corporation; ____: www.certainteed.com/#sle.
 - 2. National Gypsum Company; ____: www.nationalgypsum.com/#sle.
 - 3. USG Corporation; ____: www.usg.com/#sle.
 - 4. Substitutions: See Section 01 6000 Product Requirements.
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - a. Mold-resistant board is required whenever board is being installed before the building is enclosed and conditioned.
 - b. Mold resistant board is required in all toilet rooms.
 - 3. Thickness:
 - a. Vertical Surfaces: 5/8 inch (16 mm).
 - b. Ceilings: 5/8 inch (16 mm).
 - 4. Mold Resistant Paper Faced Products:
 - a. CertainTeed Corporation; M2Tech 1/2" Moisture & Mold Resistant Drywall.

2.03 GYPSUM WALLBOARD ACCESSORIES

- A. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
 - 1. Types: As detailed or required for finished appearance.
 - 2. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.
- B. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
 - 1. Fiberglass Tape: 2 inch (50 mm) wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
 - 2. Paper Tape: 2 inch (50 mm) wide, creased paper tape for joints and corners, except as otherwise indicated.
 - 3. Ready-mixed vinyl-based joint compound.
 - 4. Powder-type vinyl-based joint compound.
 - 5. Chemical hardening type compound.

6.

- 7. Joint Compound: Setting type, field-mixed.
- C. High Build Drywall Surfacer: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.
- D. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.
- E. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM C954; steel drill screws, corrosion resistant.
- F. Nails for Attachment to Wood Members: ASTM C514.

- G. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.
- H. Adhesive for Attachment to Wood, ASTM C557 and Metal:

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
 - Level ceiling system to a tolerance of 1/1200. 1.
 - Laterally brace entire suspension system. 2.
- C. Studs: Space studs at 16 inches on center (at 406 mm on center).
 - 1. Extend partition framing to structure where indicated and to ceiling in other locations.
 - Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in 2. accordance with manufacturer's instructions.
 - 3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections: do not leave studs unattached to track.
- D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- E. Standard Wall Furring: Install at concrete walls scheduled to receive gypsum board, not more than 4 inches (100 mm) from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches (600 mm) on center.

3.03 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
 - Exception: Tapered edges to receive joint treatment at right angles to framing. 1.
- C. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- D. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.
- Installation on Metal Framing: Use screws for attachment of gypsum board except face layer of E. non-rated double-layer assemblies, which may be installed by means of adhesive lamination.
- F. Installation on Wood Framing: For rated assemblies, comply with requirements of listing authority. For non-rated assemblies, install as follows:
 - Single-Layer Applications: Adhesive application. 1.

3.04 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.05 JOINT TREATMENT

- A. Paper Faced Gypsum Board: Use paper joint tape, embed with drying type joint compound and finish with drying type joint compound.
- B. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:

- 1. Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.
- C. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).
- D. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

3.06 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

SECTION 09 3000 TILING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Tile for floor applications.
- B. Ceramic accessories.
- C. Ceramic trim.

1.02 RELATED REQUIREMENTS

A. Section 07 9200 - Joint Sealants: Sealing joints between tile work and adjacent construction and fixtures.

1.03 REFERENCE STANDARDS

- A. ANSI A108.1a American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2017.
- B. ANSI A108.1b American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex-Portland Cement Mortar; 2017.
- C. ANSI A108.1c Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex-Portland Cement; 1999 (Reaffirmed 2016).
- D. ANSI A108.2 American National Standard General Requirements: Materials, Environmental and Workmanship; 2019.
- E. ANSI A108.4 American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-Setting Epoxy Adhesive; 2009 (Revised).
- F. ANSI A108.5 American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).
- G. ANSI A108.6 American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy; 1999 (Reaffirmed 2010).
- H. ANSI A108.8 American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 1999 (Reaffirmed 2010).
- I. ANSI A108.9 American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 1999 (Reaffirmed 2010).
- J. ANSI A108.10 American National Standard Specifications for Installation of Grout in Tilework; 2017.
- K. ANSI A108.11 American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2018.
- L. ANSI A108.12 American National Standard for Installation of Ceramic Tile with EGP (Exterior Glue Plywood) Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).
- M. ANSI A108.13 American National Standard for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2005 (Reaffirmed 2016).
- N. ANSI A108.19 American National Standard Specifications for Interior Installation of Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs by the Thin-Bed Method Bonded with Modified Dry-Set Cement Mortar or Improved Modified Dry-Set Cement Mortar; 2017.
- ANSI A118.4 American National Standard Specifications for Modified Dry-Set Cement Mortar; 2012 (Revised).

- P. ANSI A118.6 American National Standard Specifications for Standard Cement Grouts for Tile Installation; 2010 (Reaffirmed 2016).
- Q. ANSI A118.7 American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2010 (Reaffirmed 2016).
- R. ANSI A118.10 American National Standard Specifications for Load Bearing, Bonded, Waterproof Membranes For Thin-Set Ceramic Tile And Dimension Stone Installation; 2014.
- S. ANSI A137.1 American National Standard Specifications for Ceramic Tile; 2012.
- T. ASTM C373 Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products; 2018.
- U. TCNA (HB) Handbook for Ceramic, Glass, and Stone Tile Installation; 2019.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.
- C. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.06 FIELD CONDITIONS

A. Do not install solvent-based products in an unventilated environment.

PART 2 PRODUCTS

2.01 TILE

- A. Ceramic Mosaic Tile, Type __: ANSI A137.1, standard grade.
 - 1. Moisture Absorption: 0 to 0.5 percent as tested in accordance with ASTM C373.
 - 2. Size: 2 by 2 inch (51 by 51 mm), nominal.
 - 3. Shape: Square.
 - 4. Edges: Square.
 - 5. Surface Finish: Slip resistant.
 - 6. Color(s): To be selected by Architect from manufacturer's standard range.

2.02 TRIM AND ACCESSORIES

- A. Ceramic Accessories: Glazed finish, same color and finish as adjacent field tile; same manufacturer as tile.
- B. Ceramic Trim: Matching bullnose, double bullnose, cove base, and cove ceramic shapes in sizes coordinated with field tile.
 - 1. Manufacturers: Same as for tile.

2.03 SETTING MATERIALS

- A. Manufacturers:
 - 1. ARDEX Engineered Cements; ____: www.ardexamericas.com/#sle.
 - 2. Bostik Inc; ____: www.bostik-us.com/#sle.
 - 3. LATICRETE International, Inc; ____: www.laticrete.com/#sle.
 - 4. Substitutions: See Section 01 6000 Product Requirements.
- B. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4.
 - 1. Applications: Use this type of bond coat where indicated and where no other type of bond coat is indicated.

2.04 GROUTS

- A. Manufacturers:
 - 1. ARDEX Engineered Cements; _____: www.ardexamericas.com/#sle.
 - LATICRETE International, Inc; LATICRETE PERMACOLOR Grout: www.laticrete.com/#sle.
 - 3. Substitutions: See Section 01 6000 Product Requirements.
- B. Standard Grout: ANSI A118.6 standard cement grout.
 - 1. Applications: Use this type of grout where indicated and where no other type of grout is indicated.
 - 2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
 - 3. Color(s): As selected by Architect from manufacturer's full line.

2.05 MAINTENANCE MATERIALS

- A. Tile Sealant: Gunnable, silicone, siliconized acrylic, or urethane sealant; moisture and mildew resistant type.
 - 1. Applications: Between tile and plumbing fixtures.
 - 2. Color(s): As selected by Architect from manufacturer's full line.

2.06 ACCESSORY MATERIALS

- A. Waterproofing Membrane at Floors: Specifically designed for bonding to cementitious substrate under thick mortar bed or thin-set tile; complying with ANSI A118.10.
 - 1. Fluid or Trowel Applied Type:
 - a. Material: Synthetic rubber or Acrylic.
 - b. Thickness: 25 mils (0.6 mm), minimum, dry film thickness.
 - c. Products:
 - 1) ARDEX Engineered Cements; ARDEX 8+9: www.ardexamericas.com/#sle.
 - 2) LATICRETE International, Inc; LATICRETE HYDRO BAN: www.laticrete.com/#sle.
 - 3) Substitutions: See Section 01 6000 Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.
- C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of setting materials to sub-floor surfaces.
- D. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer.
- E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and damp clean.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.
- D. Install backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to a feather edge.

3.03 INSTALLATION - GENERAL

- A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108.1a through ANSI A108.19, manufacturer's instructions, and TCNA (HB) recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.
- D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.
- E. Form internal angles square and external angles bullnosed.
- F. Install ceramic accessories rigidly in prepared openings.
- G. Sound tile after setting. Replace hollow sounding units.
- H. Keep control and expansion joints free of mortar, grout, and adhesive.
- I. Prior to grouting, allow installation to completely cure; minimum of 48 hours.
- J. Grout tile joints unless otherwise indicated. Use standard grout unless otherwise indicated.
- K. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

3.04 INSTALLATION - FLOORS - THIN-SET METHODS

A. Over exterior concrete substrates, install in accordance with TCNA (HB) Method F102, with standard grout.

3.05 CLEANING

A. Clean tile and grout surfaces.

3.06 PROTECTION

A. Do not permit traffic over finished floor surface for 4 days after installation.

SECTION 09 7800

INTERIOR WALL PANELING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Decorative fiberglass reinforced plastic (FRP) wall paneling.

1.02 RELATED REQUIREMENTS

A. Section 06 8316 - Fiberglass Reinforced Paneling.

1.03 REFERENCE STANDARDS

- A. ASTM D5319 Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels; 2017.
- B. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2019b.

PART 2 PRODUCTS

2.01 DECORATIVE FRP WALL PANELING

- A. Type: Digitally-printed pattern images with manufacturer's standard scratch-resistant, UV-resistant protective coating.
 - 1. Material: Fiberglass reinforced plastic (FRP), complying with ASTM D5319.
 - a. Surface Burning Characteristics: Maximum flame spread index of less than 200 and smoke developed index of less than 450; when tested in accordance with ASTM E84.

2.02 ACCESSORIES

- A. Trim:
 - 1. Material: Vinyl.
 - 2. Color/Finish: to match panels.
 - 3. Inside Corner Trim: Standard angle.
- B. Adhesive: Type recommended by panel manufacturer.
- C. Sealant: Type recommended by paneling manufacturer; clear.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions and substrate flatness before starting work.
- B. Verify that substrate surfaces for adhered items are clean and smooth.
- C. Start of installation constitutes acceptance of project conditions.

3.02 INSTALLATION

- A. Install panels in accordance with manufacturer's instructions.
- B. Apply adhesive to the back side of the panel using trowel recommended by adhesive manufacturer.
- C. Apply panels to wall with vertical joints plumb and horizontal joints level and pattern aligned with adjoining panels.
- D. Using a roller, apply pressure to panel face to ensure proper adhesion between surfaces.
- E. Install panels with manufacturer's recommended gaps for panel field and corner joints.
- F. Install trim with adhesive.
- G. Seal joints at wall base and between panels with approved sealant to prevent moisture intrusion.
- H. Remove excess sealant after paneling is installed and prior to curing.

3.03 CLEANING

- A. Clean panel faces using clean rags and cleaning agents recommended by manufacturer to remove soiling, stains, dust, and dirt.
- B. See Section 01 7419 Construction Waste Management and Disposal, for additional requirements.

SECTION 09 9113 EXTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints, stains, varnishes, and other coatings.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
 - 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 2. Exposed surfaces of steel lintels and ledge angles.
 - 3. Mechanical and Electrical:
 - a. On the roof and outdoors, paint equipment that is exposed to weather or to view.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Stainless steel, anodized aluminum, bronze, coated stainless steel, zinc, and lead.
 - 6. Floors, unless specifically indicated.
 - 7. Exterior insulation and finish system (EIFS).
 - 8. Glass.
 - 9. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D16 Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2014.
- C. ASTM D4258 Standard Practice for Surface Cleaning Concrete for Coating; 2005 (Reapproved 2012).
- D. ASTM D4442 Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 2007.
- E. MPI (APSM) Master Painters Institute Architectural Painting Specification Manual; Current Edition, www.paintinfo.com.
- F. SSPC V1 (PM1) Good Painting Practice: Painting Manual, Volume 1; Fourth Edition.
- G. SSPC-SP 1 Solvent Cleaning; 2015.
- H. SSPC-SP 2 Hand Tool Cleaning; 1982 (Ed. 2004).

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).

- 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- 4. Manufacturer's installation instructions.
- C. Samples: Submit two paper chip samples, 3x4 inch in size illustrating range of colors and textures available for each surface finishing product scheduled.
- D. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- E. Manufacturer's Instructions: Indicate special surface preparation procedures.
- F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.06 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Minimum Application Temperatures for Latex Paints: 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- E. Minimum Application Temperature for Varnish Finishes: 65 degrees F for exterior, unless required otherwise by manufacturer's instructions.
- F. Provide lighting level of 80 ft candles measured mid-height at substrate surface.
- G. Preparation:
 - 1. No SSPC-SP-6 "Commercial Blast cleaning."
 - 2. Provide SSPC-SP 1 solvent cleaning.
 - 3. Additionally provide SSPC-SP 2 Hand Tool Cleaning, to include scraping, power brush, wire brush or wire wheel brushing.

PART 2 PRODUCTS

201 MANUFACTURERS

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- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. Roofs:
 - a. UNIFLEX Acrylic Rust Inhibitive Primer, 1 coat
 - b. Koolseal Premium Acrylic Roof Paint, 2 coats
 - 2. Exterior wall, metal panels.
 - a. UNIFLEX Acrylic Rust Inhibitive Primer, 1 coat
 - b. Sherwin Williams Pro Industrial Multi-Surface Acrylic Eg-shel, 2 coats

202 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 3. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
 - 1. Provide paints and finishes 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. Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
 - 1) Opaque, Flat: 50 g/L, maximum.
 - 2) Opaque, Nonflat: 150 g/L, maximum.
 - 3) Opaque, High Gloss: 250 g/L, maximum.
 - 4) Varnishes: 350 g/L, maximum.
 - c. Architectural coatings VOC limits of the State in which the Project is located.
 - 2. 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.
- C. Flammability: Comply with applicable code for surface burning characteristics.
- D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- E. Colors: To be selected from manufacturer's full range of available colors.
 - 1. Selection to be made by Architect after award of contract.

203 PAINT SYSTEMS - EXTERIOR

- A. Paint E-TR-C Transparent Finish on Concrete Floors:
 - 1. 2 coats sealer.
 - 2. Sealer: Silane Sealer, 40% Silane minimum.
- B. Paint ME-OP-3A Ferrous Metals, Unprimed, Alkyd, 3 Coat:
 - 1. One coat of alkyd primer.
 - 2. Semi-gloss: Two coats of alkyd enamel.
- C. Paint ME-OP-2A Ferrous Metals, Primed, Alkyd, 2 Coat:
 - 1. Touch-up with rust-inhibitive primer recommended by top coat manufacturer.
 - 2. Semi-gloss: Two coats of alkyd enamel.
- D. Paint MgE-OP-3A Galvanized Metals, Alkyd, 3 Coat:

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- 1. One coat galvanize primer.
- 2. Semi-gloss: Two coats of alkyd enamel.

204 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
 - 1. Interior/Exterior Latex Block Filler; MPI #4.
 - 2. Water Based Primer for Galvanized Metal; MPI #134.

205 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.
- F. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Exterior Plaster and Stucco: 12 percent.
 - 2. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.
 - 3. Concrete Floors and Traffic Surfaces: 8 percent.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Concrete:
 - 1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
 - 2. Clean surfaces with pressurized water. Use pressure range of 1500 to 4000 psi at 6 to 12 inches. Allow to dry.
 - 3. Clean concrete according to ASTM D4258. Allow to dry.
- G. Concrete Floors and Traffic Surfaces: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow todry.
- H. Galvanized Surfaces:
 - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
 - 2. Prepare surface according to SSPC-SP 2.

- I. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and cleaning according to SSPC-SP 2 Protect from corrosion until coated.
- J. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied. Back prime concealed surfaces before installation.
- K. Exterior Wood to Receive Transparent Finish: Remove dust, grit, and foreign matter; seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes with tinted exterior calking compound after sealer has been applied. Prime concealed surfaces.
- L. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with tinted primer.
- M. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.
- C. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- D. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- E. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- F. Apply each coat to uniform appearance.
- G. Sand wood and metal surfaces lightly between coats to achieve required finish.
- H. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- I. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- J. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

3.06 SCHEDULE - PAINT SYSTEMS

- A. Steel Fabrications: Finish surfaces exposed to view.1. Exterior: ME-OP-3A, gloss.
- B. Galvanized Steel: Finish surfaces exposed to view.
 - 1. Exterior: Paint MgE-OP-3A, gloss.
- C. Shop-Primed Metal Items: Finish surfaces exposed to view.1. Exterior: Paint-ME-OP-2A, semi-gloss.
- D. Exterior Poured Concrete Flatwork/Paving/Stairs/Ramps:
 - 1. Silane Sealer: Equal to Weather Worker J-29 by Dayton Superior.

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END OF SECTION

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EXTERIOR PAINTING

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SECTION 09 9123 INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation. Field application of paints, stains, varnishes, and other coatings.
- B. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
 - 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 2. Mechanical and Electrical:
 - a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
 - b. In finished areas, paint shop-primed items.
 - c. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
 - d. Paint dampers exposed behind louvers, grilles, to match face panels.
- C. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Stainless steel, anodized aluminum, bronze, coated stainless steel, and lead items.
 - 6. Floors, unless specifically indicated.
 - 7. Glass.
 - 8. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D16 Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2014.
- C. ASTM D4258 Standard Practice for Surface Cleaning Concrete for Coating; 2005 (Reapproved 2012).
- D. ASTM D4442 Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 2007.
- E. MPI (APSM) Master Painters Institute Architectural Painting Specification Manual; Current Edition, www.paintinfo.com.
- F. SSPC V1 (PM1) Good Painting Practice: Painting Manual, Volume 1; Fourth Edition.
- G. SSPC-SP 1 Solvent Cleaning; 2015.
- H. SSPC-SP 2 Hand Tool Cleaning; 1982 (Ed. 2004).
- I. SSPC-SP 13 Surface Preparation of Concrete; (Reaffirmed 2015); 2003.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:

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INTERIOR PAINTING

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- 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
- 2. MPI product number (e.g. MPI #47).
- 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- 4. Manufacturer's installation instructions.
- C. Samples: Submit two paper chip samples, 3x4 inch in size illustrating range of colors and textures available for each surface finishing product scheduled.
- D. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- E. Manufacturer's Instructions: Indicate special surface preparation procedures.
- F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience and approved by manufacturer.

1.05 MOCK-UP

- A. See Section 01 4000 Quality Requirements, for general requirements for mock-up.
- B. Locate where directed by Architect.
- C. Mock-up may remain as part of the work.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply materials when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.
- D. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.
- E. Minimum Application Temperature for Varnish Finishes: 65 degrees F for interior, unless required otherwise by manufacturer's instructions.
- F. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

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INTERIOR PAINTING

- G. Preparation:
 - 1. No SSPC-SP-6 "Commercial Blast cleaning."
 - 2. Provide SSPC-SP 1 solvent cleaning.
 - 3. Additionally provide SSPC-SP 2 Hand Tool Cleaning, to include scraping, power brush, wire brush or wire wheel brushing.

PART 2 PRODUCTS

201 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. Benjamin Moore & Co: www.benjaminmoore.com.
 - 2. PPG Paints: www.ppgpaints.com.
 - 3. Sherwin-Williams Company: www.sherwin-williams.com.
 - 4. Or approved equal.
- C. Primer Sealers: Same manufacturer as top coats.

202 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
 - 1. Provide paints and finishes 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. Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
 - 1) Opaque, Flat: 50 g/L, maximum.
 - 2) Opaque, Nonflat: 150 g/L, maximum.
 - 3) Opaque, High Gloss: 250 g/L, maximum.
 - 4) Varnishes: 350 g/L, maximum.
 - 2. 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.
- C. Colors: To be selected from manufacturer's full range of available colors.
 - 1. Selection to be made by Architect after award of contract.
 - 2. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.
 - 3. In utility areas, finish equipment, piping, conduit, and exposed duct work in colors according to the room color.

203 PAINT SYSTEMS - INTERIOR

- A. Paint I-OP Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, brick, wood, plaster, uncoated steel, shop primed steel, galvanized steel, and aluminum.
 - 1. Two top coats and one coat primer.
 - 2. Top Coat(s): Interior Latex; MPI #43, 44, 52, 53, 54, or 114.

- a. Products:
 - 1) Sherwin-Williams Pro Industrial Multi-Surface Acrylic, Egg Shell, 2 coats.
- B. Paint I-OP-DF Dry Fall: Metals; exposed structure and overhead-mounted services in utilitarian spaces, including shop primed steel deck, structural steel, metal fabrications, galvanized ducts, galvanized conduit, galvanized piping, and any exposed insulation...
 - 1. Shop primer by others.
 - 2. One top coat.
 - 3. Top Coat: Latex Dry Fall; MPI #118, 155, or 226.
 - a. Products:
 - 1) Sherwin-Williams Waterborne Acrylic Dryfall, Semi-Gloss. (MPI #226)
- C. Paint I-TR-C Transparent Finish on Concrete Floors.
 - 1. 2 coats sealer.
 - 2. Sealer: Water Based for Concrete Floors; MPI #99.
 - a. Products:
 - 1) Curecrete Distribution Inc.; Ashford Formula.
- D. Paint MI-OP-3L Ferrous Metals, Unprimed, Latex, 3 Coat:
 - 1. One coat of latex primer.
 - 2. Gloss: Two coats of latex enamel.
- E. Paint MgI-OP-3L Galvanized Metals, Latex, 3 Coat:
 - 1. One coat galvanize primer.
 - 2. Gloss: Two coats of latex enamel.
- F. Paint GI-OP-3LA Gypsum Board/Plaster, Latex-Acrylic, 3 Coat:
 - 1. One coat of alkyd primer sealer.
 - 2. Semi-gloss: Two coats of latex-acrylic enamel; All walls, trims and ceilings for Bathrooms, Janitors, Kitchens, Exit Stairways and other wet locations or as noted.
 - 3. Eggshell: Two coats of latex-acrylic enamel; All walls unless otherwise noted.
 - 4. Flat: Two coats of latex enamel-acrylic; All walls unless otherwise noted.

2.04 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
 - 1. Interior Latex Primer Sealer; MPI #50.
 - 2. Interior Rust-Inhibitive Water Based Primer; MPI #107.
 - 3. Interior Water Based Primer for Galvanized Metal; MPI #134.
 - 4. Latex Primer for Interior Wood; MPI #39.

205 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.
- F. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Gypsum Wallboard: 12 percent.
 - 2. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
 - 3. Concrete Floors and Traffic Surfaces: 8 percent.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or repair existing paints or finishes that exhibit surface defects.
- D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Concrete:
 - 1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
 - 2. Clean surfaces with pressurized water. Use pressure range of 1500 to 4000 psi at 6 to 12 inches. Allow to dry.
 - 3. Clean concrete according to ASTM D4258. Allow to dry.
 - 4. Prepare surface as recommended by top coat manufacturer and according to SSPC-SP 13.
- I. Concrete Floors and Traffic Surfaces: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow todry.
- J. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- K. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
- L. Galvanized Surfaces:
 - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
 - 2. Prepare surface according to SSPC-SP 2.
- M. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
 - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and cleaning according to SSPC-SP 2. Protect from corrosion until coated.

INTERIOR PAINTING

- N. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.
- O. Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.
- P. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.
- Q. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- E. Sand wood and metal surfaces lightly between coats to achieve required finish.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- G. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

3.06 SCHEDULE - PAINT SYSTEMS

- A. Concrete, Concrete Masonry Units (CMU), Concrete Block, Brick Masonry: Finish surfaces exposed to view, except Concrete floors and as indicated.
 - 1. Interior: CI-OP-3L, semi-gloss.
 - Gypsum Board: Finish surfaces exposed to view.
 - 2. Interior Ceilings and Bulkheads: GI-OP-3LA, flat.
 - 3. Interior Walls: GI-OP-3LA, semi-gloss.
- B. Steel Doors and Frames: Finish surfaces exposed to view; MI-OP-3A, gloss.
- C. Steel Fabrications: Finish surfaces exposed to view.1. Interior: MI-OP-3L, gloss.
- D. Galvanized Steel: Finish surfaces exposed to view.
 - 1. Interior: MgI-OP-3L.
- E. Shop-Primed Metal Items: Finish surfaces exposed to view.
 - 1. Interior: MI-OP-2L.

SECTION 10 1400 SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Room and door signs.
- B. Building identification signs.
- C. Traffic signs.

1.02 REFERENCE STANDARDS

- A. 36 CFR 1191 Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- C. ICC A117.1 Accessible and Usable Buildings and Facilities; 2017.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
- C. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
 - 1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
 - 2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
 - 3. Submit for approval by Owner through Architect prior to fabrication.
- D. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
- E. Manufacturer's Installation Instructions: Include installation templates and attachment devices.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.
- C. Store tape adhesive at normal room temperature.

1.06 FIELD CONDITIONS

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Flat Signs:
 - 1. Best Sign Systems, Inc: www.bestsigns.com/#sle.
 - 2. Cosco Industries (ADA signs); ADA Series 1: www.coscoarchitecturalsigns.com/#sle.
 - 3. Substitutions: See Section 01 6000 Product Requirements.

2.02 SIGNAGE APPLICATIONS

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 & applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
 - 1. Sign Type: Flat signs with engraved panel media as specified.
 - 2. Provide "tactile" signage, with letters raised minimum 1/32 inch (0.8 mm) and Grade II braille.
 - 3. Character Height: 1 inch (25 mm).
 - 4. Sign Height: 2 inches (50 mm), unless otherwise indicated.
 - 5. Office Doors: Identify with room numbers to be determined later, not the numbers indicated on drawings; in addition, provide "window" section for replaceable occupant name.
 - 6. Conference and Meeting Rooms: Identify with room numbers to be determined later, not the numbers indicated on drawings; in addition, provide "window" section with sliding "In Use/Vacant" indicator.
 - 7. Service Rooms: Identify with room names and numbers to be determined later, not those indicated on drawings.
 - 8. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", room numbers to be determined later, and braille.
- C. Building Identification Signs:
 - 1. Use individual metal letters.
 - 2. Mount on outside wall in location indicated on drawings.
- D. Traffic Signs:
 - 1. Refer to drawings for details and locations.

2.03 SIGN TYPES

- A. Flat Signs: Signage media without frame.
 - 1. Edges: Square.
 - 2. Corners: Square.
 - 3. Wall Mounting of One-Sided Signs: Tape adhesive.
 - 4. Signs shall be mounted 48" above finished floor maximum on the wall adjacent to the latch side of the door, or the right side of double doors. Where there is no wall space on the latch side or right side of double doors, signs should be on the nearest adjacent wall.
- B. Color and Font: Unless otherwise indicated:
 - 1. Character Font: Helvetica, Arial, or other sans serif font.
 - 2. Character Case: Upper case only.
 - 3. Character Color: Contrasting color.

2.04 TACTILE SIGNAGE MEDIA

- A. Engraved Panels: Laminated colored plastic; engraved through face to expose core as background color:
 - 1. Total Thickness: 1/16 inch (1.6 mm).
- B. Applied Character Panels: Acrylic plastic base, with applied acrylic plastic letters and braille.
 - 1. Total Thickness: 1/8 inch (3 mm).
 - 2. Letter Thickness: 1/8 inch (3 mm).
 - 3. Letter Edges: Square.

2.05 ACCESSORIES

- A. Signage Mounting indicated on drawings.
- B. Tape Adhesive: Double sided tape, permanent adhesive.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Protect from damage until Substantial Completion; repair or replace damaged items.

SECTION 10 2113.17

PHENOLIC TOILET COMPARTMENTS

PART 2 PRODUCTS

1.01 MANUFACTURERS

- A. Phenolic Toilet Compartments:
 - 1. All American Metal Corp AAMCO; _____: www.allamericanmetal.com/#sle.
 - 2. Partition Systems International of South Carolina; Phenolic Toilet Partitions: www.psisc.com/#sle.
 - 3. Substitutions: Section 01 6000 Product Requirements.

1.02 PHENOLIC TOILET COMPARTMENTS

- A. Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid phenolic core panels with integral melamine finish, floor-mounted unbraced.
- B. Doors:
 - 1. Thickness: 3/4 inch (19 mm).
 - 2. Width: 24 inch (610 mm).
 - 3. Width for Handicapped Use: 36 inch (915 mm), out-swinging.
 - 4. Height: 58 inch (1473 mm).
- C. Panels:
 - 1. Thickness: 1/2 inch (13 mm).
 - 2. Height: 58 inch (1473 mm).

1.03 ACCESSORIES

- A. Pilaster Shoes: Formed ASTM A666, Type 304 stainless steel with No. 4 finish, 3 inch (76 mm) high, concealing floor fastenings.
- B. Attachments, Screws, and Bolts: Stainless steel, tamper proof type.
- C. Hardware: Polished stainless steel:
 - 1. Pivot hinges, gravity type, adjustable for door close positioning; two per door.
 - 2. Door Latch: Slide type with exterior emergency access feature.
 - 3. Door strike and keeper with rubber bumper; mounted on pilaster in alignment with door latch.
 - 4. Coat hook with rubber bumper; one per compartment, mounted on door.
 - 5. Provide door pull for outswinging doors.

PART 3 EXECUTION

2.01 EXAMINATION

A. Verify that field measurements are as indicated.

2.02 INSTALLATION

- A. Install partitions secure, rigid, plumb, and level in accordance with manufacturer's instructions.
- B. Maintain 3/8 inch to 1/2 inch (9 mm to 13 mm) space between wall and panels and between wall and end pilasters.
- C. Attach panel brackets securely to walls using anchor devices.
- D. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines.

2.03 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch (5 mm).
- B. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position.

C. Adjust adjacent components for consistency of line or plane.

SECTION 10 2800

TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Commercial toilet accessories.
- B. Under-lavatory pipe supply covers.
- C. Utility room accessories.

1.02 RELATED REQUIREMENTS

A. Section 22 4000 - Plumbing Fixtures: Under-lavatory pipe and supply covers.

1.03 REFERENCE STANDARDS

- A. ADA Standards Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ASTM A666 Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.
- C. ASTM C1036 Standard Specification for Flat Glass; 2016.
- D. ASTM C1048 Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- E. ASTM C1503 Standard Specification for Silvered Flat Glass Mirror; 2018.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Commercial Toilet, Shower, and Bath Accessories:
 - 1. Bradley Corporation; ____: www.bradleycorp.com/#sle.
 - 2. Substitutions: Section 01 6000 Product Requirements.

2.02 MATERIALS

- A. Accessories General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
- B. Stainless Steel Sheet: ASTM A666, Type 304.
- C. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
- D. Mirror Glass: Tempered safety glass, ASTM C1048; and ASTM C1036 Type I, Class 1, Quality Q2, with silvering as required.
- E. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.

2.03 FINISHES

A. Stainless Steel: Satin finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. Toilet Paper Dispenser: Double roll, surface mounted, for coreless type rolls.
- B. Combination Towel Dispenser/Waste Receptacle: Recessed flush with wall, stainless steel; seamless wall flanges, continuous piano hinges, _____.
- C. Soap Dispenser: Liquid soap dispenser, wall-mounted, surface, with stainless steel cover and horizontal stainless steel tank and working parts; push type soap valve, check valve, and window gauge refill indicator, tumbler lock.

- D. Mirrors: Stainless steel framed, 1/4 inch (6 mm) thick annealed float glass; ASTM C1036.
 - 1. Annealed Float Glass: Silvering, protective and physical characteristics in compliance with ASTM C1503.
 - 2. Frame: 0.05 inch (1.3 mm)angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; satin finish.
- E. Grab Bars: Stainless steel, smooth surface.
 - 1. Standard Duty Grab Bars:
 - a. Push/Pull Point Load: 250 pound-force (1112 N), minimum.
 - b. Dimensions: 1-1/2 inch (38 mm) outside diameter, minimum 0.05 inch (1.3 mm) wall thickness, exposed flange mounting, 1-1/2 inch (38 mm) clearance between wall and inside of grab bar.
 - c. Length and Configuration: As indicated on drawings.
- F. Sanitary Napkin Disposal Unit: Stainless steel, surface-mounted, self-closing door, locking bottom panel with full-length stainless steel piano-type hinge, removable receptacle.

2.05 UNDER-LAVATORY PIPE AND SUPPLY COVERS

A. Specified in 22 4000 - Plumbing Fixtures.

2.06 UTILITY ROOM ACCESSORIES

- A. Combination Utility Shelf/Mop and Broom Holder: 0.05 inch (1.3 mm) thick stainless steel, Type 304, with 1/2 inch (12 mm) returned edges, 0.06 inch (1.6 mm) steel wall brackets.
 1. Mop/broom holders: Three spring-loaded rubber cam holders at shelf front.
- PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.

3.02 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

- A. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.
 - 1. Refer to drawings for more information

SECTION 10 4400 FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire extinguishers.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fire Extinguishers:
 - 1. Ansul, a Tyco Business; ____: www.ansul.com/#sle.
 - 2. Kidde, a unit of United Technologies Corp; _____: www.kidde.com/#sle.
 - 3. Substitutions: See Section 01 6000 Product Requirements.

2.02 FIRE EXTINGUISHERS

- A. Fire Extinguishers General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
- B. Multipurpose Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gauge.
 - 1. Class: A:B:C type.
 - 2. Size: 5 pound (2.27 kg).
 - 3. Size and classification as scheduled.
 - 4. Finish: Baked polyester powder coat, _____ color.
 - 5. Temperature range: Minus 40 degrees F (Minus 40 degrees C) to _____ degrees F (______ degrees C).

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Secure rigidly in place.

3.02 MAINTENANCE

A. See Section 01 7000 - Execution and Closeout Requirements, for additional requirements relating to maintenance service.

3.03 MAINTENANCE - SELF-SERVICE FIRE EXTINGUISHERS

- A. Monthly Inspections: Inspect self-service fire extinguishers on monthly basis in accordance with manufacturer's instructions, and requirements of the authorities having jurisdiction (AHJ).
- B. Annual Inspections: Inspect self-service fire extinguishers on annual basis in accordance with manufacturer's instructions, and requirements of the authorities having jurisdiction (AHJ).
- C. Inspection Certification Tag: Provide new tag indicating acceptable condition of fire extinguisher, date of inspection, and name of self-service inspector for each inspection.

SECTION 22 0719 PLUMBING PIPING INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Piping insulation.
- B. Jackets and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 07 8400 Firestopping.
- B. Section 22 1005 Plumbing Piping: Placement of hangers and hanger inserts.

1.03 REFERENCE STANDARDS

- A. ASTM C177 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus; 2019.
- B. ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2017.
- C. ASTM C534/C534M Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form; 2016.
- D. ASTM C547 Standard Specification for Mineral Fiber Pipe Insulation; 2019.
- E. ASTM C552 Standard Specification for Cellular Glass Thermal Insulation; 2017, with Editorial Revision (2018).
- F. ASTM C585 Standard Practice for Inner and Outer Diameters of Thermal Insulation for Nominal Sizes of Pipe and Tubing; 2010 (Reapproved 2016).
- G. ASTM C795 Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel; 2008 (Reapproved 2018).
- H. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2019b.
- I. ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials; 2016.
- J. UL 723 Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

2.02 GLASS FIBER

- A. Manufacturers:
 - 1. Johns Manville Corporation; _____: www.jm.com/#sle.
 - 2. Substitutions: See Section 01 6000 Product Requirements.
- B. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible.
 - 1. K (Ksi) Value: ASTM C177, 0.24 at 75 degrees F (0.035 at 24 degrees C).
 - 2. Maximum Service Temperature: 850 degrees F (454 degrees C).
 - 3. Maximum Moisture Absorption: 0.2 percent by volume.

C. Vapor Barrier Jacket: White Kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E96/E96M of 0.02 perm-inches (0.029 ng/Pa s m).

2.03 FLEXIBLE ELASTOMERIC CELLULAR INSULATION

- A. Insulation: Preformed flexible elastomeric cellular rubber insulation complying with ASTM C534/C534M Grade 1; use molded tubular material wherever possible.
 - 1. Minimum Service Temperature: Minus 40 degrees F (Minus 40 degrees C).
 - 2. Maximum Service Temperature: 220 degrees F (104 degrees C).
 - 3. Connection: Waterproof vapor barrier adhesive.

2.04 JACKETS

- A. PVC Plastic.
 - 1. Jacket: One piece molded type fitting covers and sheet material, off-white color.
 - a. Minimum Service Temperature: 0 degrees F (Minus 18 degrees C).
 - b. Maximum Service Temperature: 150 degrees F (66 degrees C).
 - c. Moisture Vapor Permeability: 0.002 perm inch (0.0029 ng/Pa s m), maximum, when tested in accordance with ASTM E96/E96M.
 - d. Thickness: 10 mil (0.25 mm).
 - e. Connections: Brush on welding adhesive.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that piping has been tested before applying insulation materials.
- B. Verify that surfaces are clean and dry, with foreign material removed.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Exposed Piping: Locate insulation and cover seams in least visible locations.
- C. Glass fiber insulated pipes conveying fluids below ambient temperature:
 - 1. Provide vapor barrier jackets, factory-applied or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure sensitive adhesive. Secure with outward clinch expanding staples and vapor barrier mastic.
 - 2. Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe. Finish with glass cloth and vapor barrier adhesive or PVC fitting covers.
- D. Glass fiber insulated pipes conveying fluids above ambient temperature:
 - 1. Provide standard jackets, with or without vapor barrier, factory-applied or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure sensitive adhesive. Secure with outward clinch expanding staples.
 - 2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe. Finish with glass cloth and adhesive or PVC fitting covers.
- E. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations. Finish at supports, protrusions, and interruptions. At fire separations, refer to Section 07 8400.
- F. Pipe Exposed in Mechanical Equipment Rooms or Finished Spaces (less than 10 feet (3 meters) above finished floor): Finish with canvas jacket sized for finish painting.

SECTION 22 1005 PLUMBING PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pipe, pipe fittings, specialties, and connections for piping systems.
 - 1. Sanitary sewer.
 - 2. Domestic water.
 - 3. Storm water.
 - 4. Flanges, unions, and couplings.
 - 5. Pipe hangers and supports.
 - 6. Valves.

1.02 RELATED REQUIREMENTS

A. Section 22 0719 - Plumbing Piping Insulation.

1.03 REFERENCE STANDARDS

- A. ASME B16.4 Gray Iron Threaded Fittings: Classes 125 and 250; 2016.
- B. ASME B16.18 Cast Copper Alloy Solder Joint Pressure Fittings; 2018.
- C. ASME B16.22 Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2018.
- D. ASME B31.9 Building Services Piping; 2017.
- E. ASTM A53/A53M Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.
- F. ASTM A123/A123M Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- G. ASTM B32 Standard Specification for Solder Metal; 2008 (Reapproved 2014).
- H. ASTM B42 Standard Specification for Seamless Copper Pipe, Standard Sizes; 2015a.
- I. ASTM B75/B75M Standard Specification for Seamless Copper Tube; 2011.
- J. ASTM B88 Standard Specification for Seamless Copper Water Tube; 2016.
- K. ASTM B88M Standard Specification for Seamless Copper Water Tube (Metric); 2018.
- L. ASTM B280 Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service; 2019.
- M. ASTM B813 Standard Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube; 2016.
- N. ASTM B828 Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings; 2016.
- O. ASTM D1785 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120; 2015, with Editorial Revision (2018).
- P. ASTM D2239 Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter; 2012a.
- Q. ASTM D2241 Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series); 2015.
- R. ASTM D2466 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40; 2017.
- S. ASTM D2564 Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems; 2012 (Reapproved 2018).
- T. ASTM D2609 Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe; 2015.

- U. ASTM D2661 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings; 2014, with Editorial Revision (2018).
- V. ASTM D2665 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings; 2014.
- W. ASTM D2680 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Composite Sewer Piping; 2001 (Reapproved 2014).
- ASTM D2729 Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2017.
- Y. ASTM D2855 Standard Practice for the Two-Step (Primer & Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets; 2015.
- Z. ASTM D3034 Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2016.
- AA. ASTM F441/F441M Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80; 2015.
- AB. ASTM F477 Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe; 2014.
- AC. ASTM F493 Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings; 2014.
- AD. ASTM F876 Standard Specification for Crosslinked Polyethylene (PEX) Tubing; 2019a.
- AE. ASTM F877 Standard Specification for Crosslinked Polyethylene (PEX) Hot- and Cold-Water Distribution Systems; 2019.
- AF. ASTM F1960 Standard Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Polyethylene of Raised Temperature (PE-RT) Tubing; 2019.
- AG. AWWA C606 Grooved and Shouldered Joints; 2015.
- AH. MSS SP-58 Pipe Hangers and Supports Materials, Design, Manufacture, Selection, Application, and Installation; 2018.
- Al. MSS SP-70 Cast Iron Gate Valves, Flanged and Threaded Ends; 2011.
- AJ. MSS SP-80 Bronze Gate, Globe, Angle and Check Valves; 2013.
- AK. MSS SP-110 Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; 2010.
- AL. NSF 61 Drinking Water System Components Health Effects; 2019.
- AM. NSF 372 Drinking Water System Components Lead Content; 2016.
- AN. PPI TR-4 PPI Listing of Hydrostatic Design Basis (HDB), Hydrostatic Design Stress (HDS), Strength Design Basis (SDB), Pressure Design Basis (PDB), and Minimum Required Strength (MRS) Ratings For Thermoplastic Piping Materials or Pipe; 2017.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.

1.05 QUALITY ASSURANCE

A. Perform work in accordance with applicable codes.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Provide temporary protective coating on cast iron and steel valves.

- C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

1.07 FIELD CONDITIONS

A. Do not install underground piping when bedding is wet or frozen.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that A. comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.02 SANITARY SEWER PIPING, BURIED WITHIN 5 FEET (1500 MM) OF BUILDING

- A. PVC Pipe: ASTM D2665 or ASTM D3034.
 - 1. Fittings: PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.03 SANITARY SEWER PIPING, ABOVE GRADE

- A. PVC Pipe: ASTM D1785 Schedule 40, or ASTM D2241 SDR 26 with not less than 150 psi (1 034 kPa) pressure rating.
 - 1. Fittings: ASTM D2466, PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.04 DOMESTIC WATER PIPING, BURIED WITHIN 5 FEET (1500 MM) OF BUILDING

- A. PE Pipe: ASTM D2239.
 - 1. Fittings: ASTM D2609, PE.
 - 2. Joints: Mechanical with stainless steel clamp.

2.05 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), Drawn (H).
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
 - 2. Joints: ASTM B32, alloy Sn95 solder.
 - 3. Joints: Grooved mechanical couplings.
 - Mechanical Press Sealed Fittings: Double pressed type, NSF 61 and NSF 372 approved 4. or certified, utilizing EPDM, non toxic synthetic rubber sealing elements.
 - Manufacturers: a.
 - Grinnell Products; _____: www.grinnell.com/#sle. 1)
 - 2) Viega LLC; ____: www.viega.us/#sle.
 - Substitutions: See Section 01 6000 Product Requirements. 3)
- B. Cross-Linked Polyethylene (PEX) Pipe: ASTM F876 or ASTM F877.
 - 1. Manufacturers:
 - a. SharkBite, a brand of Reliance Worldwide Corporation; : www.sharkbite.com/#sle.
 - b. Uponor, Inc; _____: www.uponorengineering.com/#sle.c. Viega LLC; ____: www.viega.us/#sle.

 - d. Substitutions: See Section 01 6000 Product Requirements.
 - 2. PPI TR-4 Pressure Design Basis:
 - a. 100 psig (689 kPa) at maximum 180 degrees F (82 degrees C).
 - Fittings: Brass and copper. 3.
 - 4. Fittings: Brass and engineered polymer (EP) ASTM F1960.
 - Joints: Mechanical compression fittings. 5.
 - Joints: ASTM F1960 cold-expansion fittings. 6.

2.06 STORM WATER PIPING, BURIED BEYOND 5 FEET (1500 MM) OF BUILDING

- A. PVC Pipe: ASTM D3034 DR 35.
 - 1. Fittings: PVC.
 - 2. Joints: Push-on, using ASTM F477 elastomeric gaskets.

2.07 STORM WATER PIPING, BURIED WITHIN 5 FEET (1500 MM) OF BUILDING

- A. PVC Pipe: ASTM D2665 or ASTM D3034.
 - 1. Fittings: PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.08 STORM WATER PIPING, ABOVE GRADE

- A. PVC Pipe: ASTM D2665 or ASTM D3034.
 - 1. Fittings: PVC.
 - 2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.09 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
 - 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
 - 2. Overhead Supports: Individual steel rod hangers attached to structure or to trapeze hangers.
 - 3. Trapeze Hangers: Welded steel channel frames attached to structure.
 - 4. Vertical Pipe Support: Steel riser clamp.

2.10 BALL VALVES

A. Construction, 4 Inches (100 mm) and Smaller: MSS SP-110, Class 150, 400 psi (2760 kPa) CWP, bronze or ductile iron body, 304 stainless steel or chrome plated brass ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle with balancing stops, threaded or grooved ends with union.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that excavations are to required grade, dry, and not over-excavated.

3.02 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- C. Install piping to maintain headroom, conserve space, and not interfere with use of space.
- D. Group piping whenever practical at common elevations.
- E. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
- F. Copper Pipe and Tube: Make soldered joints in accordance with ASTM B828, using specified solder, and flux meeting ASTM B813; in potable water systems use flux also complying with NSF 61 and NSF 372.
- G. PVC Pipe: Make solvent-welded joints in accordance with ASTM D2855.

SECTION 22 1006 PLUMBING PIPING SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Drains.
- B. Cleanouts.
- C. Hose bibbs.

1.02 REFERENCE STANDARDS

- A. ASME A112.6.3 Floor and Trench Drains; 2019.
- B. NSF 61 Drinking Water System Components Health Effects; 2019.
- C. NSF 372 Drinking Water System Components Lead Content; 2016.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide component sizes, rough-in requirements, service sizes, and finishes.
- C. Manufacturer's Instructions: Indicate Manufacturer's Installation Instructions: Indicate assembly and support requirements.
- D. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Specialties in Potable Water Supply Systems: Provide products that comply with NSF 61 and NSF 372 for maximum lead content.

2.02 DRAINS

- A. Manufacturers:
 - 1. Jay R. Smith Manufacturing Company; _____: www.jayrsmith.com/#sle.
 - 2. Zurn Industries, LLC; _____: www.zurn.com/#sle.
 - 3. Watts.
 - 4. Substitutions: See Section 01 6000 Product Requirements.
- B. Floor Drains:
 - 1. Manufacturers:
 - a. Jay R. Smith Manufacturing Company; _____: www.jrsmith.com/#sle.
 - b. Watts.www.wattsdrainage.com
 - c. Substitutions: See Section 01 6000 Product Requirements.

2.03 CLEANOUTS

- A. Manufacturers:
 - 1. Jay R. Smith Manufacturing Company; _____: www.jayrsmith.com/#sle.
 - 2. Josam Company; ____: www.josam.com/#sle.
 - 3. Zurn Industries, LLC; ____: www.zurn.com/#sle.
 - 4. Watts.www.wattsdrainage.com
 - 5. Substitutions: See Section 01 6000 Product Requirements.

2.04 HOSE BIBBS

- A. Manufacturers:
 - 1. Jay R. Smith Manufacturing Company; _____: www.jayrsmith.com/#sle.
 - 2. Zurn Industries, LLC; ____: www.zurn.com/#sle.
 - 3. _____
 - 4. Substitutions: See Section 01 6000 Product Requirements.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system.
- C. Encase exterior cleanouts in concrete flush with grade.

SECTION 22 4000 PLUMBING FIXTURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Water closets.
- B. Lavatories.
- C. Service sinks.
- D. Mop sinks.
- E. Drinking fountains.

1.02 RELATED REQUIREMENTS

- A. Section 07 9200 Joint Sealants: Sealing joints between fixtures and walls and floors.
- B. Section 22 1005 Plumbing Piping.

1.03 REFERENCE STANDARDS

- A. ADA Standards Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ASME A112.18.9 Protectors/Insulators for Exposed Waste and Supplies on Accessible Fixtures; 2011 (Reaffirmed 2017).
- C. ASTM C1822 Standard Specification for Insulating Covers on Accessible Lavatory Piping; 2015.
- D. ASHRAE Std 18 Methods of Testing for Rating Drinking-Water Coolers with Self-Contained Mechanical Refrigeration; 2013.
- E. ASME A112.6.1M Supports for Off-the-Floor Plumbing Fixtures for Public Use; 1997 (Reaffirmed 2017).
- F. ASME A112.18.1 Plumbing Supply Fittings; 2018.
- G. ASME A112.19.2 Ceramic Plumbing Fixtures; 2018.
- H. ASME A112.19.4M Porcelain Enameled Formed Steel Plumbing Fixtures; 1994 (R2009).
- I. ASSE 1070 Performance Requirements for Water Temperature Limiting Devices; 2015.
- J. NSF 61 Drinking Water System Components Health Effects; 2019.
- K. NSF 372 Drinking Water System Components Lead Content; 2016.
- L. UL (DIR) Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.
- C. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept fixtures on site in factory packaging. Inspect for damage.
- B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

1.07 WARRANTY

- A. See Section 01 7800 Closeout Submittals, for additional warranty requirements.
- B. Provide five year manufacturer warranty for electric water cooler.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.02 REGULATORY REQUIREMENTS

- A. Comply with applicable codes for installation of plumbing systems.
- B. Comply with UL (DIR) requirements.
- C. Perform work in accordance with local health department regulations.
- D. Provide certificate of compliance from Authority Having Jurisdiction indicating approval of installation.

2.03 TANK TYPE WATER CLOSETS

- A. Tank Type Water Closet Manufacturers:
 - American Standard, Inc; _____: www.americanstandard-us.com/#sle.
 Kohler Company; _____: www.kohler.com/#sle.

 - Substitutions: See Section 01 6000 Product Requirements. 3.
- B. Bowl: ASME A112.19.2; floor mounted, vitreous china reverse trap, close-coupled closet combination with regular rim, insulated vitreous china closet tank with fittings and lever flushing valve, bolt caps.
- C. Seat Manufacturers:
 - 1. American Standard, Inc; _____: www.americanstandard-us.com/#sle.
 - 2. Kohler Compan; www.kohler.com.
 - 3. Substitutions: See Section 01 6000 Product Requirements.
- D. Seat: Solid white plastic, open front, extended back, less cover, complete with self-sustaining hinge.
- E. Handle Height: 44 inches (1117 mm) or less.

2.04 LAVATORIES

- A. Lavatory Manufacturers:
 - 1. American Standard, Inc; _____: www.americanstandard-us.com/#sle.
 - Kohler Company; ____: www.kohler.com/#sle. 2.
 - Substitutions: See Section 01 6000 Product Requirements. 3
- Vitreous China Wall Hung Basin: ASME A112.19.2; vitreous china wall hung lavatory, ____ by Β. _ inch (____ by ____ mm) minimum, with 4 inch (100 mm) high back, rectangular basin with splash lip, front overflow, and soap depression.
 - 1. Drilling Centers: 8 inch (200 mm).
 - 2. Provided and Installed with integrated shroud.
- C. Supply Faucet Manufacturers:
 - 1. American Standard, Inc; _____: www.americanstandard-us.com/#sle.
 - 2. Kohler Company; ____: www.kohler.com/#sle.
 - 3. Moen.www.moen.com
 - 4. Substitutions: See Section 01 6000 - Product Requirements.
- D. Supply Faucet: ASME A112.18.1; chrome plated combination supply fitting with pop-up waste, water economy aerator with maximum flow of 2.2 gallons per minute (8.3 liters per minute), indexed handles.
- E. Provide Lavatory with Strainer.

F. Accessories:

- 1. Carrier:
 - a. Manufacturers:
 - 1) Jay R. Smith MFG. Co; ____: www.jrsmith.com/#sle.
 - 2) Kohler.www.kohler.com
 - 3) Substitutions: See Section 01 6000 Product Requirements.
 - b. ASME A112.6.1M; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, threaded studs for fixture hanger, bearing plate and studs.

2.05 DRINKING FOUNTAINS - BOTTLE FILLERS

- A. Manufacturers:
 - 1. Elkay Manufacturing Company; _____: www.elkay.com/#sle.
 - 2. Halsey Taylor. www.HalseyTaylor.com
 - 3. Substitutions: See Section 01 6000 Product Requirements.
- B. Bottle Filler: Materials to match fountain.

2.06 MOP SINKS

- A. Mop Sink Manufacturers:
 - 1. Zurn Industries, Inc; ____: www.zurn.com/#sle.
 - 2. Acorn. www.acorn.com
 - 3. Fiat, www.fiat.com
- B. Material: molded stone
- C. Type: Rectilinear.
- D. Dimensions: As indicated on drawings.
- E. Accessories:
 - 1. 5 feet (1.5 m) of 1/2 inch (13 mm) diameter plain end reinforced plastic hose.
 - 2. Mop hanger.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that walls and floor finishes are prepared and ready for installation of fixtures.
- B. Verify that electric power is available and of the correct characteristics.
- C. Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

3.02 PREPARATION

A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.

3.03 INSTALLATION

- A. Install each fixture with trap, easily removable for servicing and cleaning.
- B. Provide chrome plated rigid or flexible supplies to fixtures with loose key stops, reducers, and escutcheons.
- C. Install components level and plumb.
- D. Install and secure fixtures in place with wall supports and bolts.
- E. Solidly attach water closets to floor with lag screws. Lead flashing is not intended hold fixture in place.

3.04 INTERFACE WITH WORK OF OTHER SECTIONS

A. Review millwork shop drawings. Confirm location and size of fixtures and openings before rough-in and installation.

3.05 ADJUSTING

A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

3.06 CLEANING

- A. Clean plumbing fixtures and equipment.
- B. See Section 01 7419 Construction Waste Management and Disposal, for additional requirements.

3.07 PROTECTION

- A. Protect installed products from damage due to subsequent construction operations.
- B. Do not permit use of fixtures by construction personnel.
- C. Repair or replace damaged products before Date of Substantial Completion.

SECTION 26 0505 SELECTIVE DEMOLITION FOR ELECTRICAL

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Electrical demolition.

1.02 RELATED REQUIREMENTS

A. Section 01 7000 - Execution and Closeout Requirements: Additional requirements for alterations work.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. Materials and equipment for patching and extending work: As specified in individual sections.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that abandoned wiring and equipment serve only abandoned facilities.
- B. Demolition drawings are based on casual field observation and existing record documents.
- C. Report discrepancies to Architect before disturbing existing installation.
- D. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION

- A. Disconnect electrical systems in walls, floors, and ceilings to be removed.
- B. Coordinate utility service outages with utility company.
- C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.
- D. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Minimize outage duration.
 - 1. Obtain permission from Owner at least 24 hours before partially or completely disabling system.
 - 2. Make temporary connections to maintain service in areas adjacent to work area.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Remove, relocate, and extend existing installations to accommodate new construction.
- B. Remove abandoned wiring to source of supply.
- C. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- D. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.
- E. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
- F. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
- G. Repair adjacent construction and finishes damaged during demolition and extension work.

- H. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.
- I. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

3.04 CLEANING AND REPAIR

- A. Clean and repair existing materials and equipment that remain or that are to be reused.
- B. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

SECTION 26 0519

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Single conductor building wire.
- B. Metal-clad cable.
- C. Wiring connectors.
- D. Electrical tape.
- E. Heat shrink tubing.
- F. Oxide inhibiting compound.
- G. Wire pulling lubricant.
- H. Cable ties.

1.02 RELATED REQUIREMENTS

- A. Section 07 8400 Firestopping.
- B. Section 26 0526 Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.
- C. Section 26 0553 Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. ASTM B3 Standard Specification for Soft or Annealed Copper Wire; 2013 (Reapproved 2018).
- B. ASTM B8 Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2011 (Reapproved 2017).
- C. ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes; 2010 (Reapproved 2014).
- D. ASTM B787/B787M Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2014).
- E. ASTM B800 Standard Specification for 8000 Series Aluminum Alloy Wire for Electrical Purposes Annealed and Intermediate Tempers; 2005 (Reapproved 2015).
- F. ASTM B801 Standard Specification for Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy Wire for Subsequent Covering of Insulation; 2018.
- G. ASTM D3005 Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape; 2017.
- H. ASTM D4388 Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes; 2013.
- I. NECA 1 Standard for Good Workmanship in Electrical Construction; 2015.
- J. NECA 104 Recommended Practice for Installing Aluminum Building Wire and Cable; 2012.
- K. NECA 120 Standard for Installing Armored Cable (AC) and Metal-Clad Cable (MC); 2012.
- L. NEMA WC 70 Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy; 2009.
- M. NETA ATS Acceptance Testing Specifications for Electrical Power Equipment and Systems; 2017.
- N. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- O. UL 44 Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.
- P. UL 83 Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.

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- Q. UL 486A-486B Wire Connectors; Current Edition, Including All Revisions.
- R. UL 486C Splicing Wire Connectors; Current Edition, Including All Revisions.
- S. UL 486D Sealed Wire Connector Systems; Current Edition, Including All Revisions.
- T. UL 510 Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape; Current Edition, Including All Revisions.
- U. UL 1569 Metal-Clad Cables; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.

1.05 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

1.07 FIELD CONDITIONS

A. Do not install or otherwise handle thermoplastic-insulated conductors at temperatures lower than 14 degrees F (-10 degrees C), unless otherwise permitted by manufacturer's instructions. When installation below this temperature is unavoidable, notify Architect and obtain direction before proceeding with work.

PART 2 PRODUCTS

2.01 CONDUCTOR AND CABLE APPLICATIONS

- A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.
- B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.
- C. Metal-clad cable is permitted only as follows:
 - 1. Where not otherwise restricted, may be used:
 - a. Where concealed above accessible ceilings for final connections from junction boxes to luminaires.
 - 1) Maximum Length: 6 feet (1.8 m).
 - b. Where concealed above accessible ceilings for branch circuits up to 20 A.
 - 2. In addition to other applicable restrictions, may not be used:
 - a. Where exposed to damage.
 - b. For damp, wet, or corrosive locations, unless provided with a PVC jacket listed as suitable for those locations.

2.02 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Provide new conductors and cables manufactured not more than one year prior to installation.
- D. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.
- E. Comply with NEMA WC 70.

- F. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.
- G. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.
- H. Conductors for Grounding and Bonding: Also comply with Section 26 0526.
- I. Conductor Material:
 - 1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
 - Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
 - 3. Tinned Copper Conductors: Comply with ASTM B33.
- J. Minimum Conductor Size:
 - 1. Branch Circuits: 12 AWG.
 - a. Exceptions:
 - 1) 20 A, 120 V circuits longer than 75 feet (23 m): 10 AWG, for voltage drop.
 - 2) 20 A, 120 V circuits longer than 150 feet (46 m): 8 AWG, for voltage drop.
- K. Conductor Color Coding:
 - 1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
 - 2. Color Coding Method: Integrally colored insulation.
 - 3. Color Code:
 - a. 208Y/120 V, 3 Phase, 4 Wire System:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.
 - 4) Neutral/Grounded: White.
 - b. Equipment Ground, All Systems: Green.
 - c. Isolated Ground, All Systems: Green with yellow stripe.

2.03 SINGLE CONDUCTOR BUILDING WIRE

- A. Description: Single conductor insulated wire.
- B. Conductor Stranding:
 - 1. Feeders and Branch Circuits:
 - a. Size 10 AWG and Smaller: Solid.
 - b. Size 8 AWG and Larger: Stranded.
- C. Insulation Voltage Rating: 600 V.
- D. Insulation:
 - 1. Copper Building Wire: Type THHN/THWN or THHN/THWN-2, except as indicated below.

2.04 METAL-CLAD CABLE

- A. Description: NFPA 70, Type MC cable listed and labeled as complying with UL 1569, and listed for use in classified firestop systems to be used.
- B. Conductor Stranding:
 - 1. Size 10 AWG and Smaller: Solid.
 - 2. Size 8 AWG and Larger: Stranded.
- C. Insulation Voltage Rating: 600 V.
- D. Insulation: Type THHN, THHN/THWN, or THHN/THWN-2.
- E. Grounding: Full-size integral equipment grounding conductor.
- F. Armor: Steel, interlocked tape.
- G. Provide PVC jacket applied over cable armor where indicated or required for environment of installed location.

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2.05 WIRING CONNECTORS

- A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.
- B. Connectors for Grounding and Bonding: Comply with Section 26 0526.
- C. Wiring Connectors for Splices and Taps:
 - 1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
 - 2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression connectors.
- D. Wiring Connectors for Terminations:
 - 1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
- E. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.
- F. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.
- G. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F (105 degrees C) for standard applications and 302 degrees F (150 degrees C) for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
- H. Mechanical Connectors: Provide bolted type or set-screw type.
- I. Compression Connectors: Provide circumferential type or hex type crimp configuration.

2.06 ACCESSORIES

- A. Electrical Tape:
 - Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil (0.18 mm); resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F (105 degrees C).
 - Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil (0.18 mm); resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F (-18 degrees C) and suitable for continuous temperature environment up to 221 degrees F (105 degrees C).
 - 3. Rubber Splicing Electrical Tape: Ethylene Propylene Rubber (EPR) tape, complying with ASTM D4388; minimum thickness of 30 mil (0.76 mm); suitable for continuous temperature environment up to 194 degrees F (90 degrees C) and short-term 266 degrees F (130 degrees C) overload service.
 - 4. Electrical Filler Tape: Rubber-based insulating moldable putty, minimum thickness of 125 mil (3.2 mm); suitable for continuous temperature environment up to 176 degrees F (80 degrees C).
 - 5. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil (2.3 mm).
- B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.
- C. Oxide Inhibiting Compound: Listed; suitable for use with the conductors or cables to be installed.
- D. Wire Pulling Lubricant: Listed; suitable for use with the conductors or cables to be installed and suitable for use at the installation temperature.
- E. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that interior of building has been protected from weather.

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- B. Verify that work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.
- D. Verify that field measurements are as indicated.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.03 INSTALLATION

- A. Circuiting Requirements:
 - 1. Unless dimensioned, circuit routing indicated is diagrammatic.
 - 2. When circuit destination is indicated without specific routing, determine exact routing required.
 - 3. Arrange circuiting to minimize splices.
 - 4. Maintain separation of wiring for emergency systems in accordance with NFPA 70.
- B. Install products in accordance with manufacturer's instructions.
- C. Perform work in accordance with NECA 1 (general workmanship).
- D. Install metal-clad cable (Type MC) in accordance with NECA 120.
- E. Installation in Raceway:
 - 1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
 - 2. Pull all conductors and cables together into raceway at same time.
 - 3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
 - 4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.
- F. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.
- G. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
- H. Terminate cables using suitable fittings.
 - 1. Metal-Clad Cable (Type MC):
 - a. Use listed fittings.
 - b. Cut cable armor only using specialized tools to prevent damaging conductors or insulation. Do not use hacksaw or wire cutters to cut armor.
- I. Install conductors with a minimum of 12 inches (300 mm) of slack at each outlet.
- J. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.
- K. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.
- L. Make wiring connections using specified wiring connectors.
 - 1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
 - 2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
 - 3. Do not remove conductor strands to facilitate insertion into connector.
 - 4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.

- 5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
- 6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- M. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
 - 1. Dry Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
 - a. For taped connections, first apply adequate amount of rubber splicing electrical tape or electrical filler tape, followed by outer covering of vinyl insulating electrical tape.
 - 2. Damp Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
 - a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.
 - b. For taped connections, follow same procedure as for dry locations but apply outer covering of moisture sealing electrical tape.
- N. Insulate ends of spare conductors using vinyl insulating electrical tape.
- O. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
- P. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for additional requirements.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is required for all conductors. The resistance test for parallel conductors listed as optional is not required.
- D. Correct deficiencies and replace damaged or defective conductors and cables.

SECTION 26 0526

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Grounding and bonding requirements.
- B. Conductors for grounding and bonding.
- C. Connectors for grounding and bonding.

1.02 RELATED REQUIREMENTS

- A. Section 26 0519 Low-Voltage Electrical Power Conductors and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.
- B. Section 26 0553 Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. NECA 1 Standard for Good Workmanship in Electrical Construction; 2015.
- B. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- C. UL 467 Grounding and Bonding Equipment; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements for submittals procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for grounding and bonding system components.

1.06 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

PART 2 PRODUCTS

2.01 GROUNDING AND BONDING REQUIREMENTS

- A. Existing Work: Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.
- B. Do not use products for applications other than as permitted by NFPA 70 and product listing.
- C. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.
- D. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- E. Grounding System Resistance:
 - 1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Architect. Precipitation within the previous 48 hours does not constitute normally dry conditions.
- F. Grounding Electrode System:
 - Provide connection to required and supplemental grounding electrodes indicated to form grounding electrode system.
 - a. Provide continuous grounding electrode conductors without splice or joint.

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- b. Install grounding electrode conductors in raceway where exposed to physical damage. Bond grounding electrode conductor to metallic raceways at each end with bonding jumper.
- 2. Provide additional ground electrode(s) as required to achieve specified grounding electrode system resistance.
- G. Bonding and Equipment Grounding:
 - 1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
 - 2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
 - 3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
 - 4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
 - 5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
 - 6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
 - 7. Provide bonding for metal building frame.
 - 8. Provide bonding for metal siding not effectively bonded through attachment to metal building frame.
- H. Isolated Ground System:
 - 1. Where isolated ground receptacles or other isolated ground connections are indicated, provide separate isolated/insulated equipment grounding conductors.
 - 2. Connect isolated/insulated equipment grounding conductors only to separate isolated/insulated equipment ground busses.
 - 3. Connect the isolated/insulated equipment grounding conductors to the solidly bonded equipment ground bus only at the service disconnect or separately derived system disconnect. Do not make any other connections between isolated ground system and normal equipment ground system on the load side of this connection.

2.02 GROUNDING AND BONDING COMPONENTS

- A. General Requirements:
 - 1. Provide products listed, classified, and labeled as suitable for the purpose intended.
 - 2. Provide products listed and labeled as complying with UL 467 where applicable.
- B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 0526:
 - 1. Use insulated copper conductors unless otherwise indicated.
 - a. Exceptions:
 - 1) Use bare copper conductors where installed underground in direct contact with earth.
 - 2) Use bare copper conductors where directly encased in concrete (not in raceway).
- C. Connectors for Grounding and Bonding:
 - 1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
 - 2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
 - 3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that work likely to damage grounding and bonding system components has been completed.
- B. Verify that field measurements are as indicated.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Make grounding and bonding connections using specified connectors.
 - 1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
 - 2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
 - 3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
 - 4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
 - 5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- D. Identify grounding and bonding system components in accordance with Section 26 0553.

SECTION 26 0529

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 Cast-in-Place Concrete: Concrete equipment pads.
- B. Section 26 0533.13 Conduit for Electrical Systems: Additional support and attachment requirements for conduits.
- C. Section 26 5100 Interior Lighting: Additional support and attachment requirements for interior luminaires.
- D. Section 26 5600 Exterior Lighting: Additional support and attachment requirements for exterior luminaires.

1.03 REFERENCE STANDARDS

- A. ASTM A123/A123M Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- B. ASTM A153/A153M Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- C. ASTM B633 Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2019.
- D. MFMA-4 Metal Framing Standards Publication; 2004.
- E. NECA 1 Standard for Good Workmanship in Electrical Construction; 2015.
- F. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate sizes and arrangement of supports and bases with the actual equipment and components to be installed.
 - 2. Coordinate the work with other trades to provide additional framing and materials required for installation.
 - 3. Coordinate compatibility of support and attachment components with mounting surfaces at the installed locations.
 - 4. Coordinate the arrangement of supports with ductwork, piping, equipment and other potential conflicts installed under other sections or by others.
 - 5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not install products on or provide attachment to concrete surfaces until concrete has fully cured in accordance with Section 03 3000.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for channel (strut) framing systems, non-penetrating rooftop supports, and post-installed concrete and masonry anchors.

1.06 QUALITY ASSURANCE

A. Comply with NFPA 70.

B. Comply with applicable building code.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 SUPPORT AND ATTACHMENT COMPONENTS

- A. General Requirements:
 - 1. Provide all required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for the complete installation of electrical work.
 - 2. Provide products listed, classified, and labeled as suitable for the purpose intended, where applicable.
 - 3. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for the load to be supported. Include consideration for vibration, equipment operation, and shock loads where applicable.
 - 4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
 - 5. Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless specifically indicated or permitted.
 - 6. Steel Components: Use corrosion resistant materials suitable for the environment where installed.
 - a. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
 - b. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.
- B. Conduit and Cable Supports: Straps, clamps, etc. suitable for the conduit or cable to be supported.
 - 1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
 - 2. Conduit Clamps: Bolted type unless otherwise indicated.
- C. Outlet Box Supports: Hangers, brackets, etc. suitable for the boxes to be supported.
- D. Metal Channel (Strut) Framing Systems: Factory-fabricated continuous-slot metal channel (strut) and associated fittings, accessories, and hardware required for field-assembly of supports.
 - 1. Comply with MFMA-4.
 - 2. Channel Material:
 - a. Indoor Dry Locations: Use painted steel, zinc-plated steel, or galvanized steel.
 - b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.
 - 3. Minimum Channel Thickness: Steel sheet, 12 gage, 0.1046 inch (2.66 mm).
 - 4. Minimum Channel Dimensions: 1-5/8 inch (41 mm) width by 13/16 inch (21 mm) height.
- E. Hanger Rods: Threaded zinc-plated steel unless otherwise indicated.
 - 1. Minimum Size, Unless Otherwise Indicated or Required:
 - a. Single Conduit up to 1 inch (27 mm) trade size: 1/4 inch (6 mm) diameter.
 - b. Single Conduit larger than 1 inch (27 mm) trade size: 3/8 inch (10 mm) diameter.
 - c. Outlet Boxes: 1/4 inch (6 mm) diameter.
 - d. Luminaires: 1/4 inch (6 mm) diameter.
- F. Anchors and Fasteners:
 - 1. Unless otherwise indicated and where not otherwise restricted, use the anchor and fastener types indicated for the specified applications.
 - 2. Hollow Stud Walls: Use toggle bolts.
 - 3. Steel: Use beam clamps, machine bolts, or welded threaded studs.
 - 4. Sheet Metal: Use sheet metal screws.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive support and attachment components.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
- D. Unless specifically indicated or approved by Architect, do not provide support from suspended ceiling support system or ceiling grid.
- E. Unless specifically indicated or approved by Architect, do not provide support from roof deck.
- F. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.
- G. Equipment Support and Attachment:
 - 1. Use metal fabricated supports or supports assembled from metal channel (strut) to support equipment as required.
 - 2. Use metal channel (strut) secured to studs to support equipment surface-mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
 - 3. Use metal channel (strut) to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
 - 4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.
- H. Interior Luminaire Support and Attachment: Also comply with Section 26 5100.
- I. Exterior Luminaire Support and Attachment: Also comply with Section 26 5600.
- J. Secure fasteners according to manufacturer's recommended torque settings.
- K. Remove temporary supports.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for additional requirements.
- B. Inspect support and attachment components for damage and defects.
- C. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- D. Correct deficiencies and replace damaged or defective support and attachment components.

SECTION 26 0533.13 CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Galvanized steel rigid metal conduit (RMC).
- B. Intermediate metal conduit (IMC).
- C. PVC-coated galvanized steel rigid metal conduit (RMC).
- D. Flexible metal conduit (FMC).
- E. Electrical metallic tubing (EMT).
- F. Rigid polyvinyl chloride (PVC) conduit.
- G. Conduit fittings.
- H. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 26 0526 Grounding and Bonding for Electrical Systems.
 1. Includes additional requirements for fittings for grounding and bonding.
- B. Section 26 0529 Hangers and Supports for Electrical Systems.
- C. Section 26 0553 Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. ANSI C80.1 American National Standard for Electrical Rigid Steel Conduit (ERSC); 2015.
- B. ANSI C80.3 American National Standard for Electrical Metallic Tubing -- Steel (EMT-S); 2015.
- C. ANSI C80.6 American National Standard for Electrical Intermediate Metal Conduit (EIMC); 2005.
- D. NECA 1 Standard for Good Workmanship in Electrical Construction; 2015.
- E. NECA 101 Standard for Installing Steel Conduits (Rigid, IMC, EMT); 2013.
- F. NECA 111 Standard for Installing Nonmetallic Raceways (RNC, ENT, LFNC); 2003.
- G. NEMA FB 1 Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- H. NEMA RN 1 Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit; 2018.
- I. NEMA TC 2 Electrical Polyvinyl Chloride (PVC) Conduit; 2013.
- J. NEMA TC 3 Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing; 2016.
- K. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- L. UL 1 Flexible Metal Conduit; Current Edition, Including All Revisions.
- M. UL 6 Electrical Rigid Metal Conduit-Steel; Current Edition, Including All Revisions.
- N. UL 514B Conduit, Tubing, and Cable Fittings; Current Edition, Including All Revisions.
- O. UL 651 Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings; Current Edition, Including All Revisions.
- P. UL 797 Electrical Metallic Tubing-Steel; Current Edition, Including All Revisions.
- Q. UL 1242 Electrical Intermediate Metal Conduit-Steel; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

- 1. Coordinate minimum sizes of conduits with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
- 2. Coordinate the arrangement of conduits with structural members, ductwork, piping, equipment and other potential conflicts installed under other sections or by others.
- 3. Verify exact conduit termination locations required for boxes, enclosures, and equipment installed under other sections or by others.
- 4. Coordinate the work with other trades to provide roof penetrations that preserve the integrity of the roofing system and do not void the roof warranty.
- 5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not begin installation of conductors and cables until installation of conduit is complete between outlet, junction and splicing points.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements for submittals procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for conduits and fittings.
- C. Project Record Documents: Record actual routing for conduits installed underground, conduits embedded within concrete slabs, and conduits 2 inch (53 mm) trade size and larger.

1.06 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70 and product listing.
- B. Unless otherwise indicated and where not otherwise restricted, use the conduit types indicated for the specified applications. Where more than one listed application applies, comply with the most restrictive requirements. Where conduit type for a particular application is not specified, use galvanized steel rigid metal conduit.
- C. Concealed Within Hollow Stud Walls: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- D. Concealed Above Accessible Ceilings: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- E. Exposed, Exterior: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or PVC-coated galvanized steel rigid metal conduit.
- F. Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit.
 - 1. Maximum Length: 6 feet (1.8 m).

2.02 CONDUIT REQUIREMENTS

- A. Provide all conduit, fittings, supports, and accessories required for a complete raceway system.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.

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- B. Fittings:
 - 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - 3. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.04 INTERMEDIATE METAL CONDUIT (IMC)

- A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.
- B. Fittings:
 - 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - 3. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.05 PVC-COATED GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit with external polyvinyl chloride (PVC) coating complying with NEMA RN 1 and listed and labeled as complying with UL 6.
- B. Exterior Coating: Polyvinyl chloride (PVC), nominal thickness of 40 mil (1.02 mm).
- C. PVC-Coated Fittings:
 - 1. Manufacturer: Same as manufacturer of PVC-coated conduit to be installed.
 - 2. Non-Hazardous Locations: Use fittings listed and labeled as complying with UL 514B.
 - 3. Material: Use steel or malleable iron.
 - 4. Exterior Coating: Polyvinyl chloride (PVC), minimum thickness of 40 mil (1.02 mm).
- D. PVC-Coated Supports: Furnish with exterior coating of polyvinyl chloride (PVC), minimum thickness of 15 mil (0.38 mm).

2.06 FLEXIBLE METAL CONDUIT (FMC)

- A. Description: NFPA 70, Type FMC standard wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems to be used.
- B. Fittings:
 - 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.

2.07 ELECTRICAL METALLIC TUBING (EMT)

- A. Description: NFPA 70, Type EMT steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
- B. Fittings:
 - 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - 3. Connectors and Couplings: Use compression (gland) or set-screw type. a. Do not use indenter type connectors and couplings.

2.08 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

- A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.
- B. Fittings:

- 1. Manufacturer: Same as manufacturer of conduit to be connected.
- 2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.09 ACCESSORIES

- A. Conduit Joint Compound: Corrosion-resistant, electrically conductive; suitable for use with the conduit to be installed.
- B. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.
- C. Pull Strings: Use nylon cord with average breaking strength of not less than 200 pound-force (890 N).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive conduits.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.
- D. Install intermediate metal conduit (IMC) in accordance with NECA 101.
- E. Install rigid polyvinyl chloride (PVC) conduit in accordance with NECA 111.
- F. Conduit Routing:
 - 1. When conduit destination is indicated without specific routing, determine exact routing required.
 - 2. Arrange conduit to maintain adequate headroom, clearances, and access.
 - 3. Arrange conduit to provide no more than the equivalent of four 90 degree bends between pull points.
 - 4. Arrange conduit to provide no more than 150 feet (46 m) between pull points.
 - 5. Maintain minimum clearance of 6 inches (150 mm) between conduits and piping for other systems.
 - 6. Maintain minimum clearance of 12 inches (300 mm) between conduits and hot surfaces.
 - 7. Group parallel conduits in the same area together on a common rack.
- G. Conduit Support:
 - 1. Secure and support conduits in accordance with NFPA 70 and Section 26 0529 using suitable supports and methods approved by the authority having jurisdiction.
 - 2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
 - 3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
 - 4. Use conduit strap to support single surface-mounted conduit.
 - a. Use clamp back spacer with conduit strap for damp and wet locations to provide space between conduit and mounting surface.
 - 5. Use metal channel (strut) with accessory conduit clamps to support multiple parallel surface-mounted conduits.
 - 6. Use conduit clamp to support single conduit from beam clamp or threaded rod.
 - 7. Use of wire for support of conduits is not permitted.
- H. Connections and Terminations:
 - 1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.

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- 2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
- 3. Use suitable adapters where required to transition from one type of conduit to another.
- 4. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
- 5. Provide insulating bushings or insulated throats at all conduit terminations to protect conductors.
- 6. Secure joints and connections to provide maximum mechanical strength and electrical continuity.
- I. Penetrations:
 - 1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
 - 2. Make penetrations perpendicular to surfaces unless otherwise indicated.
 - 3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
 - 4. Conceal bends for conduit risers emerging above ground.
 - 5. Seal interior of conduits entering the building from underground at first accessible point to prevent entry of moisture and gases.
 - 6. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
- J. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
 - 1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
 - 2. Where calculated in accordance with NFPA 70 for rigid polyvinyl chloride (PVC) conduit installed above ground to compensate for thermal expansion and contraction.
 - 3. Where conduits are subject to earth movement by settlement or frost.
- K. Condensation Prevention: Where conduits cross barriers between areas of potential substantial temperature differential, provide sealing fitting or approved sealing compound at an accessible point near the penetration to prevent condensation. This includes, but is not limited to:
 - 1. Where conduits pass from outdoors into conditioned interior spaces.
 - 2. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.
- L. Provide pull string in all empty conduits and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches (300 mm) at each end.
- M. Provide grounding and bonding in accordance with Section 26 0526.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for additional requirements.
- B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- C. Correct deficiencies and replace damaged or defective conduits.

3.04 CLEANING

A. Clean interior of conduits to remove moisture and foreign matter.

3.05 PROTECTION

A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

SECTION 26 0533.16 BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Outlet and device boxes up to 100 cubic inches (1,650 cu cm), including those used as junction and pull boxes.
- B. Cabinets and enclosures, including junction and pull boxes larger than 100 cubic inches (1,650 cu cm).
- C. Boxes and enclosures for integrated power, data, and audio/video.

1.02 RELATED REQUIREMENTS

- A. Section 26 0526 Grounding and Bonding for Electrical Systems.
- B. Section 26 0529 Hangers and Supports for Electrical Systems.
- C. Section 26 0533.13 Conduit for Electrical Systems:
 - 1. Conduit bodies and other fittings.
 - 2. Additional requirements for locating boxes to limit conduit length and/or number of bends between pulling points.
- D. Section 26 0553 Identification for Electrical Systems: Identification products and requirements.
- E. Section 26 2726 Wiring Devices:
 - 1. Wall plates.

1.03 REFERENCE STANDARDS

- A. NECA 1 Standard for Good Workmanship in Electrical Construction; 2015.
- B. NECA 130 Standard for Installing and Maintaining Wiring Devices; 2010.
- C. NEMA FB 1 Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- D. NEMA OS 1 Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports; 2013.
- E. NEMA 250 Enclosures for Electrical Equipment (1000 Volts Maximum); 2018.
- F. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. UL 50 Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.
- H. UL 50E Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.
- I. UL 508A UL Standard for Safety Industrial Control Panels; 2018.
- J. UL 514A Metallic Outlet Boxes; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
 - 2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
 - 3. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.
 - 4. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.

- 5. Coordinate the placement of boxes with millwork, furniture, devices, equipment, etc. installed under other sections or by others.
- 6. Coordinate the work with other trades to preserve insulation integrity.
- 7. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted boxes where indicated.
- 8. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

1.06 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 BOXES

- A. General Requirements:
 - 1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
 - 2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
 - 3. Provide products listed, classified, and labeled as suitable for the purpose intended.
 - 4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
 - 5. Provide grounding terminals within boxes where equipment grounding conductors terminate.
- B. Outlet and Device Boxes Up to 100 cubic inches (1,650 cu cm), Including Those Used as Junction and Pull Boxes:
 - 1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
 - 2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
 - 3. Use suitable concrete type boxes where flush-mounted in concrete.
 - 4. Use suitable masonry type boxes where flush-mounted in masonry walls.
 - 5. Use raised covers suitable for the type of wall construction and device configuration where required.
 - 6. Use shallow boxes where required by the type of wall construction.
 - 7. Do not use "through-wall" boxes designed for access from both sides of wall.
 - 8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
 - 9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
 - 10. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
 - 11. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes unless specifically indicated or permitted.
 - 12. Minimum Box Size, Unless Otherwise Indicated:
 - a. Communications Systems Outlets: 4 inch square by 2-1/8 inch (100 by 54 mm) trade size.
 - b. Ceiling Outlets: 4 inch octagonal or square by 1-1/2 inch deep (100 by 38 mm) trade size.
 - 13. Wall Plates: Comply with Section 26 2726.

- C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
 - 1. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
 - 2. NEMA 250 Environment Type, Unless Otherwise Indicated:
 - 3. Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
 - a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive boxes.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.
- E. Flush-mount boxes in finished areas unless specifically indicated to be surface-mounted.
- F. Unless otherwise indicated, boxes may be surface-mounted where exposed conduits are indicated or permitted.
- G. Box Locations:
 - 1. Locate boxes so that wall plates do not span different building finishes.
 - 2. Unless otherwise indicated, where multiple outlet boxes are installed at the same location at different mounting heights, install along a common vertical center line.
 - 3. Do not install flush-mounted boxes on opposite sides of walls back-to-back. Provide minimum 6 inches (150 mm) horizontal separation unless otherwise indicated.
 - 4. Locate junction and pull boxes as indicated, as required to facilitate installation of conductors, and to limit conduit length and/or number of bends between pulling points in accordance with Section 26 0533.13.
- H. Box Supports:
 - 1. Secure and support boxes in accordance with NFPA 70 and Section 26 0529 using suitable supports and methods approved by the authority having jurisdiction.
 - 2. Provide independent support from building structure except for cast metal boxes (other than boxes used for fixture support) supported by threaded conduit connections in accordance with NFPA 70. Do not provide support from piping, ductwork, or other systems.
- I. Install boxes plumb and level.
- J. Flush-Mounted Boxes:
 - 1. Install boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that front edge of box or associated raised cover is not set back from finished surface more than 1/4 inch (6 mm) or does not project beyond finished surface.
 - 2. Install boxes in combustible materials such as wood so that front edge of box or associated raised cover is flush with finished surface.
 - 3. Repair rough openings around boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that there are no gaps or open spaces greater than 1/8 inch (3 mm) at the edge of the box.

- K. Install boxes as required to preserve insulation integrity.
- L. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.
- M. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
- N. Close unused box openings.
- O. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.
- P. Provide grounding and bonding in accordance with Section 26 0526.
- Q. Identify boxes in accordance with Section 26 0553.

3.03 CLEANING

A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

3.04 PROTECTION

A. Immediately after installation, protect boxes from entry of moisture and foreign material until ready for installation of conductors.

SECTION 26 0553

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Electrical identification requirements.
- B. Identification nameplates and labels.
- C. Wire and cable markers.
- D. Warning signs and labels.

1.02 RELATED REQUIREMENTS

A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.

1.03 REFERENCE STANDARDS

- A. ANSI Z535.2 American National Standard for Environmental and Facility Safety Signs; 2011.
- B. ANSI Z535.4 American National Standard for Product Safety Signs and Labels; 2011.
- C. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- D. UL 969 Marking and Labeling Systems; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.
- B. Sequencing:
 - 1. Do not conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
 - 2. Do not install identification products until final surface finishes and painting are complete.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittals procedures.

1.06 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

1.07 FIELD CONDITIONS

A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

PART 2 PRODUCTS

2.01 IDENTIFICATION REQUIREMENTS

- A. Existing Work: Unless specifically excluded, identify existing elements to remain that are not already identified in accordance with specified requirements.
- B. Identification for Equipment:
 - 1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
 - a. Panelboards:
 - 1) Identify ampere rating.
 - 2) Identify voltage and phase.
 - 3) Identify power source and circuit number. Include location when not within sight of equipment.
 - 4) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces using pencil.

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- 5) For power panelboards without a door, use identification nameplate to identify load(s) served for each branch device. Do not identify spares and spaces.
- 2. Service Equipment:
 - a. Use identification nameplate to identify each service disconnecting means.
- 3. Available Fault Current Documentation: Use identification label to identify the available fault current and date calculations were performed at locations requiring documentation by NFPA 70, including but not limited to the following.
 - a. Service equipment.
 - b. Industrial control panels.
 - c. Motor control centers.
 - d. Elevator control panels.
 - e. Industrial machinery.
- C. Identification for Conductors and Cables:
 - 1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 0519.
 - 2. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.
 - 3. Use wire and cable markers to identify circuit number or other designation indicated for power, control, and instrumentation conductors and cables at the following locations:
 - a. At each source and load connection.
 - b. Within boxes when more than one circuit is present.
- D. Identification for Devices:
 - 1. Use identification label or engraved wallplate to identify serving branch circuit for all receptacles.
 - a. For receptacles in public areas or in areas as directed by Architect, provide identification on inside surface of wallplate.
 - 2. Use identification label to identify receptacles protected by upstream GFI protection, where permitted.
- E. Identification for Luminaires:
 - 1. Use permanent red dot on luminaire frame to identify luminaires connected to emergency power system.

2.02 IDENTIFICATION NAMEPLATES AND LABELS

- A. Identification Nameplates:
 - 1. Materials:
 - 2. Mounting Holes for Mechanical Fasteners: Two, centered on sides for sizes up to 1 inch (25 mm) high; Four, located at corners for larger sizes.
- B. Identification Labels:
 - 1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
 - 2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.
- C. Format for Equipment Identification:
 - 1. Minimum Size: 1 inch (25 mm) by 2.5 inches (64 mm).
 - 2. Legend:
 - a. Equipment designation or other approved description.
 - 3. Text: All capitalized unless otherwise indicated.
 - 4. Minimum Text Height:
 - a. Equipment Designation: 1/2 inch (13 mm).
 - 5. Color:
 - a. Normal Power System: White text on black background.
- D. Format for Receptacle Identification:

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- 1. Minimum Size: 3/8 inch (10 mm) by 1.5 inches (38 mm).
- 2. Legend: Power source and circuit number or other designation indicated.
- 3. Text: All capitalized unless otherwise indicated.
- 4. Minimum Text Height: 3/16 inch (5 mm).
- 5. Color: Black text on clear background.
- E. Format for Control Device Identification:
 - 1. Minimum Size: 3/8 inch (10 mm) by 1.5 inches (38 mm).
 - 2. Legend: Load controlled or other designation indicated.
 - 3. Text: All capitalized unless otherwise indicated.
 - 4. Minimum Text Height: 3/16 inch (5 mm).
 - 5. Color: Black text on clear background.

2.03 WIRE AND CABLE MARKERS

- A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.
- B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.
- C. Legend: Power source and circuit number or other designation indicated.
- D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.
- E. Minimum Text Height: 1/8 inch (3 mm).
- F. Color: Black text on white background unless otherwise indicated.

2.04 WARNING SIGNS AND LABELS

- A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.
- B. Warning Signs:
 - 1. Materials:
 - 2. Minimum Size: 7 by 10 inches (178 by 254 mm) unless otherwise indicated.
- C. Warning Labels:
 - 1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using materials recognized to UL 969.
 - 2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories recommended by label manufacturer.
 - 3. Minimum Size: 2 by 4 inches (51 mm by 102 mm) unless otherwise indicated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:
 - 1. Surface-Mounted Equipment: Enclosure front.
 - 2. Flush-Mounted Equipment: Inside of equipment door.
 - 3. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
 - 4. Elevated Equipment: Legible from the floor or working platform.
 - 5. Branch Devices: Adjacent to device.
 - 6. Interior Components: Legible from the point of access.
 - 7. Conductors and Cables: Legible from the point of access.
 - 8. Devices: Outside face of cover.
- C. Install identification products centered, level, and parallel with lines of item being identified.

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- D. Secure nameplates to exterior surfaces of enclosures using stainless steel screws and to interior surfaces using self-adhesive backing or epoxy cement.
- E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.
- F. Mark all handwritten text, where permitted, to be neat and legible.

3.02 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for additional requirements.
- B. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

SECTION 26 0923 LIGHTING CONTROL DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Occupancy sensors.
- B. Outdoor photo controls.

1.02 RELATED REQUIREMENTS

- A. Section 26 0526 Grounding and Bonding for Electrical Systems.
- B. Section 26 0529 Hangers and Supports for Electrical Systems.
- C. Section 26 0533.16 Boxes for Electrical Systems.
- D. Section 26 0553 Identification for Electrical Systems: Identification products and requirements.
- E. Section 26 2726 Wiring Devices: Devices for manual control of lighting, including wall switches and fan speed controllers.
- F. Section 26 5100 Interior Lighting.
- G. Section 26 5600 Exterior Lighting.

1.03 REFERENCE STANDARDS

- A. 47 CFR 15 Radio Frequency Devices; current edition.
- B. NECA 1 Standard for Good Workmanship in Electrical Construction; 2015.
- C. NECA 130 Standard for Installing and Maintaining Wiring Devices; 2010.
- D. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- E. UL 773A Nonindustrial Photoelectric Switches for Lighting Control; Current Edition, Including All Revisions.
- F. UL 916 Energy Management Equipment; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the placement of lighting control devices with millwork, furniture, equipment, etc. installed under other sections or by others.
 - 2. Coordinate the placement of wall switch occupancy sensors with actual installed door swings.
 - 3. Coordinate the placement of occupancy sensors with millwork, furniture, equipment or other potential obstructions to motion detection coverage installed under other sections or by others.
 - 4. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.
- B. Sequencing:
 - 1. Do not install lighting control devices until final surface finishes and painting are complete.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Field Quality Control Reports.
- C. Project Record Documents: Record actual installed locations and settings for lighting control devices.

1.06 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

1.07 DELIVERY, STORAGE, AND PROTECTION

A. Store products in a clean, dry space in original manufacturer's packaging in accordance with manufacturer's written instructions until ready for installation.

1.08 FIELD CONDITIONS

A. Maintain field conditions within manufacturer's required service conditions during and after installation.

1.09 WARRANTY

- A. See Section 01 7800 Closeout Submittals, for additional warranty requirements.
- B. Provide five year manufacturer warranty for all occupancy sensors.

PART 2 PRODUCTS

2.01 LIGHTING CONTROL DEVICES - GENERAL REQUIREMENTS

- A. Provide products listed, classified, and labeled as suitable for the purpose intended.
- B. Unless specifically indicated to be excluded, provide all required conduit, wiring, connectors, hardware, components, accessories, etc. as required for a complete operating system.

2.02 OCCUPANCY SENSORS

- A. All Occupancy Sensors:
 - 1. Description: Factory-assembled commercial specification grade devices for indoor use capable of sensing both major motion, such as walking, and minor motion, such as small desktop level movements, according to published coverage areas, for automatic control of load indicated.
 - 2. Sensor Technology:
 - a. Passive Infrared (PIR) Occupancy Sensors: Designed to detect occupancy by sensing movement of thermal energy between zones.
 - 3. Provide LED to visually indicate motion detection with separate color LEDs for each sensor type in dual technology units.
 - 4. Operation: Unless otherwise indicated, occupancy sensor to turn load on when occupant presence is detected and to turn load off when no occupant presence is detected during an adjustable turn-off delay time interval.
 - 5. Turn-Off Delay: Field adjustable, with time delay settings up to 30 minutes.
 - 6. Sensitivity: Field adjustable.
 - 7. Compatibility (Non-Dimming Sensors): Suitable for controlling incandescent lighting, low-voltage lighting with electronic and magnetic transformers, fluorescent lighting with electronic and magnetic ballasts, and fractional motor loads, with no minimum load requirements.
- B. Wall Switch Occupancy Sensors:
 - 1. All Wall Switch Occupancy Sensors:
 - a. Description: Occupancy sensors designed for installation in standard wall box at standard wall switch mounting height with a field of view of 180 degrees, integrated manual control capability, and no leakage current to load in off mode.
 - b. Manual-Off Override Control: When used to turn off load while in automatic-on mode, unit to revert back to automatic mode after no occupant presence is detected during the delayed-off time interval.

2.03 OUTDOOR PHOTO CONTROLS

- A. Stem-Mounted Outdoor Photo Controls:
 - 1. Description: Direct-wired photo control unit with threaded conduit mounting stem and field-adjustable swivel base, listed and labeled as complying with UL 773A.
 - 2. Housing: Weatherproof, impact resistant polycarbonate.
 - 3. Photo Sensor: Cadmium sulfide.
 - 4. Provide external sliding shield for field adjustment of light level activation.

- 5. Light Level Activation: 1 to 5 footcandles (10.8 to 53.8 lux) turn-on and 3 to 1 turn-off to turn-on ratio with delayed turn-off.
- 6. Voltage: As required to control the load indicated on the drawings.
- 7. Failure Mode: Fails to the on position.
- 8. Load Rating: As required to control the load indicated on the drawings.
- 9. Provide accessory wall-mounting bracket where indicated or as required to complete installation.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate devices and conductors in accordance with NFPA 70.
- C. Verify that openings for outlet boxes are neatly cut and will be completely covered by devices or wall plates.
- D. Verify that final surface finishes are complete, including painting.
- E. Verify that branch circuit wiring installation is completed, tested, and ready for connection to lighting control devices.
- F. Verify that the service voltage and ratings of lighting control devices are appropriate for the service voltage and load requirements at the location to be installed.
- G. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.03 INSTALLATION

- A. Install lighting control devices in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards unless otherwise indicated.
- B. Coordinate locations of outlet boxes provided under Section 26 0533.16 as required for installation of lighting control devices provided under this section.
 - 1. Mounting Heights: Unless otherwise indicated, as follows:
 - a. Wall Switch Occupancy Sensors: 48 inches (1.2 m) above finished floor.
 - 2. Locate wall switch occupancy sensors on strike side of door with edge of wall plate 3 inches (80 mm) from edge of door frame. Where locations are indicated otherwise, notify Architect to obtain direction prior to proceeding with work.
- C. Install lighting control devices in accordance with manufacturer's instructions.
- D. Unless otherwise indicated, connect lighting control device grounding terminal or conductor to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
- E. Install lighting control devices plumb and level, and held securely in place.
- F. Where required and not furnished with lighting control device, provide wall plate in accordance with Section 26 2726.
- G. Provide required supports in accordance with Section 26 0529.
- H. Where applicable, install lighting control devices and associated wall plates to fit completely flush to mounting surface with no gaps and rough opening completely covered without strain on wall plate. Repair or reinstall improperly installed outlet boxes or improperly sized rough openings. Do not use oversized wall plates in lieu of meeting this requirement.
- I. Identify lighting control devices in accordance with Section 26 0553.
- J. Occupancy Sensor Locations:

- K. Outdoor Photo Control Locations:
 - 1. Where possible, locate outdoor photo controls with photo sensor facing north. If north facing photo sensor is not possible, install with photo sensor facing east, west, or down.
 - 2. Locate outdoor photo controls so that photo sensors do not face artificial light sources, including light sources controlled by the photo control itself.
- L. Install outdoor photo controls so that connections are weatherproof. Do not install photo controls with conduit stem facing up in order to prevent infiltration of water into the photo control.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for additional requirements.
- B. Inspect each lighting control device for damage and defects.
- C. Test occupancy sensors to verify proper operation, including time delays and ambient light thresholds where applicable. Verify optimal coverage for entire room or area. Record test results in written report to be included with submittals.
- D. Test outdoor photo controls to verify proper operation, including time delays where applicable.
- E. Correct wiring deficiencies and replace damaged or defective lighting control devices.

3.05 ADJUSTING

- A. Adjust devices and wall plates to be flush and level.
- B. Adjust occupancy sensor settings to minimize undesired activations while optimizing energy savings, and to achieve desired function as indicated or as directed by Architect.
- C. Adjust position of directional occupancy sensors and outdoor motion sensors to achieve optimal coverage as required.
- D. Adjust external sliding shields on outdoor photo controls under optimum lighting conditions to achieve desired turn-on and turn-off activation as indicated or as directed by Architect.

3.06 CLEANING

A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.07 CLOSEOUT ACTIVITIES

- A. See Section 01 7800 Closeout Submittals, for closeout submittals.
- B. See Section 01 7900 Demonstration and Training, for additional requirements.
- C. Demonstration: Demonstrate proper operation of lighting control devices to Architect, and correct deficiencies or make adjustments as directed.

SECTION 26 5100 INTERIOR LIGHTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Interior luminaires.
- B. Exit signs.
- C. Ballasts and drivers.
- D. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 23 3600 Air Terminal Units: Air distribution accessories for air handling luminaires.
- B. Section 26 0529 Hangers and Supports for Electrical Systems.
- C. Section 26 0533.16 Boxes for Electrical Systems.
- D. Section 26 0923 Lighting Control Devices: Automatic controls for lighting including occupancy sensors, outdoor motion sensors, time switches, outdoor photo controls, and daylighting controls.
- E. Section 26 2726 Wiring Devices: Manual wall switches and wall dimmers.
- F. Section 26 5600 Exterior Lighting.

1.03 REFERENCE STANDARDS

- A. IES LM-79 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products; 2008.
- B. IES LM-80 Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays, and Modules; 2015, with Errata (2017).
- C. NECA/IESNA 500 Standard for Installing Indoor Commercial Lighting Systems; 2006.
- D. NECA/IESNA 502 Standard for Installing Industrial Lighting Systems; 2006.
- E. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. NFPA 101 Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. UL 924 Emergency Lighting and Power Equipment; Current Edition, Including All Revisions.
- H. UL 1598 Luminaires; Current Edition, Including All Revisions.
- I. UL 8750 Light Emitting Diode (LED) Equipment for Use in Lighting Products; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the installation of luminaires with mounting surfaces installed under other sections or by others. Coordinate the work with placement of supports, anchors, etc. required for mounting. Coordinate compatibility of luminaires and associated trims with mounting surfaces at installed locations.
 - 2. Coordinate the placement of luminaires with structural members, ductwork, piping, equipment, diffusers, fire suppression system components, and other potential conflicts installed under other sections or by others.
 - 3. Coordinate the placement of exit signs with furniture, equipment, signage or other potential obstructions to visibility installed under other sections or by others.
 - 4. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, installed accessories, and ceiling compatibility; include model number nomenclature clearly marked with all proposed features.
 - 1. LED Luminaires:
 - a. Include estimated useful life, calculated based on IES LM-80 test data.
 - b. Include IES LM-79 test report upon request.
 - 2. Lamps: Include rated life, color temperature, color rendering index (CRI), and initial and mean lumen output.
- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- D. Operation and Maintenance Data: Instructions for each product including information on replacement parts.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 1. See Section 01 6000 Product Requirements, for additional provisions.
- F. Project Record Documents: Record actual connections and locations of luminaires and any associated remote components.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Receive, handle, and store products according to NECA/IESNA 500 (commercial lighting), NECA/IESNA 502 (industrial lighting), and manufacturer's written instructions.
- B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

1.08 FIELD CONDITIONS

A. Maintain field conditions within manufacturer's required service conditions during and after installation.

1.09 WARRANTY

- A. See Section 01 7800 Closeout Submittals, for additional warranty requirements.
- B. Provide three year manufacturer warranty for LED luminaires, including drivers.

PART 2 PRODUCTS

2.01 LUMINAIRE TYPES

- A. Furnish products as indicated in luminaire schedule included on the drawings.
- B. Substitutions: See Section 01 6000 Product Requirements, except where individual luminaire types are designated with substitutions not permitted.

2.02 LUMINAIRES

- A. Manufacturers:
 - 1. Acuity Brands, Inc: www.acuitybrands.com/#sle.
 - 2. Cooper Lighting, a division of Cooper Industries: www.cooperindustries.com/#sle.
 - 3. Lutron Electronics Company, Inc; www.lutron.com/#sle.
 - 4. Substitutions: See Section 01 6000 Product Requirements.

- B. Provide products that comply with requirements of NFPA 70.
- C. Provide products that are listed and labeled as complying with UL 1598, where applicable.
- D. Provide products listed, classified, and labeled as suitable for the purpose intended.
- E. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
- F. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, supports, trims, accessories, etc. as necessary for a complete operating system.
- G. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.
- H. LED Luminaires:
 - 1. Components: UL 8750 recognized or listed as applicable.
 - 2. Tested in accordance with IES LM-79 and IES LM-80.
 - 3. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.
 - 4. Provide emergency power supply unit in luminaires designated with "EM" on the drawings.

2.03 EXIT SIGNS

- A. Description: Internally illuminated exit signs with LEDs unless otherwise indicated; complying with NFPA 101 and all applicable state and local codes, and listed and labeled as complying with UL 924.
 - 1. Number of Faces: Single or double as indicated or as required for the installed location.
 - 2. Directional Arrows: As indicated or as required for the installed location.
- B. Self-Powered Exit Signs:
 - 1. Operation: Upon interruption of normal power source or brownout condition exceeding 20 percent voltage drop from nominal, solid-state control automatically switches connected lamps to integral battery power for minimum of 90 minutes of rated emergency illumination, and automatically recharges battery upon restoration of normal power source.
 - 2. Battery: Sealed maintenance-free nickel cadmium unless otherwise indicated.
 - 3. Diagnostics: Provide power status indicator light and accessible integral test switch to manually activate emergency operation.
 - 4. Provide low-voltage disconnect to prevent battery damage from deep discharge.

2.04 ACCESSORIES

- A. Stems for Suspended Luminaires: Steel tubing, minimum 1/2" size, factory finished to match luminaire or field-painted as directed.
- B. Threaded Rods for Suspended Luminaires: Zinc-plated steel, minimum 1/4" size, field-painted as directed.
- C. Provide accessory plaster frames for luminaires recessed in plaster ceilings.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate conductors in accordance with NFPA 70.
- C. Verify that suitable support frames are installed where required.
- D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to luminaires.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.03 INSTALLATION

- A. Coordinate locations of outlet boxes provided under Section 26 0533.16 as required for installation of luminaires provided under this section.
- B. Install products in accordance with manufacturer's instructions.
- C. Install luminaires securely, in a neat and workmanlike manner, as specified in NECA 500 (commercial lighting) and NECA 502 (industrial lighting).
- D. Provide required support and attachment in accordance with Section 26 0529.
- E. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.
- F. Suspended Ceiling Mounted Luminaires:
 - 1. Do not use ceiling tiles to bear weight of luminaires.
 - 2. Do not use ceiling support system to bear weight of luminaires unless ceiling support system is certified as suitable to do so.
 - 3. Secure lay-in luminaires to ceiling support channels using listed safety clips at four corners.
 - 4. See appropriate Division 9 section where suspended grid ceiling is specified for additional requirements.
- G. Recessed Luminaires:
 - 1. Install trims tight to mounting surface with no visible light leakage.
- H. Suspended Luminaires:
 - 1. Install using the suspension method indicated, with support lengths and accessories as required for specified mounting height.
 - 2. Provide minimum of two supports for each luminaire equal to or exceeding 4 feet nominal length, with no more than 4 feet (1.2 m) between supports.
- I. Wall-Mounted Luminaires: Unless otherwise indicated, specified mounting heights are to center of luminaire.
- J. Install accessories furnished with each luminaire.
- K. Bond products and metal accessories to branch circuit equipment grounding conductor.
- L. Exit Signs:
 - 1. Unless otherwise indicated, connect unit to unswitched power from same circuit feeding normal lighting in same room or area. Bypass local switches, contactors, or other lighting controls.
- M. Install lamps in each luminaire.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for additional requirements.
- B. Inspect each product for damage and defects.
- C. Operate each luminaire after installation and connection to verify proper operation.
- D. Test self-powered exit signs, emergency lighting units, and fluorescent emergency power supply units to verify proper operation upon loss of normal power supply.
- E. Correct wiring deficiencies and repair or replace damaged or defective products. Repair or replace excessively noisy ballasts as determined by Architect.

3.05 ADJUSTING

A. Aim and position adjustable luminaires to achieve desired illumination as indicated or as directed by Architect. Secure locking fittings in place.

B. Exit Signs with Field-Selectable Directional Arrows: Set as indicated or as required to properly designate egress path as directed by Architect or authority having jurisdiction.

3.06 CLEANING

A. Clean surfaces according to NECA 500 (commercial lighting), NECA 502 (industrial lighting), and manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

3.07 CLOSEOUT ACTIVITIES

- A. See Section 01 7800 Closeout Submittals, for closeout submittals.
- B. Just prior to Substantial Completion, replace all lamps that have failed.

3.08 PROTECTION

A. Protect installed luminaires from subsequent construction operations.

3.09 SCHEDULE - SEE DRAWINGS

SECTION 26 5600 EXTERIOR LIGHTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Exterior luminaires.

1.02 RELATED REQUIREMENTS

- A. Section 26 0526 Grounding and Bonding for Electrical Systems.
- B. Section 26 0529 Hangers and Supports for Electrical Systems.
- C. Section 26 0533.16 Boxes for Electrical Systems.
- D. Section 26 5100 Interior Lighting.

1.03 REFERENCE STANDARDS

- A. IES LM-79 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products; 2008.
- B. IES LM-80 Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays, and Modules; 2015, with Errata (2017).
- C. NECA 1 Standard for Good Workmanship in Electrical Construction; 2015.
- D. NECA/IESNA 501 Standard for Installing Exterior Lighting Systems; 2006.
- E. NFPA 70 National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. UL 1598 Luminaires; Current Edition, Including All Revisions.
- G. UL 8750 Light Emitting Diode (LED) Equipment for Use in Lighting Products; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, weight, effective projected area (EPA), and installed accessories; include model number nomenclature clearly marked with all proposed features.
 - 1. LED Luminaires:
 - a. Include estimated useful life, calculated based on IES LM-80 test data.

1.05 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Receive, handle, and store products according to NECA/IESNA 501 and manufacturer's written instructions.
- B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

1.07 WARRANTY

- A. See Section 01 7800 Closeout Submittals, for additional warranty requirements.
- B. Provide three year manufacturer warranty for all LED luminaires, including drivers.

PART 2 PRODUCTS

2.01 LUMINAIRES

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products that are listed and labeled as complying with UL 1598, where applicable.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
- E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, poles, foundations, supports, trims, accessories, etc. as necessary for a complete operating system.
- F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.
- G. LED Luminaires:
 - 1. Components: UL 8750 recognized or listed as applicable.
 - 2. Tested in accordance with IES LM-79 and IES LM-80.
 - 3. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate conductors in accordance with NFPA 70.
- C. Verify that suitable support frames are installed where required.
- D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to luminaires.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.03 INSTALLATION

- A. Coordinate locations of outlet boxes provided under Section 26 0533.16 as required for installation of luminaires provided under this section.
- B. Install products in accordance with manufacturer's instructions.
- C. Install luminaires in accordance with NECA/IESNA 501.
- D. Provide required support and attachment in accordance with Section 26 0529.
- E. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.
- F. Wall-Mounted Luminaires: Unless otherwise indicated, specified mounting heights are to center of luminaire.
- G. Install accessories furnished with each luminaire.
- H. Bond products and metal accessories to branch circuit equipment grounding conductor.
- I. Install lamps in each luminaire.

3.04 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for additional requirements.

- B. Inspect each product for damage and defects.
- C. Operate each luminaire after installation and connection to verify proper operation.
- D. Correct wiring deficiencies and repair or replace damaged or defective products. Repair or replace excessively noisy ballasts as determined by Architect.

3.05 ADJUSTING

A. Aim and position adjustable luminaires to achieve desired illumination as indicated or as directed by Architect. Secure locking fittings in place.

3.06 CLEANING

A. Clean surfaces according to NECA/IESNA 501 and manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

3.07 CLOSEOUT ACTIVITIES

A. See Section 01 7800 - Closeout Submittals, for closeout submittals.

3.08 PROTECTION

A. Protect installed luminaires from subsequent construction operations.

3.08 SCHEDULE - SEE DRAWINGS

SECTION 31 1000 SITE CLEARING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Clearing and protection of vegetation.
- B. Removal of existing debris.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 5000 Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- C. Section 01 5713 Temporary Erosion and Sediment Control.
- D. Section 01 7000 Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products.
- E. Section 02 4100 Demolition: Removal of built elements and utilities.
- F. Section 31 2200 Grading: Fill material for filling holes, pits, and excavations generated as a result of removal operations.
- G. Section 31 2323 Fill: Fill material for filling holes, pits, and excavations generated as a result of removal operations.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 SITE CLEARING

- A. Comply with other requirements specified in Section 01 7000.
- B. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

3.02 EXISTING UTILITIES AND BUILT ELEMENTS

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Protect existing structures and other elements that are not to be removed.

3.03 VEGETATION

- A. Scope: Remove trees, shrubs, brush, and stumps in areas to be covered by building structure, paving, playing fields, lawns, and planting beds.
- B. Do not remove or damage vegetation beyond the limits indicated on drawings.
- C. In areas where vegetation must be removed but no construction will occur other than pervious paving, remove vegetation with minimum disturbance of the subsoil.
- D. Vegetation Removed: Do not burn, bury, landfill, or leave on site, except as indicated.
 - 1. Chip, grind, crush, or shred vegetation for mulching, composting, or other purposes; preference should be given to on-site uses.
 - 2. Trees: Sell if marketable; if not, treat as specified for other vegetation removed; remove stumps and roots to depth of 18 inches (450 mm).
 - 3. Sod: Re-use on site if possible; otherwise sell if marketable, and if not, treat as specified for other vegetation removed.
 - 4. Fill holes left by removal of stumps and roots, using suitable fill material, with top surface neat in appearance and smooth enough not to constitute a hazard to pedestrians.

- E. Dead Wood: Remove all dead trees (standing or down), limbs, and dry brush on entire site; treat as specified for vegetation removed.
- F. Restoration: If vegetation outside removal limits or within specified protective fences is damaged or destroyed due to subsequent construction operations, replace at no cost to Owner.

3.04 DEBRIS

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

SECTION 31 2200 GRADING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Finish grading.

1.02 RELATED REQUIREMENTS

- A. Section 31 2316 Excavation.
- B. Section 31 2323 Fill: Filling and compaction.

PART 2 PRODUCTS

PART 3 EXECUTION

3.01 PREPARATION

- A. Protect site features to remain, including but not limited to bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs, from damage by grading equipment and vehicular traffic.
- B. Protect plants, lawns, rock outcroppings, and other features to remain as a portion of final landscaping.

3.02 FINISH GRADING

- A. Remove debris, roots, branches, stones, in excess of 1/2 inch (13 mm) in size. Remove soil contaminated with petroleum products.
- B. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 3 inches (75 mm).
- C. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
- D. Maintain stability of topsoil during inclement weather. Replace topsoil in areas where surface water has eroded thickness below specifications.

3.03 REPAIR AND RESTORATION

- A. Existing Facilities, Utilities, and Site Features to Remain: If damaged due to this work, repair or replace to original condition.
- B. Trees to Remain: If damaged due to this work, trim broken branches and repair bark wounds; if root damage has occurred, obtain instructions from Architect as to remedy.
- C. Other Existing Vegetation to Remain: If damaged due to this work, replace with vegetation of equivalent species and size.

3.04 FIELD QUALITY CONTROL

A. See Section 31 2323 for compaction density testing.

SECTION 31 2316 EXCAVATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Trenching for utilities outside the building to utility main connections.

1.02 RELATED REQUIREMENTS

- A. Section 01 5713 Temporary Erosion and Sediment Control: Slope protection and erosion control.
- B. Section 31 2200 Grading: Soil removal from surface of site.
- C. Section 31 2200 Grading: Grading.
- D. Section 31 2323 Fill: Fill materials, backfilling, and compacting.

1.03 REFERENCE STANDARDS

A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.

PART 3 EXECUTION

2.01 PREPARATION

- A. Locate, identify, and protect utilities that remain and protect from damage.
- B. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- C. Protect plants, lawns, rock outcroppings, and other features to remain.

2.02 EXCAVATING

- A. Excavate to accommodate construction operations.
- B. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Remove excess escavated material from site.
- E. Provide temporary means and methods, as required, to remove all water from excavations until directed by Architect. Remove and replace soils deemed suitable by classification and which are excessively moist due to lack of dewatering or surface water control.

2.03 SUBGRADE PREPARATION

A. See Section 31 2323 for subgrade preparation at general excavations.

2.04 FILLING AND BACKFILLING

A. Do not fill or backfill until all debris, water, unsatisfactory soil materials, obstructions, and deleterious materials have been removed from excavation.

2.05 PROTECTION

- A. Divert surface flow from rains or water discharges from the excavation.
- B. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
- C. Protect open excavations from rainfall, runoff, freezing groundwater, or excessive drying so as to maintain foundation subgrade in satisfactory, undisturbed condition.
- D. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
- E. Keep excavations free of standing water and completely free of water during concrete placement.

SECTION 31 2316.13 TRENCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Backfilling and compacting for utilities outside the building to utility main connections.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 Grading: Site grading.
- B. Section 31 2316 Excavation: Building and foundation excavating.
- C. Section 31 2323 Fill: Backfilling at building and foundations.

1.03 REFERENCE STANDARDS

- A. AASHTO T 180 Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2018.
- B. ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012, with Editorial Revision (2015).
- C. ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012, with Editorial Revision (2015).

PART 2 PRODUCTS

2.01 FILL MATERIALS

A. See section 31 2323 - Fill.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that survey bench marks and intended elevations for the work are as indicated.

3.02 PREPARATION

- A. Locate, identify, and protect utilities that remain and protect from damage.
- B. Grade top perimeter of trenching area to prevent surface water from draining into trench. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by the Architect.

3.03 TRENCHING

- A. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- B. Slope banks of excavations deeper than 4 feet (1.2 meters) to angle of repose or less until shored.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Cut trenches wide enough to allow inspection of installed utilities.
- E. Hand trim excavations. Remove loose matter.
- F. Remove excavated material that is unsuitable for re-use from site.
- G. Remove excess excavated material from site.
- H. Provide temporary means and methods, as required, to remove all water from trenching until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.
- I. Determine the prevailing groundwater level prior to trenching. If the proposed trench extends less than 1 foot (305 mm) into the prevailing groundwater, control groundwater intrusion with perimeter drains routed to sump pumps, or as directed by the Architect.

3.04 PREPARATION FOR UTILITY PLACEMENT

- A. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- B. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- C. Until ready to backfill, maintain excavations and prevent loose soil from falling into excavation.

3.05 BACKFILLING

- A. Backfill to contours and elevations indicated using unfrozen materials.
- B. Employ a placement method that does not disturb or damage other work.
- C. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Correct areas that are over-excavated.
- F. Compaction Density Unless Otherwise Specified or Indicated:
 - 1. Under paving, slabs-on-grade, and similar construction: 97 percent of maximum dry density.
- G. Reshape and re-compact fills subjected to vehicular traffic.

3.06 BEDDING AND FILL AT SPECIFIC LOCATIONS

- A. Utility Piping, Conduits, and Duct Bank:
 - 1. Bedding: as indicated on drawings.
 - 2. Cover: as indicated on drawings.
 - 3. Fill up to subgrade elevation.
 - 4. Compact in maximum 8 inch (200 mm) lifts to 95 percent of maximum dry density.

3.07 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for general requirements for field inspection and testing.
- B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D1557 ("modified Proctor"), AASHTO T 180, or ASTM D698 ("standard Proctor").
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

SECTION 31 2323

FILL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Filling, backfilling, and compacting for building volume below grade.
- B. Backfilling and compacting for utilities outside the building to utility main connections.
- C. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 Grading: Site grading.
- B. Section 31 2316 Excavation: Removal and handling of soil to be re-used.

1.03 REFERENCE STANDARDS

- A. AASHTO T 180 Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2018.
- B. ASTM C136/C136M Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2014.
- C. ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012, with Editorial Revision (2015).
- D. ASTM D1556/D1556M Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
- E. ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012, with Editorial Revision (2015).
- F. ASTM D2167 Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- G. ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2017.
- H. ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2017, with Editorial Revision (2018).
- I. ASTM D6938 Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2017a.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Soil Samples: 10 pounds (4.5 kg) sample of each type of fill; submit in air-tight containers to testing laboratory.
- C. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used, including manufactured fill.
- D. Compaction Density Test Reports.

PART 2 PRODUCTS

2.01 FILL MATERIALS

- A. General Fill: Subsoil excavated on-site.
 - 1. Free of lumps larger than 3 inches (75 mm), rocks larger than 2 inches (50 mm), and debris.
 - 2. Complying with ASTM D2487 Group Symbol CL.
 - 3. Must be approved by Engineer/Owner prior to use.
- B. Structural Fill Fill Type Item 4: Complying with State of New York Highway Department standard.

- C. Granular Fill Fill Type Gravel: Coarse aggregate, complying with State of New York Highway Department standard.
- D. Topsoil: Friable loam; imported borrow.
 - 1. Free of roots, rocks larger than 1/2 inch (12 mm), subsoil, debris, large weeds and foreign matter.
 - 2. Acidity range (pH) of 5.5 to 7.5.
 - 3. Containing a minimum of 4 percent and a maximum of 25 percent inorganic matter.
 - 4. Complying with ASTM D2487 Group Symbol OH.

2.02 ACCESSORIES

A. Geotextile Fabric: Non-biodegradable, woven.

2.03 SOURCE QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for general requirements for testing and analysis of soil material.
- B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the Work are as indicated.
- B. Identify required lines, levels, contours, and datum locations.
- C. See Section 31 2200 for additional requirements.
- D. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.
- E. Verify structural ability of unsupported walls to support imposed loads by the fill.
- F. Verify areas to be filled are not compromised with surface or ground water.

3.02 FILLING

- A. Fill to contours and elevations indicated using unfrozen materials.
- B. Fill up to subgrade elevations unless otherwise indicated.
- C. Employ a placement method that does not disturb or damage other work.
- D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Granular Fill: Place and compact materials in equal continuous layers not exceeding 8 inches (200 mm) compacted depth.
- G. Correct areas that are over-excavated.
 - 1. Under paved surfaces: Use structural fill, flush t orequired elevation, compacted to minimum 98 percent of maximum dry density.
- H. Reshape and re-compact fills subjected to vehicular traffic.
- I. Maintain temporary means and methods, as required, to remove all water while fill is being placed as required, or until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.

3.03 TOLERANCES

A. Top Surface of General Filling: Plus or minus 1 inch (25 mm) from required elevations.

B. Top Surface of Filling Under Paved Areas: Plus or minus 1 inch (25 mm) from required elevations.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for general requirements for field inspection and testing.
- B. Soil Fill Materials:
 - 1. Perform compaction density testing on compacted fill in accordance with ASTM D1556/D1556M, ASTM D2167, or ASTM D6938.
 - 2. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D698 ("standard Proctor"), ASTM D1557 ("modified Proctor"), or AASHTO T 180.
 - 3. If tests indicate work does not meet specified requirements, remove work, replace and retest.
 - 4. Frequency of Tests: as directed by engineer.
 - 5. Proof roll compacted fill at surfaces that will be under slabs-on-grade.

3.05 CLEANING

- A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- B. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

SECTION 32 0116.74

IN PLACE HOT REUSED ASPHALT PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Heating, scarifying, milling, remixing, placing, and compacting existing asphaltic concrete.

PART 2 PRODUCTS

2.01 MATERIALS

2.02 EQUIPMENT

- A. Milling Unit: Type for the intended purpose as follows:
 - 1. Self-propelled, with a wheel base sufficient to maximize leveling action.
 - 2. Capable of loosening pavement material to a 2 inch (50 mm) depth.

2.03 RECYCLED MIX

PART 3 EXECUTION

3.01 PREPARATION

- A. Mechanically sweep pavement surfaces immediately prior to commencement of work. Clean pavement surfaces of loose foreign matter. Verify that surfaces are dry.
- B. Protect existing improvements, overhanging trees, and plant life from heat damage by individual shielding and water spray.
- C. Remove and store manhole covers and frames.
- 3.02 REMOVAL
- 3.03 MIXING
- 3.04 PLACING
- 3.05 ROLLING AND COMPACTING

SECTION 32 0120

PREPARATION FOR RESURFACING CONCRETE PAVEMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preparation of concrete pavement surfaces for new pavement.

PART 2 PRODUCTS

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work.

3.02 PREPARATION

A. Prepare and protect adjacent work from damage.

3.03 CLEANING

- A. Clean concrete surfaces of dirt or other contamination; wire brush using water; rinse surface and allow to dry.
- B. Flush out cracks and voids with cleaning agent to remove laitance and dirt. Chemically neutralize by rinsing with water.
- C. Blast clean clean the exposed concrete surfaces.

SECTION 32 1123 AGGREGATE BASE COURSES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aggregate base course.
- B. Paving aggregates.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 Grading: Preparation of site for base course.
- B. Section 31 2316.13 Trenching: Compacted fill over utility trenches under base course.
- C. Section 31 2323 Fill: Topsoil fill at areas adjacent to aggregate base course.
- D. Section 31 2323 Fill: Compacted fill under base course.
- E. Section 32 1216 Asphalt Paving: Finish and binder asphalt courses.

1.03 REFERENCE STANDARDS

- A. AASHTO M 147 Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses; 2017.
- AASHTO T 180 Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2018.
- C. ASTM C136/C136M Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2014.
- D. ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012, with Editorial Revision (2015).
- E. ASTM D1556/D1556M Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
- F. ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012, with Editorial Revision (2015).
- G. ASTM D2167 Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- H. ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2017.
- I. ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2017, with Editorial Revision (2018).
- J. ASTM D6938 Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2017a.

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Materials Sources: Submit name of imported materials source.
- C. Aggregate Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
- D. Compaction Density Test Reports.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. When necessary, store materials on site in advance of need.
- B. Aggregate Storage, General:
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Coarse Aggregate Type item 4: Coarse aggregate, complying with State of New York Highway Department standard.
- B. Materials furnished under this section shall be as specified by NYSDOT, Section 403.05, Type 4 materials shall have the following gradations by weight: Passing 2 inch sieve size designation 100% Passing 1/4 inch sieve size designation 30 65% Passing No. 40 sieve size designation 5 40% Passing No. 200 sieve size designation 0 10%
- C. Geotextile Fabric: Non-biodegradable, woven 500X manufactured by Marifi.

2.02 SOURCE QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for general requirements for testing and analysis of aggregate materials.
- B. Where aggregate materials are specified using ASTM D2487 classification, test and analyze samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the work are as indicated.
- B. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

3.02 PREPARATION

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
- B. Do not place aggregate on soft, muddy, or frozen surfaces.

3.03 INSTALLATION

- A. Under Bituminous Concrete Paving:
 - 1. Compact to 95 percent of maximum dry density.
- B. Place aggregate in maximum 4 inch (100 mm) layers and roller compact to specified density.
- C. Level and contour surfaces to elevations and gradients indicated.
- D. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.
- E. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- F. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.04 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch (6.4 mm) measured with 10 foot (3 m) straight edge.
- B. Scheduled Compacted Thickness: Within 1/4 inch (6.4 mm).
- C. Variation From Design Elevation: Within 1/2 inch (12.8 mm).

3.05 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for general requirements for field inspection and testing.
- B. Compaction density testing will be performed on compacted aggregate base course in accordance with ASTM D1556/D1556M, ASTM D2167, or ASTM D6938.
- C. Results will be evaluated in relation to compaction curve determined by testing uncompacted material in accordance with AASHTO T 180, ASTM D698 ("standard Proctor"), or ASTM D1557 ("modified Proctor").

- D. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- E. Frequency of Tests: Multiple Daily tests in each lift as required by testing consultant based on performance.

3.06 CLEANING

A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

SECTION 32 1216 ASPHALT PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aggregate base course.
- B. Single course bituminous concrete paving.
- C. Double course bituminous concrete paving.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 Grading: Preparation of site for paving and base.
- B. Section 31 2323 Fill: Compacted subgrade for paving.

1.03 REFERENCE STANDARDS

A. AI MS-2 - Asphalt Mix Design Methods; 2015.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with State of New York Highways standard.
- B. Mixing Plant: Complying with State of New York Highways standard.
- C. Obtain materials from same source throughout.

1.05 FIELD CONDITIONS

- A. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F (4 degrees C), or surface is wet or frozen.
- B. Place bitumen mixture when temperature is not more than 15 F degrees (8 C degrees) below bitumen supplier's bill of lading and not more than maximum specified temperature.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Aggregate for Base Course: In accordance with State of New York Highways standards.
- B. Aggregate for Binder Course: In accordance with State of New York Highways standards.
- C. Aggregate for Wearing Course: In accordance with State of New York Highways standards.
- D. Tack Coat: Homogeneous, medium curing, liquid asphalt.

2.02 ASPHALT PAVING MIXES AND MIX DESIGN

- A. Bituminous concrete shall be composed of mineral aggregate, mineral filler and bituminous material and shall conform in all respects to the New Yok Department of Transporation Standard Specificications for Parking Lot
 - 1. Binder Course: Type 3 NYSDOT Item 403.13 asphalt concrete conforming to composition requirements of Table403-1.
 - 2. Top Course: Type 6 NYSDOT Item 403.16 asphalt concrete conforming to composition requirements of Table 403-1
 - 3. Submit proposed mix design of each class of mix for review prior to beginning of work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that compacted subgrade is dry and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

3.02 BASE COURSE

A. Place and compact base course.

3.03 PREPARATION - TACK COAT

A. Apply tack coat in accordance with manufacturer's instructions.

- B. Apply tack coat on asphalt or concrete surfaces over subgrade surface at uniform rate of 1/3 gal/sq yd (1.5 L/sq m).
- C. Coat surfaces of manhole frames with oil to prevent bond with asphalt pavement. Do not tack coat these surfaces.

3.04 PLACING ASPHALT PAVEMENT - DOUBLE COURSE

- A. Place asphalt binder course within 24 hours of applying primer or tack coat.
- B. Place wearing course within two hours of placing and compacting binder course.
- C. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- D. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

3.05 FIELD QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for general requirements for quality control.
- B. Provide field inspection and testing. Take samples and perform tests in accordance with AI MS-2.

3.06 PROTECTION

A. Immediately after placement, protect pavement from mechanical injury for one days or until surface temperature is less than 140 degrees F (60 degrees C).

3.07 CLEANING

A. After completion of paving and surfacing operations, clean surfaces of excess or spilled asphalt. gravel or stone materials to the satisfaction of Clinton County.

SECTION 32 1723.13

PAINTED PAVEMENT MARKINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Parking lot markings, including parking bays, crosswalks, arrows, handicapped symbols, and curb markings.

1.02 RELATED REQUIREMENTS

A. Section 32 1216 - Asphalt Paving.

1.03 REFERENCE STANDARDS

A. FHWA MUTCD - Manual on Uniform Traffic Control Devices for Streets and Highways; U.S. Department of Transportation, Federal Highway Administration; Current Edition.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver paint in containers of at least 5 gallons (18 L) accompanied by batch certificate.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Manufacturer Sherwin Williams
 - 1. Model Hotline Fast Dry.
 - 2. Application Spray.
 - 3. Dry-No-Pick-Up 10 minutes @ 77 degrees F. 50% RH.
 - 4. Dry Time Night <1/2 1 1/2 hours.
 - 5. Federal Spec E Type II Yes.
 - 6. Cleanup Method Water.
 - 7. Size(s) 5 gallon.
 - 8. Color(s).
 - a. Parking lots: Yellow.
 - b. Handicapped Sybmols: Blue.
- B. Substitutions: See Section 01 6000 Product Requirements

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Clean surfaces thoroughly prior to installation.
 - 1. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods.
- D. Where oil or grease are present, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application; after cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint.

3.03 INSTALLATION

- A. Begin pavement marking as soon as practicable after surface has been cleaned and dried.
- B. Do not apply paint if temperature of surface to be painted or the atmosphere is less than 50 degrees F (10 degrees C) or more than 95 degrees F (35 degrees C).
- C. Apply in accordance with manufacturer's instructions using an experienced technician that is thoroughly familiar with equipment, materials, and marking layouts.
- D. Comply with FHWA MUTCD manual (http://mutcd.fhwa.dot.gov) for details not shown.
- E. Apply markings in locations determined by measurement from survey control points; preserve control points until after markings have been accepted.
- F. Apply uniformly painted markings of color(s), lengths, and widths as indicated on drawings true, sharp edges and ends.
 - 1. Apply paint in one coat only.
 - 2. Wet Film Thickness: 0.015 inch (0.4 mm), minimum.
 - 3. Width Tolerance: Plus or minus 1/8 inch (3 mm).
- G. Parking Lots: Apply parking space lines, entrance and exit arrows, painted curbs, and other markings indicated on drawings.
 - 1. Mark the International Handicapped Symbol at indicated parking spaces.
 - 2. Hand application by pneumatic spray is acceptable.
- H. Symbols: Use a suitable template that will provide a pavement marking with true, sharp edges and ends, of the design and size indicated.

3.04 DRYING, PROTECTION, AND REPLACEMENT

- A. Protect newly painted markings so that paint is not picked up by tires, smeared, or tracked.
- B. Provide barricades, warning signs, and flags as necessary to prevent traffic crossing newly painted markings.
- C. Allow paint to dry at least the minimum time specified by the applicable paint standard and not less than that recommended by the manufacturer.
- D. Remove and replace markings that are applied at less than minimum material rates; deviate from true alignment; exceed length and width tolerances; or show light spots, smears, or other deficiencies or irregularities.
- E. Remove markings in manner to avoid damage to the surface to which the marking was applied, using carefully controlled sand blasting, approved grinding equipment, or other approved method.
- F. Replace removed markings at no additional cost to Owner.

SECTION 32 9219 SEEDING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preparation of subsoil.
- B. Placing topsoil.
- C. Seeding, mulching and fertilizer.
- D. Maintenance.

1.02 RELATED REQUIREMENTS

- A. Section 31 2200 Grading: Topsoil material.
- B. Section 31 2200 Grading: Preparation of subsoil and placement of topsoil in preparation for the work of this section.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Topsoil samples.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable. Deliver seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

PART 2 PRODUCTS

2.01 SEED MIXTURE

- A. Seed Mixture:
 - 1. Kentucky Blue Grass: 20 percent.
 - 2. Creeping Red Fescue Grass: 65 percent.
 - 3. Streambark Wheat: 15 percent.

2.02 SOIL MATERIALS

A. Topsoil: Type imported borrow as specified in Section 31 2200.

2.03 ACCESSORIES

- A. Fertilizer: 5-10-10; recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, as indicated by analysis.
- B. Lime: Agricultural grade limestone applied to establish a PH of 6.
- C. Water: Clean, fresh and free of substances or matter that could inhibit vigorous growth of grass.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that prepared soil base is ready to receive the work of this Section.

3.02 PREPARATION

- A. Prepare subgrade in accordance with Section 31 2200.
- B. Place topsoil in accordance with Section 31 2200.

3.03 FERTILIZING

A. Apply fertilizer in accordance with manufacturer's instructions.

- B. Apply after smooth raking of topsoil and prior to roller compaction.
- C. Do not apply fertilizer at same time or with same machine as will be used to apply seed.
- D. Mix thoroughly into upper 2 inches (50 mm) of topsoil.
- E. Lightly water to aid the dissipation of fertilizer.

3.04 SEEDING

- A. Apply seed at a rate of 5 to 6 lbs per 1000 sq ft (____ Kg per 1000 sq m) evenly in two intersecting directions. Rake in lightly.
- B. Do not seed areas in excess of that which can be mulched on same day.
- C. Do not sow immediately following rain, when ground is too dry, or during windy periods.
- D. Roll seeded area with roller not exceeding 112 lbs (50 Kg).
- E. Immediately following seeding and compacting, apply mulch to a thickness of 1/8 inches (3 mm). Maintain clear of shrubs and trees.
- F. Apply water with a fine spray immediately after each area has been mulched. Saturate to 4 inches (100 mm) of soil.
- G. Following germination, immediately re-seed areas without germinated seeds that are larger than 4 by 4 inches (100 by 100 mm).

3.05 MAINTENANCE

- A. Provide maintenance at no extra cost to Owner; Owner will pay for water.
- B. Maintain seeded areas immediately after placement until grass is well established and exhibits a vigorous growing condition.
- C. Mow grass at regular intervals to maintain at a maximum height of 2-1/2 inches (65 mm). Do not cut more than 1/3 of grass blade at any one mowing.
- D. Neatly trim edges and hand clip where necessary.
- E. Immediately remove clippings after mowing and trimming.
- F. Water to prevent grass and soil from drying out.
- G. Roll surface to remove minor depressions or irregularities.
- H. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.
- I. Immediately reseed areas that show bare spots.
- J. Protect seeded areas with warning signs during maintenance period.

SECTION 33 1116

SITE WATER UTILITY DISTRIBUTION PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pipe and fittings for site water lines including mains and service laterals.
- B. Valves.

1.02 RELATED REQUIREMENTS

- A. Section 31 2316.13 Trenching: Excavating, bedding, and backfilling.
- B. Section 32 1313 Concrete Paving: Concrete for thrust restraints.
- C. Section 33 0523.13 Horizontal Directional Drilling: Installation of water main.
- D. Section 33 1300 Disinfecting of Water Utility Distribution: Disinfection of site service utility water piping.

1.03 PRICE AND PAYMENT PROCEDURES

- A. See Section 01 2200 Unit Prices, for additional unit price requirements.
- B. Pipe and Fittings: By the linear foot. Includes open trench excavation, hand trimming excavation, pipe and fittings, bedding, concrete thrust restraints, backfill, insulation, steel casing at sewer crossings, connection to building service piping, and all necessary fittings, piping, etc. to connect to [existing water mains]. All flushing, disinfection, and testing is to be included in this item.
- C. Horizontal Directional Drilling Pipe and Fittings: By the linear foot. Includes horizontal directional drilling, hand trimming excavation, pipe and fittings, bedding, concrete thrust restraints, backfill, insulation, steel casing at sewer crossings, connection to building service piping, and all necessary fittings, piping, etc. to connect to existing water mains. All flushing, disinfection, and testing is to be included in this item.
- D. Water Service Pipe and Fittings: By the linear foot. Includes both rod&pull trenchless road crossing and open trench installation outside of roadway, hand trimming excavation, copper tubing and fittings, threaded tap on water main, corporation stop, bedding, backfill, and connection to existing water service.
- E. Valves & Curb Stops: By the unit. Includes valve, valve box, fittings, accessories, excavation, and backfill.
- F. Hydrant Branch Connection: By the unit. Includes hand trimming excavation, hydrant, valve, tee or taping sleeve connection, concrete thrust restraint, accessories, excavation, and backfill.

1.04 REFERENCES

- A. ASME B16.3 Malleable Iron Threaded Fittings Classes 150 and 300; 2011.
- B. ASME B16.4 Gray Iron Threaded Fittings Classes 125 and 250; 2011.
- C. ASME B16.22 Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; The American Society of Mechanical Engineers; 2013.
- D. ASME B18.2.2 Nuts for General Applications: Machine Screw Nuts, Hex, Square, Hex Flange, and Coupling Nuts (Inch Series); 2010.
- E. ASTM A307 Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2014.
- F. ASTM A563 Standard Specification for Carbon and Alloy Steel Nuts; 2007a (Reapproved 2014).
- G. ASTM A563M Standard Specification for Carbon and Alloy Steel Nuts [Metric]; 2007.
- H. ASTM B88 Standard Specification for Seamless Copper Water Tube; 2009.
- I. ASTM D3035 Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter; 2012.

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- J. ASTM D3139 Standard Specification for Joints for Plastic Pressure Pipes using Flexible Elastomeric Seals; 1998 (Reapproved 2011).
- K. AWWA C104/A21.4 Cement-Mortar Lining for Ductile-Iron Pipe and Fittings; American Water Works Association; 2008 (ANSI/AWWA C104/A21.4).
- L. AWWA C111/A21.11 Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings; American Water Works Association; 2012 (ANSI/AWWA C111/A21.11).
- M. AWWA C115/A21.15 Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges; 2011.
- N. AWWA C151/A21.51 Ductile-Iron Pipe, Centrifugally Cast; American Water Works Association; 2009 (ANSI/AWWA C151/A21.51).
- O. AWWA C502 Dry-Barrel Fire Hydrants; American Water Works Association; 2014 (ANSI/AWWA C502/C502a).
- P. AWWA C600 Installation of Ductile-Iron Water Mains and Their Appurtenances; American Water Works Association; 2010 (ANSI/AWWA C600).
- Q. AWWA C606 Grooved and Shouldered Joints; American Water Works Association; 2011.
- R. AWWA C901 Polyethylene (PE) Pressure Pipe and Tubing, 1/2 In. (13 mm) Through 3 In. (76 mm), for Water Service; American Water Works Association; 2008.
- S. UL 246 Hydrants for Fire-Protection Service; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on pipe materials, pipe fittings, valves and accessories.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- D. Project Record Documents: Record actual locations of piping mains, valves, connections, thrust restraints, and invert elevations. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.06 QUALITY ASSURANCE

A. Perform Work in accordance with municipality requirements.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store valves in shipping containers with labeling in place.

PART 2 PRODUCTS

2.01 WATER PIPE

1

- A. Ductile Iron Pipe: AWWA C151 CL52:
 - 1. Lining: Cement, 1/16 inch (1.6 mm) minimum thickness.
 - 2. Fittings: Compact Ductile iron, C153, standard thickness.
 - 3. Joints: AWWA C111, rubber gasket with rods.
 - 4. Joints: AWWA C111, Buna-N (Nitrile) gaskets in contaminated soils.
- B. Copper Tubing: ASTM B88, Type K, annealed:
 - Fittings: ASME B16.18, cast copper, or ASME B16.22, wrought copper.
 - a. Corporation Stop:
 - 1) Product: McDonald compression type plug style corporation stop.
 - b. Curb Stop:
 - 1) Product: McDonald #76100 series compression type ball valve curb stop, no stop and waste fittings.
 - c. Curb Box:
 - 1) Product: McDonald #5601 Erie style arch type with rod and matched 2 hole screw on cap. Each cap to be coated with anti-seize compound.

- d. Miscellaneous Fittings:
 - 1) Manufactured by McDonald.
- C. Polyethylene Pipe: AWWA C901 DR 9:
 - 1. As identified in Section 33 0523.13.
 - 2. Fittings: AWWA C906, molded.
 - 3. Fittings: Mechanical joint D.I. fittings.
 - 4. Joints: Butt fusion.
 - 5. Saddle Tap: Electrofusion
- D. Trace Wire: Magnetic 10ga solid copper detectable conductor, brightly colored plastic covering, imprinted with "Water Service " in large letters, extended to above grade for connection point as coordinated with Owner for both water mains and lateral crossings under roadways.

2.02 VALVES

- A. Valves: Manufacturer's name and pressure rating marked on valve body.
- B. Gate Valves 3 Inches and Over:
 - 1. AWWA C500, iron body, bronze trim, non-rising stem with square nut, single wedge, flanged ends, control rod, post indicator, valve key, and extension box.
 - 2. Each valve shall be furnished complete with necessary nuts, bolts, studs and gaskets.
 - 3. Valves shall open left (counter clockwise) with a standard 2 inch square nut with arrow cast on it showing the direction of opening.
 - 4. All valves shall have a minimum operating pressure of 200 psi OWG, factory tested at 400 psi.
 - 5. Product: Kennedy #8571 MJxMJ resilient wedge valve with stainless steel trim.
- C. Valve Boxes:
 - 1. All valve boxes shall be of cast-iron, sliding telescopic type, at least five and one-quarter inch (5-1/4 inch) in diameter. Valve boxes shall be two (2) piece and shall be furnished to match the specific valve dimensions and trench depth as shown on the drawings.
 - 2. All valve boxes shall be furnished with a cast-iron cover, drop style, with both the word "Water" and an arrow indicateing the direction.
 - 3. Product: Sigma VB466T bury slide box.

2.03 HYDRANTS

- A. Hydrants: AWWA C502, UL 246, dry barrel type.
 - 1. Product: Centurion 250 A-423 with 5 1/4 inch valve opening, one (1) NST 4 1/2 inch pumper nozzle, and two (2) NST 2 1/2 inch hose nozzles.
 - 2. Substitutions: See Section 01 6000 Product Requirements.
- B. Open Direction: Left (Counter-Clockwise).
- C. Operating Nut: Standard Pentagon Nut.
- D. Depth of Bury: Minimum 6 feet 0 inches.
- E. Finish: Special coating in color required by utility company.

2.04 BEDDING AND COVER MATERIALS

- A. Bedding: As specified in Section 31 2316.13.
- B. Cover: As specified in Section 31 2316.13.

2.05 ACCESSORIES

- A. Concrete for Thrust Restraints: Concrete type specified in Section 32 1313.
- B. Pipe Joint Restraint: Mechanical joint field lok gaskets rated for 350 psi in accordance with AWWA A21.11.
- C. Tie Rods: Steel, Black ASTM A307 Grade 2, sized per Standard Sheet M663-3.
- D. Valve Key: Furnish one (1) steel socket key to the Owner. The length shall be compatible with the valve of the greatest depth of bury.

PART 3 EXECUTION

3.01 PREPARATION

- A. Cut pipe ends square, ream pipe and tube ends to full pipe diameter, remove burrs.
- B. Remove scale and dirt on inside and outside before assembly.
- C. Prepare pipe connections to equipment with flanges or unions.

3.02 TRENCHING

- A. See the Section 31 2316.13 for additional requirements.
- B. Hand trim excavation for accurate placement of pipe to elevations indicated.
- C. Form and place concrete for pipe thrust restraints at each change of pipe direction. Place concrete to permit full access to pipe and pipe accessories. Provide varied sq ft thrust restraint bearing on subsoil as per the Thrust Block Details.
- D. Backfill around sides and to top of pipe with cover fill, tamp in place and compact, then complete backfilling.

3.03 HORIZONTAL DIRECTIONAL DRILLING

A. See the Section 33 0523.13 for additional requirements.

3.04 INSTALLATION - PIPE

- A. Maintain separation of water main from sewer piping in accordance with New York State Department of Health code.
- B. Establish elevations of buried piping to ensure not less than 6 ft of cover.
- C. Install pipe to indicated elevation to within tolerance of 1 inches.
- D. Route pipe in straight line, angular deflection greater than 5 degrees will not be permitted for 8 inch diameter pipe.
- E. Install pipe to allow for expansion and contraction without stressing pipe or joints.
- F. Prior to assembly the surfaces of the pipe shall be cleaned and lubricated.
- G. At times when pipe laying is not in progress, the open ends of the pipe shall be closed by a watertight plug or other means as approved by the Engineer.
- H. Install access fittings to permit disinfection of water system performed under Section 33 1300.
- I. Install trace wire 6 inches above top of pipe; coordinate with Section 31 2316.13.

3.05 INSTALLATION - VALVES AND HYDRANTS

- A. Set valves on solid bearing per Typ. Valve Detail.
- B. Center and plumb valve box over valve. Set box cover flush with finished grade.
- C. Set hydrants plumb; locate pumper nozzle perpendicular to and facing roadway.
- D. Set hydrants to grade, with nozzles at least 20 inches above ground.
- E. Locate control valve 4 inches away from hydrant or as required to match Municipal standard.
- F. Provide a drainage pit 36 inches square by 24 inches deep filled with 2 inches washed gravel. Encase elbow of hydrant in gravel to 6 inches above drain opening. Do not connect drain opening to sewer.

3.06 SERVICE CONNECTIONS

- A. Provide new water service laterals to replace each existing service lateral within the work zone.
- B. Provide new curb stop at existing curb stop location or edge of right-of-way as shown by plan and connect existing building service piping to new curb stop after adequate flushing, leaking testing, and disinfection of water mains.

3.07 FIELD QUALITY CONTROL

- A. All pipe will be inspected on delivery and immediatey before being placed in the work, and such pipe not conforming to the requirements will be rejected. The Contractor shall furnish all labor necessary for handling the pipe during inspection and shall remove all rejected pipe from the Site. The Contractor shall be responsible to replace at his own expense all materials, which are defective in manufacture or damaged in handling after delivery.
- B. Pipes shall be tested for strength under a hydrostatic pressure of 150 pounds per square inch.
- C. Leakage shall be defined as the quantity of water that must be supplied into the pipe section being tested at a duration of 2 hours to maintain a pressure within 5 psi of the specified leakage test pressure after the pipe has been filled with water and the air in the pipeline expelled. No installation will be accepted if the leakage is greater than that determined by the formula:
 - $L = ND(P)^{(1/2)} / 7,400$
 - Where: L = allowable leakage, in gallons per hour
 - N = number of joints in the length of pipeline tested
 - D = nominal diameter of the pipe, in inches
 - P = average test pressure during the leakage test, in pounds per square inch
- D. If tests indicate the Work does not meet specified requirements, remove defective portions of Work, place and retest at no cost to the Owner.

SECTION 33 1300

DISINFECTING OF WATER UTILITY DISTRIBUTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Disinfection of site domestic water lines specified in Section 33 1116.
- B. Testing and reporting results.

1.02 RELATED REQUIREMENTS

A. Section 33 1116 - Site Water Utility Distribution Piping.

1.03 REFERENCE STANDARDS

- A. AWWA B300 Hypochlorites; American Water Works Association; 2011 (ANSI/AWWA B300).
- B. AWWA B301 Liquid Chlorine; American Water Works Association; 2010 (ANSI/AWWA B301).
- C. AWWA C651 Disinfecting Water Mains; American Water Works Association; 2005 (ANSI/AWWA C651).

1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Test Reports: Indicate results comparative to specified requirements.
- C. Disinfection report:
 - 1. Type and form of disinfectant used.
 - 2. Date and time of disinfectant injection start and time of completion.
 - 3. Test locations.
 - 4. Initial and 24 hour disinfectant residuals (quantity in treated water) in ppm for each outlet tested.
 - 5. Date and time of flushing start and completion.
 - 6. Disinfectant residual after flushing in ppm for each outlet tested.
- D. Bacteriological report:
 - 1. Date issued, project name, and testing laboratory name, address, and telephone number.
 - 2. Time and date of water sample collection.
 - 3. Name of person collecting samples.
 - 4. Test locations.
 - 5. Test interval: Two tests in 24 hour period for each outlet tested.
 - 6. Coliform bacteria test results for each outlet tested.
 - 7. Certification that water conforms, or fails to conform, to bacterial standards of ______.

1.05 QUALITY ASSURANCE

- A. Testing Firm: Company specializing in testing potable water systems, certified by governing authorities of New York.
- B. Submit bacteriologist's signature and authority associated with testing.

PART 2 PRODUCTS

2.01 DISINFECTION CHEMICALS

A. Chemicals: AWWA B300, Hypochlorite and AWWA B301, Liquid Chlorine.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that piping system and water well has been cleaned, inspected, and pressure tested.
- B. Schedule disinfecting activity to coordinate with start-up, testing, adjusting and balancing, demonstration procedures, including related systems.

3.02 DISINFECTION

- A. Use method prescribed by the applicable state or local codes, or health authority or water purveyor having jurisdiction, or in the absence of any of these follow AWWA C651.
- B. Provide and attach equipment required to perform the work.
- C. Inject treatment disinfectant into piping system.
- D. Maintain disinfectant in system for 24 hours.
- E. Flush, circulate, and clean until required cleanliness is achieved; use municipal domestic water.
- F. Replace permanent system devices removed for disinfection.

3.03 FIELD QUALITY CONTROL

- A. Perform field inspection and testing in accordance with Section 01 4000.
- B. Test samples in accordance with AWWA C651.



Architectural & Engineering DESIGN Associates P.C.

APPENDIX A

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Roberta Reardon, Commissioner



Andrew M. Cuomo, Governor

City of Plattsburgh Joseph R Krupka, Intern Architect/Project Mgr. 1246 Route 3 Plattsburgh NY 12901

Schedule Year Date Requested 03/13/2020 PRC#

2019 through 2020 2020003401

Location City of Plattsburgh Project ID# Project Type Rehabilitation/renovation of existing facility. Construction of new pavilion/toilet rooms.

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Attached is the current schedule(s) of the prevailing wage rates and prevailing hourly supplements for the project referenced above. A unique Prevailing Wage Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2019 through June 2020. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.ny.gov. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice. **OR** fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed:

Date Cancelled:

Name & Title of Representative:

Phone: (518) 457-5589 Fax: (518) 485-1870 W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

General Provisions of Laws Covering Workers on Article 8 Public Work Contracts

Introduction

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

Responsibilities of the Department of Jurisdiction

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission: a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract MUST obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule MUST be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

Both the PW 16 and PW 200 forms are available for completion online.

Hours

No laborer, worker, or mechanic in the employ of a contractor or subcontractor engaged in the performance of any public work project shall be permitted to work more than eight hours in any day or more than five days in any week, except in cases of extraordinary emergency. The contractor and the Department of Jurisdiction (Contracting Agency) may apply to the Bureau of Public Work for a dispensation permitting workers to work additional hours or days per week on a particular public work project.

There are very few exceptions to this rule. Complete information regarding these exceptions is available on the "Request for a dispensation to work overtime" form (PW30) and "4 Day / 10 Hour Work Schedule" form (PW 30.1).

Wages and Supplements

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule form the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12240; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website www.labor.ny.gov.

Upon receiving the original schedule, the Department of Jurisdiction (Contracting Agency) is REQUIRED to provide complete copies to all prime contractors who in turn MUST, by law, provide copies of all applicable county schedules to each subcontractor and obtain from each subcontractor, an affidavit certifying such schedules were received. If the original schedule expired, the contractor may obtain a copy of the new annual determination from the NYSDOL website www.labor.ny.gov.

The Commissioner of Labor makes an annual determination of the prevailing rates. This determination is in effect from July 1st through June 30th of the following year. The annual determination is available on the NYSDOL website www.labor.ny.gov.

Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. As per Article 6 of the Labor law, contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemperaneous, true, and accurate payroll records. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Address, Last 4 Digits of Social Security Number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid

or provided, and Daily and weekly number of hours worked in each classification.

The filing of payrolls to the Department of Jurisdiction is a condition of payment. Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury. The Department of Jurisdiction (Contracting Agency) shall collect, review for facial validity, and maintain such payrolls.

In addition, the Commissioner of Labor may require contractors to furnish, with ten (10) days of a request, payroll records sworn to as their validity and accuracy for public work and private work. Payroll records include, by are not limited to time cards, work description sheets, proof that supplements were provided, cancelled payroll checks and payrolls. Failure to provide the requested information within the allotted ten (10) days will result in the withholding of up to 25% of the contract, not to exceed \$100,000.00. If the contractor or subcontractor does not maintain a place of business in New York State and the amount of the contract exceeds \$25,000.00, payroll records and certifications must be kept on the project worksite.

The prime contractor is responsible for any underpayments of prevailing wages or supplements by any subcontractor.

All contractors or their subcontractors shall provide to their subcontractors a copy of the Prevailing Rate Schedule specified in the public work contract as well as any subsequently issued schedules. A failure to provide these schedules by a contractor or subcontractor is a violation of Article 8, Section 220-a of the Labor Law.

All subcontractors engaged by a public work project contractor or its subcontractor, upon receipt of the original schedule and any subsequently issued schedules, shall provide to such contractor a verified statement attesting that the subcontractor has received the Prevailing Rate Schedule and will pay or provide the applicable rates of wages and supplements specified therein. (See NYS Labor Laws, Article 8. Section 220-a).

Determination of Prevailing Wage and Supplement Rate Updates Applicable to All Counties

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

Withholding of Payments

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b and 235.2 of the Labor Law to so notify the financial officer of the Department of Jurisdiction (Contracting Agency) that awarded the public work contract. Such officer MUST then withhold or cause to be withheld from any payment due the prime contractor on account of such contract the amount indicated by the Bureau as sufficient to satisfy the unpaid wages and supplements, including interest and any civil penalty that may be assessed by the Commissioner of Labor. The withholding continues until there is a final determination of the underpayment by the Commissioner of Labor or by the court in the event a legal proceeding is instituted for review of the determination of the Commissioner of Labor.

The Department of Jurisdiction (Contracting Agency) shall comply with this order of the Commissioner of Labor or of the court with respect to the release of the funds so withheld.

Summary of Notice Posting Requirements

The current Prevailing Rate Schedule must be posted in a prominent and accessible place on the site of the public work project. The prevailing wage schedule must be encased in, or constructed of, materials capable of withstanding adverse weather conditions and be titled "PREVAILING RATE OF WAGES" in letters no smaller than two (2) inches by two (2) inches.

The "Public Work Project" notice must be posted at the beginning of the performance of every public work contract, on each job site.

Every employer providing workers. compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers. Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

Apprentices

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeyworkers in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above or is performing work outside the classification of work for which the apprentice is indentured, must be paid the prevailing journeyworker's wage rate for the classification of work the employee is actually performing.

NYSDOL Labor Law, Article 8, Section 220-3, require that only apprentices individually registered with the NYS Department of Labor may be paid apprenticeship rates on a public work project. No other Federal or State Agency of office registers apprentices in New York State.

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12240 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

The only conclusive proof of individual apprentice registration is written verification from the NYSDOL Apprenticeship Training Albany Central office. Neither Federal nor State Apprenticeship Training offices outside of Albany can provide conclusive registration information.

It should be noted that the existence of a registered apprenticeship program is not conclusive proof that any person is registered in that program. Furthermore, the existence or possession of wallet cards, identification cards, or copies of state forms is not conclusive proof of the registration of any person as an apprentice.

Interest and Penalties

In the event that an underpayment of wages and/or supplements is found:

- Interest shall be assessed at the rate then in effect as prescribed by the Superintendent of Banks pursuant to section 14-a of the Banking Law, per annum from the date of underpayment to the date restitution is made.
- A Civil Penalty may also be assessed, not to exceed 25% of the total of wages, supplements, and interest due.

Debarment

Any contractor or subcontractor and/or its successor shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with any state, municipal corporation or public body for a period of five (5) years when:

- Two (2) willful determinations have been rendered against that contractor or subcontractor and/or its successor within any consecutive six (6) year period.
- There is any willful determination that involves the falsification of payroll records or the kickback of wages or supplements.

Criminal Sanctions

Willful violations of the Prevailing Wage Law (Article 8 of the Labor Law) may be a felony punishable by fine or imprisonment of up to 15 years, or both.

Discrimination

No employee or applicant for employment may be discriminated against on account of age, race, creed, color, national origin, sex, disability or marital status.

No contractor, subcontractor nor any person acting on its behalf, shall by reason of race, creed, color, disability, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates (NYS Labor Law, Article 8, Section 220-e(a)).

No contractor, subcontractor, nor any person acting on its behalf, shall in any manner, discriminate against or intimidate any employee on account of race, creed, color, disability, sex, or national origin (NYS Labor Law, Article 8, Section 220e(b)).

The Human Rights Law also prohibits discrimination in employment because of age, marital status, or religion.

There may be deducted from the amount payable to the contractor under the contract a penalty of \$50.00 for each calendar day during which such person was discriminated against or intimidated in violation of the provision of the contract (NYS Labor Law, Article 8, Section 220-e(c)).

The contract may be cancelled or terminated by the State or municipality. All monies due or to become due thereunder may be forfeited for a second or any subsequent violation of the terms or conditions of the anti-discrimination sections of the contract (NYS Labor Law, Article 8, Section 220-e(d)).

Every employer subject to the New York State Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers notices furnished by the State Division of Human Rights.

Workers' Compensation

In accordance with Section 142 of the State Finance Law, the contractor shall maintain coverage during the life of the contract for the benefit of such employees as required by the provisions of the New York State Workers' Compensation Law.

A contractor who is awarded a public work contract must provide proof of workers' compensation coverage prior to being allowed to begin work.

The insurance policy must be issued by a company authorized to provide workers' compensation coverage in New York State. Proof of coverage must be on form C-105.2 (Certificate of Workers' Compensation Insurance) and must name this agency as a certificate holder.

If New York State coverage is added to an existing out-of-state policy, it can only be added to a policy from a company authorized to write workers' compensation coverage in this state. The coverage must be listed under item 3A of the information page.

The contractor must maintain proof that subcontractors doing work covered under this contract secured and maintained a workers' compensation policy for all employees working in New York State.

Every employer providing worker's compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

Unemployment Insurance

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the New York State Department of Labor.

THE OF NEW OF A

Andrew M. Cuomo, Governor

City of Plattsburgh

Joseph R Krupka, Intern Architect/Project Mgr. 1246 Route 3 Plattsburgh NY 12901 Schedule Year Date Requested PRC#

2019 through 2020 03/13/2020 2020003401

LocationCity of PlattsburghProject ID#Project TypeRehabilitation/renovation of existing facility. Construction of new pavilion/toilet rooms.

Notice of Contract Award

New York State Labor Law, Article 8, Section 220.3a requires that certain information regarding the awarding of public work contracts, be furnished to the Commissioner of Labor. One "Notice of Contract Award" (PW 16, which may be photocopied), **MUST** be completed for **EACH** prime contractor on the above referenced project.

Upon notifying the successful bidder(s) of this contract, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

| Federal Employer Identification N | umber: | | |
|------------------------------------------------------------|--------------|----------------------|---------------------------------------------------------------------------------------------------------------|
| Name: Address: | | | |
| City: | | State: | Zip: |
| Amount of Contract: | <u>\$</u> // | Contra [] | act Type: (01) General Construction |
| Approximate Starting Date: Approximate Completion Date: | / | [] [] [] [] | (02) Heating/Ventilation(03) Electrical(04) Plumbing(05) Other : |

Contractor Information All information must be supplied

Phone: (518) 457-5589 Fax: (518) 485-1870 W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

Roberta Reardon, Commissioner

Social Security Numbers on Certified Payrolls:

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors' concern regarding inclusion of this information on payrolls if another identifier will suffice.

For these reasons, the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor. This change does not affect the Department's ability to request and receive the entire social security number from employers during its public work/ prevailing wage investigations.

Construction Industry Fair Play Act: Required Posting for Labor Law Article 25-B § 861-d

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site. Failure to post the notice can result in penalties of up to \$1,500 for a first offense and up to \$5,000 for a second offense. The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, www.labor.ny.gov. https://labor.ny.gov/formsdocs/ui/IA999.pdf

If you have any questions concerning the Fair Play Act, please call the State Labor Department toll-free at 1-866-435-1499 or email us at: <u>dol.misclassified@labor.ny.gov</u>.

Worker Notification: (Labor Law §220, paragraph a of subdivision 3-a)

This provision is an addition to the existing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the *prevailing wage rate* for their particular job classification *on each pay stub**. It also requires contractors and subcontractors to *post a notice* at the beginning of the performance of every public work contract *on each job site* that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her job classification. The required notification will be provided with each wage schedule, may be downloaded from our website *www.labor.ny.gov* or be made available upon request by contacting the Bureau of Public Work at 518-457-5589. *In the event the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.

(05.19)

To all State Departments, Agency Heads and Public Benefit Corporations IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

Budget Policy & Reporting Manual

B-610

Public Work Enforcement Fund

effective date December 7, 2005

1. Purpose and Scope:

This Item describes the Public Work Enforcement Fund (the Fund, PWEF) and its relevance to State agencies and public benefit corporations engaged in construction or reconstruction contracts, maintenance and repair, and announces the recently-enacted increase to the percentage of the dollar value of such contracts that must be deposited into the Fund. This item also describes the roles of the following entities with respect to the Fund:

- New York State Department of Labor (DOL),
- The Office of the State of Comptroller (OSC), and
- State agencies and public benefit corporations.

2. Background and Statutory References:

DOL uses the Fund to enforce the State's Labor Law as it relates to contracts for construction or reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.

Chapter 511 of the Laws of 1995 (as amended by Chapter 513 of the Laws of 1997, Chapter 655 of the Laws of 1999, Chapter 376 of the Laws of 2003 and Chapter 407 of the Laws of 2005) established the Fund.

3. Procedures and Agency Responsibilities:

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law, into which all State agencies and public benefit corporations enter.

Chapter 407 of the Laws of 2005 increased the amount required to be provided to this fund to .10 of one-percent of the total cost of each such contract, to be calculated at the time agencies or public benefit corporations enter into a new contract or if a contract is amended. The provisions of this bill became effective August 2, 2005.

To all State Departments, Agency Heads and Public Benefit Corporations IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

OSC will report to DOL on all construction-related ("D") contracts approved during the month, including contract amendments, and then DOL will bill agencies the appropriate assessment monthly. An agency may then make a determination if any of the billed contracts are exempt and so note on the bill submitted back to DOL. For any instance where an agency is unsure if a contract is or is not exempt, they can call the Bureau of Public Work at the number noted below for a determination. Payment by check or journal voucher is due to DOL within thirty days from the date of the billing. DOL will verify the amounts and forward them to OSC for processing.

For those contracts which are not approved or administered by the Comptroller, monthly reports and payments for deposit into the Public Work Enforcement Fund must be provided to the Administrative Finance Bureau at the DOL within 30 days of the end of each month or on a payment schedule mutually agreed upon with DOL.

Reports should contain the following information:

- Name and billing address of State agency or public benefit corporation;
- State agency or public benefit corporation contact and phone number;
- Name and address of contractor receiving the award;
- Contract number and effective dates;
- Contract amount and PWEF assessment charge (if contract amount has been amended, reflect increase or decrease to original contract and the adjustment in the PWEF charge); and
- Brief description of the work to be performed under each contract.

Checks and Journal Vouchers, payable to the "New York State Department of Labor" should be sent to:

Department of Labor Administrative Finance Bureau-PWEF Unit Building 12, Room 464 State Office Campus Albany, NY 12240

Any questions regarding billing should be directed to NYSDOL's Administrative Finance Bureau-PWEF Unit at (518) 457-3624 and any questions regarding Public Work Contracts should be directed to the Bureau of Public Work at (518) 457-5589.



Required Notice under Article 25-B of the Labor Law

Attention All Employees, Contractors and Subcontractors: You are Covered by the Construction Industry Fair Play Act

The law says that you are an employee unless:

- You are free from direction and control in performing your job, and
- You perform work that is not part of the usual work done by the business that hired you, and
- You have an independently established business.

Your employer cannot consider you to be an independent contractor unless all three of these facts apply to your work.

It is against the law for an employer to misclassify employees as independent contractors or pay employees off the books.

Employee Rights: If you are an employee, you are entitled to state and federal worker protections. These include:

- Unemployment Insurance benefits, if you are unemployed through no fault of your own, able to work, and otherwise qualified,
- Workers' compensation benefits for on-the-job injuries,
- Payment for wages earned, minimum wage, and overtime (under certain conditions),
- Prevailing wages on public work projects,
- The provisions of the National Labor Relations Act, and
- A safe work environment.

It is a violation of this law for employers to retaliate against anyone who asserts their rights under the law. Retaliation subjects an employer to civil penalties, a private lawsuit or both.

Independent Contractors: If you are an independent contractor, you must pay all taxes and Unemployment Insurance contributions required by New York State and Federal Law.

Penalties for paying workers off the books or improperly treating employees as independent contractors:

| Civil Penalty | First offense: Up to \$2,500 per employee | | | |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| | Subsequent offense(s): Up to \$5,000 per employee | | | |
| Criminal Penalty | First offense: Misdemeanor - up to 30 days in jail, up to a \$25,000 fine and debarment from performing public work for up to one year. | | | |
| | Subsequent offense(s): Misdemeanor - up to 60 days in jail or up to a \$50,000 fine and debarment from performing public work for up to 5 years. | | | |

If you have questions about your employment status or believe that your employer may have violated your rights and you want to file a complaint, call the Department of Labor at (866) 435-1499 or send an email to <u>dol.misclassified@labor.ny.gov</u>. All complaints of fraud and violations are taken seriously. You can remain anonymous.

Employer Name: IA 999 (09/16)

New York State Department of Labor Bureau of Public Work

Attention Employees

THIS IS A:

PUBLIC WORK PROJECT

If you are employed on this project as a **worker, laborer, or mechanic** you are entitled to receive the **prevailing wage and supplements rate** for the classification at which you are working.

Chapter 629 of the Labor Laws of 2007: These wages are set by law and must be posted at the work site. They can also be found at: <u>www.labor.ny.gov</u>

If you feel that you have not received proper wages or benefits, please call our nearest office.*

Albany Binghamton Buffalo Garden City New York City Newburgh

(518) 457-2744 (607) 721-8005 (716) 847-7159 (516) 228-3915 (212) 932-2419 (845) 568-5156 Patchogue Rochester Syracuse Utica White Plains

(631) 687-4882 (585) 258-4505 (315) 428-4056 (315) 793-2314 (914) 997-9507

 For New York City government agency construction projects, please contact the Office of the NYC Comptroller at (212) 669-4443, or <u>www.comptroller.nyc.gov</u> – click on Bureau of Labor Law.

Contractor Name:

Project Location:

Requirements for OSHA 10 Compliance

Article 8 §220-h requires that when the advertised specifications, for every contract for public work, is \$250,000.00 or more the contract must contain a provision requiring that every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. The clear intent of this provision is to require that all employees of public work contractors, required to be paid prevailing rates, receive such training "prior to the performing any work on the project."

The Bureau will enforce the statute as follows:

All contractors and sub contractors must attach a copy of proof of completion of the OSHA 10 course to the first certified payroll submitted to the contracting agency and on each succeeding payroll where any new or additional employee is first listed.

Proof of completion may include but is not limited to:

- Copies of bona fide course completion card (Note: Completion cards do not have an expiration date.)
- Training roster, attendance record of other documentation from the certified trainer pending the issuance of the card.
- Other valid proof

**A certification by the employer attesting that all employees have completed such a course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-457-5589.

WICKS

Public work projects are subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work, when the total project's threshold is \$3 million in Bronx, Kings, New York, Queens and, Richmond counties; \$1.5 million in Nassau, Suffolk and Westchester counties; and \$500,000 in all other counties.

For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or the use of a Project Labor Agreement (PLA), and must be open to public inspection.

Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA's would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.

The Commissioner of Labor shall have the power to enforce separate specification requirement s on projects, and may issue stopbid orders against public owners for non-compliance.

Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.

Contractors must pay subcontractors within a 7 days period.

(07.19)

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a countyby-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Payrolls and Payroll Records

Contractors and subcontractors are required to establish, maintain, and preserve for not less that six (6) years, contemporaneous, true, and accurate payroll records.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.ny.gov) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

| Title (Trade) | Ratio |
|------------------------------------------------|---------|
| Boilermaker (Construction) | 1:1,1:4 |
| Boilermaker (Shop) | 1:1,1:3 |
| Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder) | 1:1,1:4 |
| Carpenter (Residential) | 1:1,1:3 |
| Electrical (Outside) Lineman | 1:1,1:2 |
| Electrician (Inside) | 1:1,1:3 |
| Elevator/Escalator Construction & Modernizer | 1:1,1:2 |
| Glazier | 1:1,1:3 |
| Insulation & Asbestos Worker | 1:1,1:3 |
| Iron Worker | 1:1,1:4 |
| Laborer | 1:1,1:3 |
| Mason | 1:1,1:4 |
| Millwright | 1:1,1:4 |
| Op Engineer | 1:1,1:5 |
| Painter | 1:1,1:3 |
| Plumber & Steamfitter | 1:1,1:3 |
| Roofer | 1:1,1:2 |
| Sheet Metal Worker | 1:1,1:3 |
| Sprinkler Fitter | 1:1,1:2 |
| | |

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor Bureau of Public Work State Office Campus, Bldg. 12 Albany, NY 12240

| District Office Locations: | Telephone # | FAX # |
|----------------------------------------|--------------|--------------|
| Bureau of Public Work - Albany | 518-457-2744 | 518-485-0240 |
| Bureau of Public Work - Binghamton | 607-721-8005 | 607-721-8004 |
| Bureau of Public Work - Buffalo | 716-847-7159 | 716-847-7650 |
| Bureau of Public Work - Garden City | 516-228-3915 | 516-794-3518 |
| Bureau of Public Work - Newburgh | 845-568-5287 | 845-568-5332 |
| Bureau of Public Work - New York City | 212-932-2419 | 212-775-3579 |
| Bureau of Public Work - Patchogue | 631-687-4882 | 631-687-4902 |
| Bureau of Public Work - Rochester | 585-258-4505 | 585-258-4708 |
| Bureau of Public Work - Syracuse | 315-428-4056 | 315-428-4671 |
| Bureau of Public Work - Utica | 315-793-2314 | 315-793-2514 |
| Bureau of Public Work - White Plains | 914-997-9507 | 914-997-9523 |
| Bureau of Public Work - Central Office | 518-457-5589 | 518-485-1870 |

Clinton County General Construction

Boilermaker

03/01/2020

| Boilermaker | | | | | | | | 03/01/2020 |
|--------------------------------------------------------------------|----------------------|------------------------------|------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| JOB DESCRIPTION BO | oilermaker | | | | | DISTRICT (| 5 | |
| ENTIRE COUNTIES Cayuga, Clinton, Cortland | , Franklin, Jeffer | son, Lewis, N | /ladison, Oneida | a, Onondaga, | Oswego, Sene | eca, St. Lawre | nce, Tompkin | s |
| WAGES | | | | | | | | |
| Per hour: | | 07/01/2019 | | 01/01/2020 | | | | |
| Boilermaker | | \$ 33.93 | | \$ 35.23 | | | | |
| SUPPLEMENTAL BEN Per hour: | EFITS | | | | | | | |
| Journeyman | | \$ 26.36** | | \$ 26.65** | | | | |
| ** IMPORTANT NOTE: Po | ortion of supplem | nental benefit | s per hour paid | at same pren | nium as shown | for overtime. | | |
| Journeyman | | \$ 25.13 | | \$ 25.42 | | | | |
| OVERTIME PAY See (B, E, Q) on OVERTII | ME PAGE | | | | | | | |
| HOLIDAY Paid: Overtime: NOTE: When a holiday fal | | 25) on HOLI le day observ | DAY PAGE red by the State | or Nation sha | all be observed | l. When Chris | mas Day and | New Year's |
| all on Saturday, Friday wi REGISTERED APPREN WAGES per hour: | | s the holiday. | | | | | | |
| Six month terms at the foll | lowing percentag | ge of Journey | man's wage. | | | | | |
| | 1st 65% | 2nd 65% | 3rd 70% | 4th 75% | 5th 80% | 6th 85% | 7th 90% | 8th 95% |
| 07/01/2019 01/01/2020 | \$ 22.05 \$ 22.90 | \$ 22.05 \$ 22.90 | \$ 23.75 \$ 24.66 | \$ 25.45 \$ 26.42 | \$ 27.14 \$ 28.18 | \$ 28.84 \$ 29.95 | \$ 30.54 \$ 31.70 | \$ 32.23 \$ 33.47 |
| SUPPLEMENTAL BENEF | TTS per hour: | | | | | | | |
| 07/01/2019 | \$ 20.04 | \$ 20.04 | \$ 20.95 | \$ 21.84 | \$ 22.73 | \$ 23.65 | \$ 24.57 | \$ 25.46 |
| 01/01/2020 | \$ 20.23 | \$ 20.23 | \$ 21.15 | \$ 22.05 | \$ 22.96 | \$ 23.89 | \$ 24.83 | \$ 25.73 |
| IMPORTANT NOTE: Port | tion of suppleme | ental benefits | per hour paid a | t same premi | um as shown f | or overtime. | | |
| 07/01/2019 | \$ 18.81* | \$ 18.81* | \$ 19.72* | \$ 20.61* | \$ 21.50* | \$ 22.42* | \$ 23.34* | \$ 24.23* |
| 01/01/2020 | \$ 19.00* | \$ 19.00* | \$ 19.92* | \$ 20.82* | \$ 21.73* | \$ 22.66* | \$23.60* | \$ 24.50* 6-17 |
| Carpenter - Building | | | | | | | | 03/01/2020 |
| JOB DESCRIPTION Ca | arpenter - Buildir | ng | | | | DISTRICT 2 | 2 | |
| ENTIRE COUNTIES Clinton, Essex, Franklin | | | | | | | | |
| WAGES | | | | | | | | |
| Per hour: | 07/01/2019 | | 07/01/2020 Additional | | | | | |
| Carpenter | \$ 27.17 | | \$ 1.00 | | | | | |
| Floor Coverer | 27.17 | | 1.00 | | | | | |
| Carpet Laver | 27.17 | | 1.00 | | | | | |

1.00

1.00

1.00

0.00

27.17

27.17

27.17

61.25

28.17

Carpet Layer Dry-Wall

Diver-Wet Day

Diver-Dry Day

Lather

Diver Tender

1.00

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (not subject to overtime premiums):

- Pile Drivers shall receive \$0.25 per hour over the journeyman's rate of pay when performing piledriving work.

- Certified welders shall receive \$1.00 per hour over the journeyman's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work

- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive his regular hourly rate plus \$1.50 per hour.

- Depth pay for Divers based upon deepest depth on the day of the dive:

28.17

0' to 80' no additional fee

81' to 100' additional \$.50 per foot

101' to 150' additional \$0.75 per foot

151' and deeper additional \$1.25 per foot

- Penetration pay for Divers based upon deepest penetration on the day of the dive:

0' to 50' no additional fee

51' to 100' additional \$.75 per foot

101' and deeper additional \$1.00 per foot

- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman

\$ 20.89

OVERTIME PAY

See (B, E, *E2, Q) on OVERTIME PAGE

* Note - Saturday is payable at straight time if the employee misses work, except where a doctor's or hospital verification of illness is produced Monday through Friday when work was available to the employee.

HOLIDAY Paid:

See (1) on HOLIDAY PAGE See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE Note: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

REGISTERED APPRENTICES

Wages per hour

FOR APPRENTICES INDENTURED PRIOR TO JANUARY 1, 2016

One year terms at the following percentage of Journeyman's base wage.

| 1st | 2nd | 3rd | 4th |
|-----|-----|-----|-----|
| 50% | 60% | 70% | 80% |

Supplemental Benefits per hour:

| 1st year term | \$ 11.46 |
|---------------|----------|
| 2nd year term | 11.46 |
| 3rd year term | 14.06 |
| 4th year term | 14.06 |

FOR APPRENTICES INDENTURED AFTER JANUARY 1, 2016 1,300 hour terms at the following percentage of Journeyman's base wage.

| 1st | 2nd | 3rd | 4th | 5th |
|-----|-----|-----|-----|-----|
| 50% | 60% | 65% | 70% | 80% |

| Supplemental Benefits p | er hour: |
|-------------------------|----------|
| 1st term | \$ 11.46 |
| 2nd term | 11.46 |
| 3rd term | 14.06 |
| 4th term | 14.06 |
| 5th term | 14.06 |

DISTRICT 2

ADDITIONAL AMOUNTS PAID TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED (not subject to overtime premiums):

- Pile Driving apprentices shall receive \$0.25 per hour when performing piledriving work.

- Certified welders shall receive \$1.00 per hour over the apprentices rate of pay when the apprentice is required to be certified and performs DOT or ABS specified welding work

- When an apprentice performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require the apprentice to be furnished and use or wear required forms of personal protection, then the apprentice shall receive his regular hourly rate plus \$1.50 per hour.

2-291B-Cli

03/01/2020

Carpenter - Building / Heavy&Highway

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES

Orange: The area lying on Northern side of Orange County demarcated by a line drawn from the Bear Mountain Bridge continuing east to the Bear Mountain Circle, continue North on 9W to the town of Cornwall where County Road 107 (also known as Quaker Rd) crosses under 9W, then east on County Road 107 to Route 32, then north on Route 32 to Orrs Mills Rd, then west on Orrs Mills Rd to Route 94, continue west and south on Route 94 to the Town of Chester, to the intersection of Kings Highway, continue south on Kings Highway to Bellvale Rd, west on Bellvale Rd to Bellvale Lakes Rd, then south on Bellvale Lakes Rd to Kain Rd, southeast on Kain Rd to Route 17A, then north and southeast along Route 17A to Route 210, then follow Route 210 to NJ Border.

| Wages per hour: | 07/01/2019 | 07/01/2020 Additional | 07/01/2021 Additional |
|--------------------------------------------------------------------|------------|--------------------------|--------------------------|
| Carpenter - ONLY for Artificial Turf/Synthetic Sport Surface | \$ 30.88 | \$ 1.15 | \$ 1.15 |

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

SUPPLEMENTAL BENEFITS Per hour:

Journeyman \$23.10

OVERTIME PAY See (B, E, Q, X) on OVERTIME PAGE

HOLIDAY

See (5) on HOLIDAY PAGE

Overtime: Notes:

Paid:

WAGES

See (5, 6, 16) on HOLIDAY PAGE

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. Whan a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

REGISTERED APPRENTICES

Wages per hour:

One year terms at the following percentage of Journeyman's wage:

| 1st | 2nd | 3rd | 4th |
|---------------|----------------|-----------|----------|
| 55% | 60% | 70% | 80% |
| | | | |
| Supplem | ental Benefits | per hour: | |
| 1st year term | | | \$ 11.55 |
| 2nd year term | | | 11.55 |
| 3rd year term | | | 14.15 |
| 4th vear term | | | 14.15 |

2-42AtSS

03/01/2020

JOB DESCRIPTION Carpenter - Heavy&Highway

ENTIRE COUNTIES

Carpenter - Heavy&Highway

Albany, Clinton, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

4th year term

07/01/2021

DISTRICT 2

| | | Additional | Additional |
|---------------|----------|------------|------------|
| Carpenter | \$ 33.02 | \$ 1.40 | \$ 1.40 |
| Piledriver | 33.02 | 1.40 | 1.40 |
| Diver-Wet Day | 58.02 | 1.40 | 1.40 |
| Diver-Dry Day | 34.02 | 1.40 | 1.40 |
| Diver-Tender | 34.02 | 1.40 | 1.40 |

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (not subject to overtime premiums):

- When project owner mandates a single irregular work shift, the employee will receive an additional \$2.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.

- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.00 per hour.

- Certified welders when required to perform welding work will receive an additional \$1.50 per hour.

ADDITIONAL NOTES PERTAINING TO DIVERS/TENDERS:

Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate

plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and tenders).

- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- All crew members aboard a submersible shall receive the Diver-Wet Day rate.

- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):

0' to 50' no additional fee

51'to 100' additional \$.50 per foot

101'to 150' additional \$0.75 per foot

151'and deeper additional \$1.25 per foot

- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):

0' to 50' no additional fee

51' to 100' additional \$.75 per foot

101' and deeper additional \$1.00 per foot

- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday, provided the project duration is more than forty (40) hours.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

| Journeyman | \$ 22.50 | |
|------------|----------|--|
|------------|----------|--|

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday. Employee must work scheduled work day before and after the Holiday.

REGISTERED APPRENTICES

Wages per hour

FOR APPRENTICES INDENTURED PRIOR TO JANUARY 1, 2016

One year terms at the following percentage of Journeyman's base wage

| 1st | 2nd | 3rd | 4th |
|---------------|----------------|-----------|----------|
| 55% | 60% | 70% | 80% |
| | | | |
| Suppleme | ental Benefits | per hour: | |
| 1st year t | erm | | \$ 11.42 |
| 2nd year | term | | 11.42 |
| 3rd year term | | | 14.02 |
| 4th year term | | | 14.02 |

FOR APPRENTICES INDENTURED AFTER JANUARY 1, 2016 1,300 hour terms at the following percentage of Journeyman's base wage

| 1st | 2nd | 3rd | 4th | 5th |
|-----|-----|-----|-----|-----|
| 55% | 60% | 65% | 70% | 80% |

2-291HH-Alb

| Supplemental Benefits per | r hour: | |
|---------------------------|-----------------------------|-------------------------------------------------------------|
| 1st term | \$ 11.42 | |
| 2nd term | 11.42 | |
| 3rd term | 14.02 | |
| 4th term | 14.02 | |
| 5th term | 14.02 | |
| NOTE ADDITIONAL AMO | UNTS PAID TO APPRENTICES FO | OR THE FOLLOWING WORK LISTED BELOW (not subject to overtime |
| premiums): | | |

- When project owner mandates a single irregular work shift, the employee will receive an additional \$2.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.

- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.00 per hour.

- Certified welders when required to perform welding work will receive an additional \$1.50 per hour.

| Electrician | 03/01/2020 |
|-----------------------------|------------|
| JOB DESCRIPTION Electrician | DISTRICT 6 |

ENTIRE COUNTIES

Clinton, Essex, Franklin, Jefferson, Lewis, St. Lawrence

WAGES

| Per hour: | 07/01/2019 | 04/01/2020 Additional | 04/01/2021 Additional | 04/01/2022 Additional |
|-------------|------------|--------------------------|--------------------------|--------------------------|
| Electrician | \$ 35.00 | \$ 1.55 | \$ 1.60 | \$ 1.65 |
| Teledata | 35.00 | | | |
| Welder | 37.00 | | | |

NOTE: Additional premiums for the following work listed:

-Additional \$1.50 per hour for work performed underground such as tunnels and mine shafts. Excludes manholes and walkway tunnels between buildings.

-Additional \$1.50 per hour for working 35 feet or more on scaffolds, ladders, towers, steeples, structural steel, or mechanical lifts over 65 feet.

Shift Work: The following rates will apply on all Contracting Agency mandated shifts worked between the hours listed below. The employer may be permitted to adjust the starting hours of the shift by up to two (2) hours if required by the agency. If a shift begins outside of the stated shift hours, the rate paid would be determined by what shift the majority of the hours were worked.

| 1st shift: | 8:00 AM to 4:30 PM regular wage rate |
|------------|--------------------------------------------------|
| 2nd shift: | 4:30 PM to 1:00 AM regular wage rate plus 17.3% |
| 3rd shift: | 12:30 AM to 9:00 AM regular wage rate plus 31.4% |

** IMPORTANT NOTICE - EFFECTIVE 07/01/2012 **

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 20.68 *plus 5.75% of gross wage

* NOTE: THE 5.75% IS BASED ON THE HOURLY WAGE PAID, STRAIGHT TIME RATE OR PREMIUM TIME RATE.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP...Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

| Paid: | See (1) on HOLIDAY PAGE |
|-----------|----------------------------|
| Overtime: | See (5, 6) on HOLIDAY PAGE |

REGISTERED APPRENTICES

| WAGES: Hourly terms at the following p | percentage of Jo | ourneyman's v | vage. | |
|----------------------------------------|------------------|---------------|---------|---------|
| 1-1000 | to 2000 | to 3500 | to 5000 | to 6500 |
| 45% | 50% | 55% | 60% | 70% |
| | | | | |

| | | 0070 | 0070 | 0070 | | 0070 |
|-----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Electrician Tunnel | \$15.75 \$17.25 | \$17.50 \$19.00 | \$19.25 \$20.75 | \$21.00 \$22.50 | \$24.50 \$26.00 | \$28.00 \$29.50 |
| | | | | | | |

to 8000 80%

DISTRICT 1

| SUPPLEMENTAL BENEFITS per hour: | |
|---------------------------------|------------|
| | 07/01/2019 |

| Appr 1st & 2nd term | \$ 10.02 * plus 5.75% of gross wage |
|----------------------|-------------------------------------------|
| Appr All other terms | \$ 20.68 * plus 5.75% of gross wage |

* NOTE: THE 5.75% IS BASED ON THE HOURLY WAGE PAID, STRAIGHT TIME RATE OR PREMIUM TIME RATE.

6-910

| Elevator Constructor | 03/01/2020 |
|----------------------|------------|
| | |

JOB DESCRIPTION Elevator Constructor

ENTIRE COUNTIES

Albany, Clinton, Essex, Fulton, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Madison: Madison Only the towns of: Brookfield, Hamilton, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida Oneida: Entire county except the towns of: Camden, Florence, and Vienna.

WAGES Per hour

| | 07/01/2019 | 01/01/2020 |
|----------|------------------------------|------------------------------|
| Mechanic | \$ 46.00 | \$ 47.51 |
| Helper | 70% of Mechanic Wage Rate | 70% of Mechanic Wage Rate |

Four (4), ten (10) hour days may be worked for New Construction and Modernization Work at straight time during a week, Monday thru Thursday or Tuesday thru Friday.

***Four (4), ten (10) hour days are not permitted for Contract Work/Repair Work

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS Per hour

| | 07/01/2019 | 01/01/2020 |
|-------------------|------------|------------|
| Journeyman/Helper | \$ 33.705* | \$ 34.765* |

(*)Plus 6% of hourly rate, if less than 5 years of service. Plus 8% of hourly rate, if more than 5 years of service.

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

| Paid: | See (5, 6, 15, 16) on HOLIDAY PAGE |
|-----------|------------------------------------|
| Overtime: | See (5, 6, 15, 16) on HOLIDAY PAGE |

Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

| Wages per | hour: | | | |
|-----------|---------|--------|--------|--------|
| 0-6 mo* | 6-12 mo | 2nd yr | 3rd yr | 4th yr |
| 50% | 55 % | 65 % | 70 % | 80 % |

(*)Plus 6% of the hourly rate, no additional supplemental benefits.

Supplemental Benefits - per hour worked:

Same as Journeyman/Helper

1-35

03/01/2020

Glazier

JOB DESCRIPTION Glazier

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

| Per nour | 07/01/2019 | 5/01/2020 | 5/01/2021 |
|----------------------|-----------------------------------------|-------------|------------|
| | | Additional | Additional |
| Glazier Base Wage | \$ 29.15 | \$ 1.75 | \$ 1.75 |
| | + additional \$2.20 per hour for all ho | ours worked | |
| High Work Base Wage* | 31.55 | | |

+ additional \$3.55 per hour for all hours worked

(*)When working on Swing Stage or Lift 100 feet or more in height, measured from the ground level up.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the 4 Day/10 Hour Work schedule, as your normal schedule, you must submit an Employer Registration for Use of 4 Day/10 Hour Work Schedule, form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour

| Journeyman | \$ 20.06 |
|------------|----------|
| Journeyman | |
| High Work | 25.36 |

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

Premium is applied to the respective base wage only.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE

Note: If any of the holidays are designated by federal law to be celebrated on a day other than that on which they regularly fall, then the holiday shall be celebrated on the day set by said federal law as if the day on which the holiday is celebrated was actually the holiday date.

REGISTERED APPRENTICES

Wages per hour

Apprentice Glazier One Year and 1500 hr. terms at the following percentage of Journeymans base wage.

| 1st | 2nd | 3rd | 4th |
|-----------------|---------------|-----------------|---------------------|
| 50% | 65% | 75% | 90% |
| + additional \$ | 2.20 per hour | for all hours w | orked for all terms |

Apprentice Glazier Hi-Work One Year and 1500 hr. terms at the following percentage of Journeymans Hi-Work base wage.

| 1st | 2nd | 3rd | 4th | |
|---------------|-----|-----|-----|------|
| 50% | 65% | 75% | 90% | |
| مر ما دا نه م | | | | - 11 |

+ additional \$3.52 per hour for all hours worked for all terms

Supplemental Benefits per hour worked

| Apprentice | |
|----------------------|----------|
| 1st term | \$ 16.39 |
| 2nd-4th term | 20.06 |
| Apprentice High Work | |
| 1st term | 19.34 |
| 2nd-4th term | 25.36 |

| Last Published on Mar 0 | 1 2020 | | | PRC Number 202000340 | 1 Clinton County |
|-----------------------------------------------------------------------|-------------------|-------------------------------------|-----------------------------------------------------------|-----------------------------------|------------------|
| JOB DESCRIPTION | Insulator - He | at & Frost | | DISTRICT 1 | |
| ENTIRE COUNTIES Clinton, Franklin | i | | | | |
| WAGES | | | | | |
| Wages per hour | | 07/01/2019 | 8/1/2019 | | |
| Asbestos Worker* | | \$ 30.63 | \$ 30.28 | | |
| Insulator* | | 30.63 | 30.28 | | |
| Firestopping Worker* | | 30.64 | 30.28 | | |
| *)On Mechanical Syst | ems only. | | | | |
| On government manda | ated shift work a | additional 12% of wage fo | or all shifts starting after 3:3 | 30 Pm. | |
| SUPPLEMENTAL B | ENEFITS | | | | |
| Journeyman | | \$ 21.94 | \$ 22.36 | | |
| • | | ΨΖΙ.ΰΤ | ψ ΖΖ.ΟΟ | | |
| OVERTIME PAY See (*B1, **Q) on OVE 'B1=Double time begin | ns after 10 hour | | | | |
| **Q=Triple time on Lab | or Day if worke | ð. | | | |
| HOLIDAY | 0 (1) - | | | | |
| Paid: Overtime: | | n HOLIDAY PAGE) on HOLIDAY PAGE | | | |
| | | | observed as the holiday. | | |
| REGISTERED APPI Wages per hour | - | | | | |
| | | | | | |
| one year terms at the f | following percer | ntage of Journeyman""s v | wage. | | |
| 1st 2nd 60 % 70 % | 3rd 80 % | 4th 90 % | | | |
| Supplemental Benefits | | | | | |
| | | | ¢ 22.26 | | |
| Apprentices | | \$ 21.94 | \$ 22.36 | | 1-40/CF |
| Ironworker | | | | | 03/01/2020 |
| JOB DESCRIPTION | Ironworker | | | DISTRICT 1 | |
| ENTIRE COUNTIES | | Essey Greene Renssel | aer Saratoga Schenectad | ly, Schoharie, Warren, Washington | |
| | | | aci, Garaloga, Genericelad | y, ochonane, warren, washington | |
| Fulton: Only the Town | ships of Broada | albin, Mayfield, Northamp | oton, Perth, Bleecker and Jo | ohnstown. | |
| Hamilton: Only the To | wnships of Hop | e, Benson and Wells. | alester Clar Mahavili and | Deat | |
| Otsego: Only the Tow | ns of Unadilla, | Butternuts, Morris, Otego | rleston, Glen, Mohawk and o, Oneonta, Laurens, Millfor | d, Maryland and Worchester. | |
| WAGES | | | | | |
| Wages | | 07/0 | 1/2019 | | |
| Per hour | | | | | |
| Ornamental | | \$ 3 | 1.55 | | |
| Reinforcing | | | 1.55 | | |
| Rodman | | 3 | 1.55 | | |
| Structural & Precast | | 3 | 1.55 | | |
| Mover/Rigger | | 3 | 1.55 | | |
| Fence Erector | | | 1.55 | | |
| Stone Derrickman | | | 1.55 | | |
| Shootor | | 2 | 1 90 | | |

Sheeter

Curtain Wall Installer Metal Window Installer 31.80

31.55

31.55

Per hour

JOURNEYMAN

\$28.81

OVERTIME PAY See (B, E, Q) on OVERTIME PAGE

HOLIDAY

 Paid:
 See (1) on HOLIDAY PAGE

 Overtime:
 See (5, 6) on HOLIDAY PAGE

 Note:
 Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

ONE YEAR TERMS AT THE FOLLOWING WAGE RATES:

| | 07/01/2019 |
|---------------------------------------------------------------------------------------|-------------------------------------|
| 1st year 2nd year 3rd year 4th year | \$ 16.50 18.50 20.50 22.50 |
| Supplemental Benefits per hour worked 1st year 2nd year 3rd year 4th year | \$ 11.25 22.39 23.97 25.57 |

Laborer - Building

JOB DESCRIPTION Laborer - Building

ENTIRE COUNTIES Clinton, Essex, Warren

WAGES

GROUP A: All Laborers (except as noted)

GROUP B: Asbestos & Hazardous Waste Work.

WAGES per hour

07/01/2019

\$24.33

\$ 22.45

Group A Group B

ир В 25.83

SUPPLEMENTAL BENEFITS

Per hour:

Journeymen

OVERTIME PAY See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

Terms are at the following percentage of Group Rate A.

| 0-1,000 Hrs | 1,001-2,000 Hrs | 2,001-3,000 Hrs | 3,001-4,000 Hrs |
|-------------|-----------------|-----------------|-----------------|
| 60% | 70% | 80% | 90% |

SUPPLEMENTAL BENEFITS per hour worked:

All Terms: Same as Journeyman

| Laborer - Heavy&Highway | |
|-------------------------|--|
|-------------------------|--|

03/01/2020

DISTRICT 7

JOB DESCRIPTION Laborer - Heavy&Highway

ENTIRE COUNTIES Clinton, Essex, Warren

WAGES

Per hour:

GROUP A: Drill Helper, Flagmen, Outboard and Hand Boats.

GROUP B: BASIC RATE: Bull Float (where used for strike off only), Chain Saw, Concrete Aggregate Bin, Concrete Bootman, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of All Steel Mesh, Small Generators for Laborers' Tools, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Water Pump Operator (1-1/2" and Single Diaphragm) Nozzle (Asphalt, Gunite, Seeding, and Sand Blasting), Laborers on Chain Link Fence Erection, Rock Splitter & Power Unit, Pusher Type Concrete Saw and All Other Gas, Electric, Oil, and Air Tool Operators, Wrecking Laborer.

GROUP C: Drilling Equipment - only where a separate air compressor unit supplies power, Acetylene Torch Operators, Asphalt Raker, Powder Man, Tail or Screw Operator on Asphalt Paver.

GROUP D: Blasters, Form Setters, Stone or Granite Curb Setters.

GROUP E: Hazardous Waste Removal Work when designated by State/Federal as hazardous waste site and regulations require employees wear required personal protection.

| WAGES per hour | 07/01/2019 | 07/01/2020 | 07/01/2021 |
|----------------|------------|------------|------------|
| | | Additional | Additional |
| Group # A | \$ 25.97 | \$ 1.60 | \$ 1.60 |
| Group # B | 26.17 | 1.60 | 1.60 |
| Group # C | 26.37 | 1.60 | 1.60 |
| Group # D | 26.57 | 1.60 | 1.60 |
| Group # E | 28.67 | 1.60 | 1.60 |

NOTE: A single irregular work shift starting any time between 5:00 PM and 1:00 AM on governmental mandated night work shall be paid an additional \$2.50 per hour.

IMPORTANT NOTE: Wage and supplement rates for the operation of forklift and skid steer may be found under the classification "Operating Engineer".

SUPPLEMENTAL BENEFITS

Per hour:

\$ 24.95

OVERTIME PAY See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Journeymen

Paid: See (5, 6) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE NOTE: If a holiday falls on Sunday, it will be celebrated on Monday. In the event that men work on this Sunday holiday, they shall be paid double time. In the event that men work on Monday, they shall be compensated at double time plus the holiday pay. Accordingly, the

Monday following the Sunday is treated as the holiday.

REGISTERED APPRENTICES

WAGES: 1000 hour terms at the following percentage of Journeyman's wage.

| 1st | 2nd | 3rd | 4th |
|-----|-----|-----|-----|
| 60% | 70% | 80% | 90% |

SUPPLEMENTAL BENEFITS per hour worked:

All Terms: Same as Journeyman

7-1822/2h

03/01/2020

Laborer - Tunnel

JOB DESCRIPTION Laborer - Tunnel

ENTIRE COUNTIES Clinton, Essex, Warren

WAGES GROUP A: General Laborer **DISTRICT** 7

DISTRICT 7

GROUP B: Change Houseman, Miners and all Machine Men, Safety Miner, all Shaft-work, Caisson work, Drilling, Blow Pipe, all Air Tools, Tugger, Scaling, Nipper, Guniting pot to nozzle, Bit Grinder, Signal Man (top and bottom), Concrete Men, Shield driven tunnels, mixed face and soft ground, liner plate tunnels in free air.

GROUP C: Hazardous/Waste Work

| WAGES (per hour) | | | |
|------------------|------------|------------|------------|
| | 07/01/2019 | 07/01/2020 | 07/01/2021 |
| Tunnel Laborer: | | Additional | Additional |
| Group A | \$ 29.15 | \$ 1.60 | \$ 1.60 |
| Group B | 29.35 | 1.60 | 1.60 |
| Group C* | 31.65 | 1.60 | 1.60 |

(*)Work site required to be designated by State/Federal as hazardous waste site and relevant regulations require employees to use personal protection.

Note - A single irregular work shift shall be paid an additional \$2.50 per hour.

SUPPLEMENTAL BENEFITS Per hour:

Journeyman

\$24.95

OVERTIME PAY See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: Overtime:

See (5, 6) on HOLIDAY PAGE See (5, 6) on HOLIDAY PAGE

NOTE: If a holiday falls on Saturday, it will be celebrated on Friday. If a holiday falls on Sunday, it will be celebrated on Monday. In the event that men work on this Sunday holiday, they shall be paid double time. In the event that men work on Monday, they shall be compensated at double time plus the holiday pay. Accordingly, the Monday following the Sunday is treated as the holiday.

REGISTERED APPRENTICES

Wages per hour

Terms are at the following percentage of Group B rate.

| 0-1000 Hrs | 1001-2000 Hrs | 2001-3000 Hrs | 3001-4000 Hrs |
|------------|---------------|---------------|---------------|
| 60% | 70% | 80% | 90% |

SUPPLEMENTAL BENEFITS

All Terms: Same as Journeyman

7-1822T

Lineman Electrician

03/01/2020

JOB DESCRIPTION Lineman Electrician

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. (Ref #14.01.01)

| | 07/01/2019 | 05/04/2020 |
|------------------------|------------|------------|
| Lineman, Technician | \$ 52.05 | \$ 53.50 |
| Crane, Crawler Backhoe | 52.05 | 53.50 |
| Welder, Cable Splicer | 52.05 | 53.50 |
| Digging Mach. Operator | 46.85 | 48.15 |
| Tractor Trailer Driver | 44.24 | 45.48 |

| Groundman, Truck Driver | 41.64 | 42.80 |
|-------------------------|-------|-------|
| Equipment Mechanic | 41.64 | 42.80 |
| Flagman | 31.23 | 32.10 |

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (Ref #14.02.01-A)

| Lineman, Technician | \$ 52.05 | \$ 53.50 |
|-------------------------|----------|----------|
| Crane, Crawler Backhoe | 52.05 | 53.50 |
| Cable Splicer | 57.26 | 58.85 |
| Certified Welder - | | |
| Pipe Type Cable | 54.65 | 56.18 |
| Digging Mach. Operator | 46.85 | 48.15 |
| Tractor Trailer Driver | 44.24 | 45.48 |
| Groundman, Truck Driver | 41.64 | 42.80 |
| Equipment Mechanic | 41.64 | 42.80 |
| Flagman | 31.23 | 32.10 |

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (Ref #14.02.01-B)

| Lineman, Tech, Welder | \$ 53.37 | \$ 54.82 |
|-------------------------|----------|----------|
| Crane, Crawler Backhoe | 53.37 | 54.82 |
| Cable Splicer | 58.71 | 60.30 |
| Certified Welder - | | |
| Pipe Type Cable | 56.04 | 57.56 |
| Digging Mach. Operator | 48.03 | 49.34 |
| Tractor Trailer Driver | 45.36 | 46.60 |
| Groundman, Truck Driver | 42.70 | 43.86 |
| Equipment Mechanic | 42.70 | 43.86 |
| Flagman | 32.02 | 32.89 |

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (Ref #14.03.01)

| Lineman, Tech, Welder | \$ 54.56 | \$ 56.01 |
|-------------------------|----------|----------|
| Crane, Crawler Backhoe | 54.56 | 56.01 |
| Cable Splicer | 54.56 | 56.01 |
| Digging Mach. Operator | 49.10 | 50.41 |
| Tractor Trailer Driver | 46.38 | 47.61 |
| Groundman, Truck Driver | 43.65 | 44.81 |
| Equipment Mechanic | 43.65 | 44.81 |
| Flagman | 32.74 | 33.61 |

Additional \$1.00 per hour for entire crew when a helicopter is used.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

| 1ST SHIFT | 8:00 AM to 4:30 PM REGULAR RATE |
|-----------|----------------------------------------------|
| 2ND SHIFT | 4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 % |
| 3RD SHIFT | 12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 % |

** IMPORTANT NOTICE **

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. *Effective 05/06/2013, Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked (also required on non-worked holidays):

The following SUPPLEMENTAL BENEFITS apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

| Journeyman | \$ 24.15 | \$ 24.90 |
|------------|----------------|----------------|
| | *plus 6.75% of | *plus 6.75% of |
| | hourly wage | hourly wage |

*The 6.75% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q.) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction. NOTE: WAGE CAP...Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid Overtime

See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day. See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

Lineman Electrician - Teledata

WAGES: 1000 hour terms at the following percentage of the applicable Journeyman Lineman wage.

| 1st | 2nd | 3rd | 4th | 5th | 6th | 7th |
|-----|-----|-----|-----|-----|-----|-----|
| 60% | 65% | 70% | 75% | 80% | 85% | 90% |

SUPPLEMENTAL BENEFITS: Same as Journeyman

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6-1249a
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03/01/2020

JOB DESCRIPTION Lineman Electrician - Teledata

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour:

For outside work, stopping at first point of attachment (demarcation).

| | 07/01/2019 | 01/01/2020 | 01/01/2021 |
|------------------------|------------|------------|------------|
| Cable Splicer | \$ 32.78 | \$ 33.77 | \$ 34.78 |
| Installer, Repairman | \$ 31.12 | \$ 32.05 | \$ 33.01 |
| Teledata Lineman | \$ 31.12 | \$ 32.05 | \$ 33.01 |
| Tech., Equip. Operator | \$ 31.12 | \$ 32.05 | \$ 33.01 |
| Groundman | \$ 16.49 | \$ 16.99 | \$ 17.50 |

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED:

| 1ST SHIFT | REGULAR RATE |
|-----------|-----------------------|
| 2ND SHIFT | REGULAR RATE PLUS 10% |
| 3RD SHIFT | REGULAR RATE PLUS 15% |

SUPPLEMENTAL BENEFITS

Per hour: Journeyman

| \$ 4.73 | |
|-------------|--|
| *plus 3% of | |
| wage paid | |

\$ 4.73 *plus 3% of wage paid

\$4.73 *plus 3% of wage paid

DISTRICT 6

*The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP...Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

| Paid: | See (1) on HOLIDAY PAGE |
|-----------|--------------------------------|
| Overtime: | See (5, 6, 16) on HOLIDAY PAGE |

6-1249LT - Teledata

03/01/2020

Lineman Electrician - Traffic Signal, Lighting

JOB DESCRIPTION Lineman Electrician - Traffic Signal, Lighting

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Par hour

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

A Groundman/Groundman Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chainsaws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/groundman truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only. (Ref #14.01.01)

| 07/01/2019 | 05/04/2020 |
|------------|----------------------------------------------------------------|
| \$ 45.00 | \$ 46.20 |
| 45.00 | 46.20 |
| 47.25 | 48.51 |
| 40.50 | 41.58 |
| 38.25 | 39.27 |
| 36.00 | 36.96 |
| 36.00 | 36.96 |
| 27.00 | 27.72 |
| | \$ 45.00 45.00 47.25 40.50 38.25 36.00 36.00 |

Above rates are applicable for installation, testing, operation, maintenance and repair on all Traffic Control (Signal) and Illumination (Lighting) projects, Traffic Monitoring Systems, and Road Weather Information Systems. Includes digging of holes for poles, anchors, footer foundations for electrical equipment; assembly of all electrical materials or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

| 1ST SHIFT | 8:00 AM TO 4:30 PM | REGULAR RATE |
|-----------|---------------------|---------------------------|
| 2ND SHIFT | 4:30 PM TO 1:00 AM | REGULAR RATE PLUS 17.3% |
| 3RD SHIFT | 12:30 AM TO 9:00 AM | 1 REGULAR RATE PLUS 31.4% |

** IMPORTANT NOTICE **

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. *Effective 05/06/2013, Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

| Journeyman | \$ 24.15 | \$ 24.90 |
|------------|----------------|----------------|
| | *plus 6.75% of | *plus 6.75% of |
| | hourly wage | hourly wage |

*The 6.75% is based on the hourly wage paid, straight time rate or premium rate. Supplements paid at STRAIGHT TIME rate for holidays.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction. NOTE: WAGE CAP...Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day. Overtime: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES: Per hour. 1000 hour terms.

| | 07/01/2019 | 05/04/2020 |
|----------|------------|------------|
| 1st term | \$ 27.00 | \$ 27.72 |
| 2nd term | 29.25 | 30.03 |
| 3rd term | 31.50 | 32.34 |
| 4th term | 33.75 | 34.65 |
| 5th term | 36.00 | 36.96 |
| 6th term | 38.25 | 39.27 |
| 7th term | 40.50 | 41.58 |

07/01/2010

SUPPLEMENTAL BENEFITS: Same as Journeyman

Lineman Electrician - Tree Trimmer

JOB DESCRIPTION Lineman Electrician - Tree Trimmer

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also would include stump removal near underground energized electrical lines, including telephone and CATV lines.

| | 07/01/2019 |
|--------------------|------------|
| Tree Trimmer | \$ 25.79 |
| Equipment Operator | 22.81 |
| Equipment Mechanic | 22.81 |
| Truck Driver | 18.99 |
| Groundman | 15.64 |
| Flag person | 11.27 |

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

| Journeyman | \$ 9.98 |
|------------|-------------|
| | *plus 3% of |
| | hourly wage |

* The 3% is based on the hourly wage paid, straight time rate or premium rate.

6-1249a-LT

03/01/2020

DISTRICT 6

6-1249TT

03/01/2020

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

JOB DESCRIPTION Mason - Building

NOTE: WAGE CAP...Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid:See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGEOvertime:See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGENOTE: All paid holidays falling on a Saturday shall be observed on the preceding Friday.All paid holidays falling on a Sunday shall be observed on the following Monday.

Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

| Per hour | 07/01/2019 |
|----------------------|------------|
| Tile/Marble/Terrazzo | |
| Setter | \$ 35.46 |
| Finisher | 27.71 |

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked

| Journeyman Setter | \$ 19.98 |
|---------------------|----------|
| Journeyman Finisher | 17.24 |
| | |

OVERTIME PAY See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

| Paid: | See (1) on HOLIDAY PAGE |
|-----------|----------------------------|
| Overtime: | See (5, 6) on HOLIDAY PAGE |
| | |

REGISTERED APPRENTICES

Wages per hour

Hour Terms at the following percentage of Journeyman's wage

| Setter: 1st term 0-500 hrs 2nd term 501-1500 hrs 3rd term 1501-2500 hrs 4th term 2501-3500 hrs 5th term 3501-4500 hrs 6th term 4501-6000 hrs | 60% 70% 80% 85% 90% 95% |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Finisher: | |
| 1st term 0-500 hrs | 70% |
| 2nd term 501-1500 hrs | 80% |
| 3rd term 1501-2500 hrs | 90% |
| 4th term 2501-3700 hrs | 95% |
| Supplemental Benefits per hour worked | 07/01/2019 |
| Setter: | 0.701/2010 |

| Setter: | |
|------------------------|----------|
| 1st term 0-500 hrs | \$ 11.63 |
| 2nd term 501-1500 hrs | 11.63 |
| 3rd term 1501-2500 hrs | 15.85 |
| | |

| 4th term 2501-3500 hrs | 15.85 |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 5th term 3501-4500 hrs | 17.97 |
| 6th term 4501-6000 hrs | 19.98 |
| Finisher: 1st term 0-500 hrs 2nd term 501-1500 hrs 3rd term 1501-2500 hrs 4th term 2501-3700 hrs | \$ 11.09 11.09 14.21 14.21 |

Mason - Building

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES Clinton, Essex, Franklin

PARTIAL COUNTIES

Warren: Only the Townships of Chester, Hague, Horicon and Johnsburg.

| WAGES Per hour | 07/01/2019 |
|-------------------------|------------|
| Bricklayer | \$ 32.84 |
| Cement Finisher | 32.84 |
| Plasterer/Fireproofer* | 32.84 |
| Pointer/Caulker/Cleaner | 32.84 |
| Stone Mason | 32.84 |
| Acid Brick | 33.84 |

(*)Fireproofer on Structural only.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked

\$ 19.62

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Journeyman

 Paid:
 See (1) on HOLIDAY PAGE

 Overtime:
 See (5, 6) on HOLIDAY PAGE

 Note: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

750 hr terms at the following percentage of Journeyman's wage

| 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 55% | 60% | 65% | 70% | 75% | 80% | 85% | 90% |

Supplemental Benefits per hour worked

| 0-500 Hours | \$ 11.77 |
|-------------|----------|
| All others | \$ 19.62 |

12-2b.8

Mason - Heavy&Highway

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 12

ENTIRE COUNTIES

Albany, Cayuga, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Oswego, Rensselaer, Saratoga, Schenectady, Schoharie, St. Lawrence, Warren, Washington

12-2TS.1

03/01/2020

DISTRICT 12

03/01/2020

PARTIAL COUNTIES

Onondaga: For Heavy & Highway Cement Mason or Plaster Work in Onondaga County, refer to Mason-Heavy&Highway tag 1-2h/h on.

WAGES Per hour

| | 07/01/2019 |
|---------|------------|
| Mason & | |

Bricklayer \$38.24

Additional \$1.00 per hour for work on any swing scaffold or staging suspended by means of ropes or cables.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman

\$ 19.90

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

See (1) on HOLIDAY PAGE Paid: Overtime: See (5, 6) on HOLIDAY PAGE Note: If a holiday falls on Sunday, the Monday following shall constitute the day of the legal holiday.

REGISTERED APPRENTICES

Wages per hour

750 HR TERMS at the following percent of Journeyman's wage

| 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 55% | 60% | 65% | 70% | 75% | 80% | 85% | 90% |

Supplemental Benefits per hour worked

\$19.90

12-2hh.1

03/01/2020

Millwright

JOB DESCRIPTION Millwright

ENTIRE COUNTIES

Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, Oneida, Onondaga, Oswego, St. Lawrence, Warren, Washington

| WAGES Per hour: | 07/01/2019 | 07/01/2020 Additional |
|--------------------|------------|--------------------------|
| Building | \$ 28.59 | \$ 1.25 |
| Heavy & Highway | 30.59 | 1.25 |

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums): - Certified Welders shall receive \$1.75 per hour in addition to the current Millwrights rate provided he/she is directed to perform certified welding.

- For Building work if a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a \$1.50 premium per hour for Building work. - For Heavy & Highway work if the work is performed at a State or Federally designated hazardous waste site where employees are required to wear protective gear, the employees performing the work shall receive an additional \$2.00 per hour over the millwright heavy and highway wage rate for all hours worked on the day protective gear was worn.

- An employee performing the work of a machinist shall receive \$2.00 per hour in addition to the current Millwrights rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.

- When performing work underground at 500 feet and below, the employee shall receive an additional \$0.50. This amount will increase to \$1.00 on 7/1/2020.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$23.30

OVERTIME PAY See (B, E, *E2, Q) on OVERTIME PAGE **DISTRICT** 2

*Note - Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire, or natural disaster prevent the performance of work on a regular scheduled work day.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

Wages per hour:

| (1) year terms at the following percentage of journeymans rate. | | | | |
|-----------------------------------------------------------------|-----|-----|-----|--|
| 1st | 2nd | 3rd | 4th | |
| 60% | 70% | 80% | 90% | |

Supplemental Benefits per hour:

Apprentices:

| 1st term | \$ 10.60 |
|----------|----------|
| 2nd term | 19.49 |
| 3rd term | 20.76 |
| 4th term | 22.03 |
| | |

JOB DESCRIPTION Operating Engineer - Building

Operating Engineer - Building

2-1163.2 03/01/2020

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASS A1:

Crane, hydraulic cranes, tower crane, locomotive crane, piledriver, cableway, derricks, whirlies, dragline, boom trucks over 5 tons.

CLASS A:

Shovel, all Excavators (including rubber tire full swing), Gradalls, power road grader, all CMI equipment, front-end rubber tire loader, tractormounted drill (quarry master), mucking machine, concrete central mix plant, concrete pump, belcrete system, automated asphalt concrete plant, and tractor road paver, boom trucks 5 tons and under, maintenance engineer, self-contained crawler drill-hydraulic rock drill.

CLASS B:

Backhoes (rubber tired backhoe/loader combination), bulldozer, pushcat, tractor, traxcavator, scraper, LeTourneau grader, form fine grader, self-propelled soil compactor (fill roller), asphalt roller, blacktop spreader, power brooms, sweepers, trenching machine, Barber Green loader, side booms, hydro hammer, concrete spreader, concrete finishing machine, one drum hoist, power hoisting (single drum), hoist two drum or more, three drum engine, power hoisting (two drum and over), two drum and swinging engine, three drum swinging engine, hod hoist, A-L frame winches, core and well drillers (one drum), post hole digger, model CHB Vibro-Tamp or similar machine, batch bin and plant operator, dinky locomotive, skid steer loader, track excavator 5/8 cubic yard or smaller, front end rubber tired loader under four cubic yards, vacum machine (mounted or towed).

CLASS C:

Fork lift, high lift, all terrain fork lift: or similar, oiler, fireman and heavy-duty greaser, boilers and steam generators, pump, vibrator, motor mixer, air compressor, dust collector, welding machine, well point, mechanical heater, generators, temporary light plants, electric submersible pumps 4" and over, murphy type diesel generator, conveyor, elevators, concrete mixer, beltcrete power pack (belcrete system), seeding, and mulching machines, pumps.

* In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour

| | 07/01/2019 | 07/01/2020 | 07/01/2021 |
|------------|------------|------------|------------|
| Class # A1 | \$ 44.68 | 45.67 | 46.71 |
| Class # A | 44.19 | 45.18 | 46.22 |
| Class # B | 43.17 | 44.16 | 45.20 |

| | age Rates for 0 ed on Mar 01 20 | | 30/2020 | | Pub | lished by the New York State Department of Labor PRC Number 2020003401 Clinton County |
|-----------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------|-----------------|------------------------------------------------------------------------------------------|
| Class # C | | 40.27 | | 41.26 | 42.30 | |
| Additional \$ Additional \$ Additional \$ Additional \$ Additional \$ | 2.25 per hr for 2.50 per hr ove 0.40 per hr for | Cranes with E Cranes with E er B rate for N tunnel or exca if work require | Boom length & ji Boom length & ji uclear Leader w avation of shaft | 40" or more deep. | hazardous waste | site activities with a level C or over rating. |
| Per hour | ENTAL DEN | | | | | |
| | | 07/01/2019 | 9 | 07/01/2020 | 07/01/20 | 21 |
| Journeymai | า | \$ 27.10 | | 28.25 | 29.40 | |
| OVERTIM See (B, E, C | E PAY ଦ) on OVERTII | ME PAGE | | | | |
| Employees | who work a Sa | See (̀5́, 6) o Sunday, it will aturday holiday | | GE | | lay, it will be celebrated on Friday. |
| 1000 hours | terms at the fo | llowing percer | ntage of Journey | vman"s wage Class I | 3 | |
| 1st 60% | 2nd 70% | 3rd 80% | 4th 90% | | | |
| Supplemen | tal Benefits per | hour worked | | | | |
| | | 07/01/2019 | 9 | 07/01/2020 | 07/01/20 | 21 |
| All terms | | \$ 22.40 | | 23.55 | 24.70 | 1-158 Alb |
| Operating | g Engineer - I | Heavy&High | way | | | 03/01/2020 |

Operating Engineer - Heavy&Highway

JOB DESCRIPTION Operating Engineer - Heavy&Highway

ENTIRE COUNTIES

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

DISTRICT 1

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

CLASSIFICATION A:

Asphalt Curb Machine (Self Propelled, Slipform), Asphalt Paver, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck, GPS operated Bull Dozer, Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine (Self Propelled, Slipform), Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All PurposeHydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole, Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.), Quad 9, Quarry Master (or equivalent), Scraper, Shovel, Side Boom, Slip Form Paver (If a second man is needed, he shall be an Oiler), Tractor Drawn BeltType Loader, Truck or Trailer Mounted Log Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

CLASSIFICATION B:

Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Brokk, Boring Machine, Cage Hoist, Central Mix Plant [(NonAutomated) and All Concrete Batching Plants], Concrete Paver (Over 16S), Crawler Drill (Self-contained), Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders (If Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler), L.C.M. Work Boat Operator, Locomotive, Material handling knuckle boom, Mini Excavator (under 18,000 lbs.), Mixer (for stabilized base selfpropelled), Monorail Machine, Plant Engineer, Prentice Loader, Profiler (105 H.P. and under), Pug Mill, Pump Crete, Ready Mix Concrete Plant, Refrigeration Equipment (for soil stabilization), Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Rideon Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vacum machine (mounted or towed), Vermeer saw (ride on, any size or type), Welder

CLASSIFICATION C:

A Frame Winch Hoist on Truck, Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving Machine (ride on), Ballast Regulator(Ride-on), Boiler (used in conjunction with production), Bituminous Heater (self-propelled), Boat (powered), Cement and Bin Operator, Concrete Pavement Spreader and Finisher Concrete Paver or Mixer (16' and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill (Core and Well), Farm Tractor with accessories, Fine Grade Machine, Fireman, Fork Lift, Form Tamper, Grout Pump, Gunite Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker (ride-on), Hydraulic Pump (jacking system), Hydro-Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinius Widener, Roller (Grade and Fill), Scarifier (ride-on), Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw (ride-on), Steam Cleaner, Tamper (ride-on), Tie Extractor (ride-on), Tie Handler (ride-on), Tie Inserter (ride-on), Tie Spacer (ride-on), Tire Repair, Track Liner (ride-on), Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point, and the following hands-off equipment: Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants and Heaters

- Note for all above classifications of Operating Engineer - In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

| 07/01/2019 | 07/01/2020 | 07/01/2021 |
|------------|----------------|--------------------------------------------------|
| | Additional | Additional |
| \$ 46.43 | \$ 2.60 | \$ 2.70 |
| 44.82 | | |
| 43.91 | | |
| 41.34 | | |
| | 44.82 43.91 | Additional \$ 46.43 \$ 2.60 44.82 43.91 |

Additional \$2.50 per hour for All Employees who work a single irregular work shift starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.

Additional \$2.50 per hr. for hazardous waste removal work on State and/or Federally designated waste site which require employees to wear Level C or above forms of personal protection.

(*) Premiums for CRANES is based upon Class A rates with the following premiums:

- Additional \$4.00 per hr for Tower Cranes, including self erecting.

- Additional \$3.00 per hr for Lattice Boom Cranes and all other cranes with a manufacturers rating of fifty (50) tons and over.

- Additional \$2.00 per hr for all Hydraulic Cranes and Derricks with a manufacturer's rating of 49 ton and below, including boom trucks.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour

| Journeyman | \$ 27.30 |
|-------------|----------|
| oounioyinan | φ 21.00 |

OVERTIME PAY See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on a Saturday, it will be celebrated on Saturday.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

1st 2nd 3rd 4th

| - | ed on Mar 01 | or 07/01/2019 - 2020 | | Published by the New York State Department of Labo PRC Number 2020003401 Clinton County |
|------------------------------------------------------------|------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 60% | 70% | 80% | 90% | |
| Supplemen | tal Benefits | per hour work | ed | |
| | | | 07/01/2019 | |
| All Terms | | | \$ 22.70 | 1-158H/H Alt |
| Operating | g Engineer | - Marine Dr | edging | 03/01/2020 |
| JOB DES | CRIPTION | Operating En | gineer - Marine Dredging | DISTRICT 4 |
| ENTIRE C Albany, Bro York, Niaga Wayne, We | nx, Cayuga ara, Orange, | , Chautauqua, Orleans, Osw | Clinton, Columbia, Dutchess, Er ego, Putnam, Queens, Renssela | e, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New er, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, |
| Engineer H | eavy/Highw | | wage rates below for all equipme | truction projects. For those projects, please see the Operating ant and operators are only for marine dredging work in navigable |
| Per Hour: | | | 07/01/2019 | 10/01/2019 |
| Mechanical | in, Leverma Dredge Op ug Operator | | \$ 39.23 ore. | \$ 40.31 |
| CLASS A2 Crane Oper | rator (360 sv | wing) | 34.96 | 35.92 |
| CLASS B Dozer,Front Operator or | | | To conform to Operating En Prevailing Wage in locality v is being performed including | here work |
| Spider/Spill Operator II, Engineer, C Chief Welde | Chief Mate, I er, Maintena | rator | 33.93 | 34.86 |
| CLASS B2 Certified We | elder | | 31.94 | 32.82 |
| CLASS C1 Drag Barge Steward, M Assistant Fi | ate, | | 31.07 | 31.92 |
| CLASS C2 Boat Opera | tor | | 30.06 | 30.89 |
| Rodman, S | Deckhand, cowman, Co Porter/Janito | ook, | 24.97 | 25.66 |

SUPPLEMENTAL BENEFITS

Prevailing Wage Rates for 07/01/2019 - 06/30/2020

Per Hour: THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B

07/01/2019 \$11.23 plus 7.5% of straight time wage, Overtime hours add \$ 0.63 10/01/2019 \$11.88 plus 7.5% of straight time wage, Overtime hours add \$ 0.63

Published by the New York State Department of Labor

| All Class C | \$10.93 plus 7.5% of straight time wage, Overtime hours add \$ 0.48 | 11.58 plus 7.5% of straight time wage, Overtime hours add \$ 0.48 |
|-------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| All Class D | \$10.63 plus 7.5% of straight time wage, Overtime hours add \$ 0.33 | 11.28 plus 7.5% of straight time wage, Overtime hours add \$ 0.33 |
| OVERTIME PAY See (B2, F, R) on OVERTI | ME PAGE | |
| HOLIDAY Paid: Overtime: | See (1) on HOLIDAY PAGE See (5, 6, 8, 15, 26) on HOLIDAY PAGE | |

Operating Engineer - Survey Crew

JOB DESCRIPTION Operating Engineer - Survey Crew

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north. Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to Building, Tunnel and Heavy Highway.

Per hour: SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party. Instrument Person - One who operates the surveying instruments. Rod Person - One who holds the rods and assists the Instrument Person.

07/01/2019

| Party Chief | \$ 41.51 |
|-------------------|----------|
| Instrument Person | 39.15 |
| Rod Person | 27.10 |

Additional \$3.00/hr. for Tunnel Work Additional \$2.50/hr. for Hazardous Work Site

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$26.80

OVERTIME PAY See (B, E, P, T) on OVERTIME PAGE

| HOLIDAY | |
|-----------|----------------------------|
| Paid: | See (5, 6) on HOLIDAY PAGE |
| Overtime: | See (5, 6) on HOLIDAY PAGE |

REGISTERED APPRENTICES

WAGES: 1000 hour terms based on the Percentage of Rod Persons Wage:

07/01/2019

| 0-1000 | 60% |
|-----------|-----|
| 1001-2000 | 70% |
| 2001-3000 | 80% |

SUPPLEMENTAL BENIFIT per hour worked:

DISTRICT 12

4-25a-MarDredge

03/01/2020

DISTRICT 12

12-158-545 D.H.H.

03/01/2020

Operating Engineer - Survey Crew - Consulting Engineer

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

\$ 16.21

18.92

21.63

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north. Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

0-1000

1001-2000

2001-3000

These rates apply to feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer Agreement.

Per hour: SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party. Instrument Person - One who operates the surveying instruments. Rod Person - One who holds the rods and assists the Instrument Person.

| | 07/01/2019 |
|-------------------|------------|
| Party Chief | \$ 42.86 |
| Instrument Person | 39.37 |
| Rod Person | 29.14 |

Additional \$3.00/hr. for Tunnel Work. Additional \$2.50/hr. for EPA or DEC certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$25.60

OVERTIME PAY See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: 1000 hour terms based on percentage of Rod Persons Wage:

07/01/2019

| 0-1000 | 60% |
|-----------|-----|
| 1001-2000 | 70% |
| 2001-3000 | 80% |

SUPPLEMENTAL BENIFIT per hour worked:

| 0-1000 | \$ 17.43 |
|-----------|----------|
| 1001-2000 | \$ 20.35 |
| 2001-3000 | \$ 23.26 |

Operating Engineer - Tunnel

JOB DESCRIPTION Operating Engineer - Tunnel ENTIRE COUNTIES

03/01/2020

12-158-545 DCE

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: Northern part of Dutchess to the northern boundary line of the City of Poughkeepie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Rte. 343 then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains to Connecticut.

Genesee: Only that portion of the county that lies east of a line drawn down the center of Route 98 and the entirety of the City of Batavia.

WAGES

CLASS A: Automatic Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (except tractor mounted,rubber tired); Belt Placer (CMI Type); Blacktop Plant (automated); Cableway; Caisson Auger; Central Mix Concrete Plant (automated); Concrete Curb Machine (self-propelled slipform); Concrete Pump (8" or over); Dredge; Dual Drum Paver; Excavator; Front End Loader (4 cu. yd & over); Gradall; Head Tower (Sauerman or Equal); Hoist (shaft); Hoist (two or three Drum); Log Chipper/Loader (self-feeder); Maintenance Engineer (shaft and tunnel); any Mechanical Shaft Drill; Mine Hoist; Mining Machine(Mole and similar types); Mucking Machine or Mole; Overhead Crane (Gantry or Straddle Type); Pile Driver; Power Grader; Remote Controlled Mole or Tunnel Machine; Scraper; Shovel; Side Boom; Slip Form Paver (If a second man is needed, they shall be an Oiler); Tripper/Maintenance Engineer (shaft & tunnel); Tractor Drawn Belt-Type Loader; Tug Operator (manned rented equipment excluded); Tunnel Shovel

CLASS B: Automated Central Mix Concrete Plant; Backhoe (topside); Backhoe (track mounted, rubber tired); Backhoe (topside); Bituminous Spreader and Mixer, Blacktop Plant (non-automated); Blast or Rotary Drill (truck or tractor mounted); Boring Machine; Cage Hoist; Central Mix Plant(non-automated); all Concrete Batching Plants; Compressors (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Pump; Crusher; Diesel Power Unit; Drill Rigs (tractor mounted); Front End Loader (under 4 cu. yd.); Grayco Epoxy Machine; Hoist (One Drum); Hoist (2 or 3 drum topside); Knuckle Boom material handler; Kolman Plant Loader & similar type Loaders (if employer requires another person to clean the screen or to maintain the equipment, they shall be an Oiler); L.C.M. Work Boat Operator; Locomotive; Maintenance Engineer (topside); Maintenance Grease Man; Mixer (for stabilized base-self propelled); Monorail Machine; Plant Engineer; Personnel Hoist; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Shotcrete Machine; Shovel (topside); Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Tunnel Locomotive; Welder; Winch; Winch Cat

CLASS C: A Frame Truck; All Terrain Telescoping Material Handler; Ballast Regulator (ride-on); Compressors (4 not to exceed 2,000 c.f.m. combined capacity; or 3 or less with more than 1200 c.f.m. but not to exceed 2,000 c.f.m.); Compressors ((any size, but subject to other provisions for compressors), Dust Collectors, Generators, Pumps, Welding Machines, Light Plants (4 or any type combination)); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill (well); Electric Pump used in conjunction with Well Point System; Farm Tractor with Accessories; Fine Grade Machine; Fork Lift; Grout Pump (over 5 cu. ft.); Gunite Machine; Hammers (hydraulic-self-propelled); Hydra-Spiker (ride-on); Hydra-Blaster (water); Hydro-Blaster; Motorized Form Carrier; Post Hole Digger and Post Driver; Power Sweeper; Roller grade & fill); Scarifer (ride-on); Span-Saw (ride-on); Submersible Electric Pump (when used in lieu of well points); Tamper (ride-on); Tie-Extractor (ride-on), Tie Handler (ride-on), Tie Inserter (ride-on), Tie Spacer (ride-on); Track Liner (ride-on); Tractor with towed accessories; Vibratory Compactor; Vibro Tamp, Well Point

CLASS D: Aggregate Plant; Cement & Bin Operator; Compressors (3 or less not to exceed 1,200 c.f.m. combined capacity); Compressors ((any size, but subject to other provisions for compressors), Dust Collectors, Generators, Pumps, Welding Machines, Light Plants (3 or less or any type or combination)); Concrete Saw (self-propelled); Form Tamper; Greaseman; Hydraulic Pump (jacking system); Junior Engineer; Light Plants; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Power Broom (towed); Power Heaterman (when used for production); Revinius Widener; Shell Winder; Steam Cleaner; Tractor

| WAGES per hour: | | | | |
|-----------------|------------|------------|------------|------------|
| · | 07/01/2019 | 07/01/2020 | 07/01/2021 | 07/01/2022 |
| Master Mechanic | \$ 48.00 | \$ 49.45 | \$ 51.00 | \$ 52.60 |
| CLASS A | 45.59 | 47.04 | 48.59 | 50.19 |
| CLASS B | 44.37 | 45.82 | 47.37 | 48.97 |
| CLASS C | 41.58 | 43.03 | 44.58 | 46.18 |
| CLASS D | 38.57 | 40.02 | 41.57 | 43.17 |

Additional \$5.00 per hour for Hazardous Waste Work on a state or federally designated hazardous waste site where the Operating Engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin and eye protection. Fringe benefits will be paid at the hourly wage premium.

CRANES:

Crane 1: All cranes, including self-erecting to be paid \$4.00 per hour over the Class A rate.

Crane 2: All Lattice Boom Cranes and all cranes with a manufacturer's rating of fifty (50) ton and over to be paid \$3.00 per hour over Class A rate.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton and below, including boom trucks, to be paid \$2.00 per hour over Class A rate.

| Crane 1 | \$ 49.59 | \$ 51.04 | \$ 52.59 | \$ 54.19 |
|---------|----------|----------|----------|----------|
| Crane 2 | 48.59 | 50.04 | 51.59 | 53.19 |

| iana 3 47.59 49.04 50.59 52.19 UPPLEMENTAL BENETTS er flou: \$ 29.80 \$ 30.75 \$ 31.90 \$ 33.05 WORTIME PAGE BOULDAY ERG 5(0) ON HOLDAY PAGE a notary list ball to base used on Monday. EGISTERED APPRENTICES WAGES (1000) hours terms at the following percentage of Journeyman's wage. Item Office (Class 8 indiam Micro) Office (Class 8 indiam Micro) DIPUEMENTAL BENEFITS per hour paid: Same as Journeyman's wage. Item Office (Class 8 indiam Office (Class 8 interm) OSTORICE 1 OSTORICE 1 <th>revailing Wage Rates for 07 ast Published on Mar 01 20</th> <th></th> <th>20</th> <th></th> <th></th> <th>the New York State Department RC Number 2020003401 Clinto</th> <th></th> | revailing Wage Rates for 07 ast Published on Mar 01 20 | | 20 | | | the New York State Department RC Number 2020003401 Clinto | | |
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| er hour: \$29.60 \$30.75 \$31.90 \$33.65 VERTIME PAY es (B, 82, E, G, X) on OVERTIME PAGE OLIDAY Weithine: \$29.60 in HOUIDAY PAGE Antiday it shall be observed on Monday. EGISTEED APPRENTICES VAGES (1000) hours terms at the following percentage of Journeyman's wage. at term 60% of Class B ind term 60% of Class B UPPLEMENTAL BENEFITS per hour paid: Same as Journeyman's wage. Trise-832' Painter 03001202: OB DESCRIPTION Painter 03001202: OB DESCRIPTION Painter 03001202: OB DESCRIPTION Painter 07701/2019 05/01/2020 Additional Additional Same S 2.90 \$ 1.50 NUMBER S 2.90 \$ 1.50 Same S 2.9 | rane 3 | 47.59 | 49 |).04 | 50.59 | 52.19 | | |
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| | | owing percentage c | of Journeyman's w | /age. | | | | |
| 45% 50% 60% 70% 80% 90% | | | | | | | | |
| | | 3rd 4t | | 6th | | | | |

DISTRICT 8

All terms

\$ 15.65

1-201-CFP

03/01/2020

Painter - Bridge & Structural Steel

JOB DESCRIPTION Painter - Bridge & Structural Steel

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour: STEEL: Bridge Painting:

07/01/2019

\$ 49.50 + 6.38*

ADDITIONAL \$6.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SUPPLEMENTAL BENEFITS

| Per Hour: | |
|----------------|------------|
| Journeyworker: | 07/01/2019 |
| - | \$ 9.50 |
| | +26.05* |

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

OVERTIME PAY

See (A, F, R) on OVERTIME PAGE

HOLIDAY

| Paid: | See (1) on HOLIDAY PAGE |
|-----------|----------------------------|
| Overtime: | See (4, 6) on HOLIDAY PAGE |

REGISTERED APPRENTICES

Wage - Per hour:

Apprentices: (1) year terms

| | 07/01/2019 |
|-----------------------------------|------------|
| 1st year | \$ 23.13 |
| 2nd year | 34.73 |
| 3rd year | 46.30 |
| Supplemental Benefits - Per hour: | |

| | , | | \$ 13.44 20.16 26.88 |
|--|---|--|----------------------------|
|--|---|--|----------------------------|

Painter - Line Striping

JOB DESCRIPTION Painter - Line Striping

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

8-DC-9/806/155-BrSS

03/01/2020

WAGES

Per hour:

| Painter (Striping-Highway): | 07/01/2019 |
|-----------------------------|------------|
| Striping-Machine Operator* | \$ 29.93 |
| Linerman Thermoplastic | \$ 36.06 |

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

| SUPPLEMENTAL BENI Per hour paid: Journeyworker: | E FITS 07/01/2019 | |
|---------------------------------------------------------|------------------------------------------------------------|--|
| Striping-Machine operator Linerman Thermoplastic | \$ 7.44 \$ 7.44 | |
| OVERTIME PAY See (B, B2, E2, F, S) on O | VERTIME PAGE | |
| HOLIDAY Paid: Overtime: | See (5, 20) on HOLIDAY PAGE See (5, 20) on HOLIDAY PAGE | |
| REGISTERED APPREN One (1) year terms at the f | | |
| One (1) year terms at the r | 07/01/2019 | |
| 1st term 2nd term 3rd term | \$ 11.97 17.96 23.94 | |
| Supplemental Benefits per hour: | | |
| 1st term 2nd term 3rd term | \$ 7.44 7.44 7.44 | |

8-1456-LS 03/01/2020

Painter - Metal Polisher

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

| | 07/01/2019 |
|------------------|------------|
| Metal Polisher | \$ 30.58 |
| Metal Polisher* | 31.53 |
| Metal Polisher** | 34.08 |

*Note: Applies on New Construction & complete renovation ** Note: Applies when working on scaffolds over 34 feet.

| SUPPLEMENTAL BENEFITS Per Hour: | 07/01/2019 |
|--------------------------------------|------------|
| Journeyworker: All classification | \$ 7.72 |
| | |

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

| HOLIDAY | |
|-----------|---------------------------------------------------|
| Paid: | See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE |
| Overtime: | See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE |

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

| | 07/01/2019 |
|------------|------------|
| 1st year | \$ 15.00 |
| 2nd year | 15.00 |
| 3rd year | 15.75 |
| 1st year* | \$ 17.39 |
| 2nd year* | 17.44 |
| 3rd year* | 18.29 |
| 1st year** | \$ 19.50 |
| 2nd year** | 19.50 |
| 3rd year** | 20.25 |

*Note: Applies on New Construction & complete renovation ** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

8-8A/28A-MP

03/01/2020

DISTRICT 1

Plumber

JOB DESCRIPTION Plumber

ENTIRE COUNTIES

Clinton, Warren, Washington

PARTIAL COUNTIES

Saratoga: Entire county except the Townships of Stillwater, Halfmoon, Galway, Milton, Charlton, Clifton Park and City of Mechanicville.

WAGES

Per hour

07/01/2019

\$ 37.50

\$ 20.55

+10.43*

Plumber & Steamfitter

SUPPLEMENTAL BENEFITS

Per hour

Journeyman

* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime and applicable to paid Holidays

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid:See (22) on HOLIDAY PAGEOvertime:See (5, 6, 16, 23) on HOLIDAY PAGE

Note: Whenever a Holiday falls on a Saturday, the preceding day, Friday, shall be observed as the Holiday. If a Holiday falls on a Sunday, the following day, Monday shall be observed as the Holiday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's wage

DISTRICT 1

1-773-SF

03/01/2020

| 1st yr | 50% |
|--------|-----|
| 2nd yr | 60% |
| 3rd yr | 70% |
| 4th yr | 80% |
| 5th yr | 90% |

Supplemental Benefits per hour worked

| 1st yr | \$ 17.63 + 5.22* | |
|--------|------------------|--|
| 2nd yr | 18.21 + 6.26* | |
| 3rd yr | 18.80 + 7.30* | |
| 4th yr | 19.38 + 8.34* | |
| 5th yr | 19.97 + 9.39* | |

* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

* This portion per hour paid.

Roofer

JOB DESCRIPTION Roofer

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Warren, Washington WAGES

| Per hour | | | |
|----------------------|------------|------------|------------|
| | 07/01/2019 | 07/01/2020 | 07/01/2021 |
| | | Additional | Additional |
| Roofer/Waterproofer | \$ 31.55 | \$1.50 | \$1.50 |
| Asphalt Cold Process | 32.05 | | |
| Fluid Applied Roof | 32.05 | | |
| Pitch & Asbestos | 33.55 | | |
| | | | |

Shift Work:

On government mandated shift work starting after 12:00pm and before 4:00am workers shall be paid \$4.00 additional per hour

SUPPLEMENTAL BENEFITS

Per hour

Journeyman \$ 19.27

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE.

HOLIDAY Paid:

See (1) on HOLIDAY PAGE ime: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE Note: When any Holiday falls on Saturday, the Friday before such Holiday shall be recognized as the legal Holiday. When a Holiday falls on

Sunday, it shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

Apprentice terms at the following per cent of the Roofer/Waterproofer rate. For Pitch & Asbestos work, an additional \$2.00 must be paid in wages. For Asphalt Cold Process work and Fluid Applied Roof coating, an additional \$0.50 must be paid in the wages.

| 1st Term 1500 hrs. | 58% |
|---------------------------------|-----|
| 2nd Term 1 yr. and 1500 hrs. | 74% |
| 3rd Term 1 yr. and 1050 hrs. | 90% |

Supplemental Benefits per hour worked

| 1st Term | \$ 17.69 |
|----------|----------|
| 2nd Term | 18.12 |
| 3rd Term | 18.60 |

Sheetmetal Worker

JOB DESCRIPTION Sheetmetal Worker

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

| Per hour | | | |
|-------------------|------------|------------|------------|
| | 07/01/2019 | 06/01/2020 | 06/01/2021 |
| | | Additional | Additional |
| Sheetmetal Worker | \$33.16 | \$ 1.75 | \$ 1.75 |

All work requiring HAZWOPER Training additional \$1.00 per hour

SUPPLEMENTAL BENEFITS

Per hour

\$33.09

OVERTIME PAY

See (B,E,E5,Q) on OVERTIME PAGE

HOLIDAY

Journeyman

 Paid:
 See (1) on HOLIDAY PAGE

 Overtime:
 See (5, 6) on HOLIDAY PAGE

 When any holiday falls on Saturday, the Friday before such holiday shall be recognized as the legal holiday. Any holiday falling on Sunday, the following Monday shall be recognized as the legal holiday.

REGISTERED APPRENTICES

Wages per hour

6 Month Terms at the following rate:

| 1st term 2nd term 3rd term 4th term 5th term 6th term 7th term 8th term 9th term 10th term | \$18.44 \$19.99 \$20.77 \$21.55 \$20.34 \$21.35 \$23.04 \$24.73 \$26.41 \$28.10 |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 10th term | \$28.10 |
| | |

Supplemental Benefits per hour worked

| 1st term | \$20.30 |
|-----------|---------|
| 2nd term | 20.88 |
| 3rd term | 21.18 |
| 4th term | 21.60 |
| 5th term | 27.62 |
| 6th term | 28.05 |
| 7th term | 28.77 |
| 8th term | 29.49 |
| 9th term | 30.21 |
| 10th term | 30.93 |

Sprinkler Fitter

1-83

03/01/2020

JOB DESCRIPTION Sprinkler Fitter

ENTIRE COUNTIES

Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Washington, Wayne, Wyoming, Yates

WAGES

Per hour Sprinkler Fitter

DISTRICT 1

03/01/2020

DISTRICT 1

SUPPLEMENTAL BENEFITS

Per hour

Journeyman \$24.93

OVERTIME PAY See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: Overtime: See (1) on HOLIDAY PAGE See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

REGISTERED APPRENTICES

Wages per hour

For Apprentices HIRED ON OR AFTER 04/01/2010:

One Half Year terms at the following percentage of journeyman's wage.

| 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th |
|------------|------------------|-----------------|----------------|---------------|----------|----------|----------|----------|----------|
| 45% | 50% | 55% | 60% | 65% | 70% | 75% | 80% | 85% | 90% |
| Suppleme | ntal Benefits pe | er hour worked | | | | | | | |
| 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th |
| \$ 9.18 | \$ 9.22 | \$ 17.89 | \$ 17.93 | \$ 18.48 | \$ 18.52 | \$ 18.57 | \$ 18.61 | \$ 18.66 | \$ 18.70 |
| For Apprei | ntices HIRED C | ON OR AFTER | 04/01/2013: | | | | | | |
| One Half Y | ear terms at th | e following per | centage of jou | ırneyman's wa | ige. | | | | |
| 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th |
| 45% | 50% | 55% | 60% | 65% | 70% | 75% | 80% | 85% | 90% |

Supplemental Benefits per hour worked

| 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th |
|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| \$ 8.27 | \$ 8.27 | \$ 18.04 | \$ 18.04 | \$ 18.29 | \$ 18.29 | \$ 18.29 | \$ 18.29 | \$ 18.29 | \$ 18.29 |
| | | | | | | | | | |

1-669

03/01/2020

Teamster - Building

DISTRICT 7

ENTIRE COUNTIES

Clinton, Essex, Franklin, Jefferson, St. Lawrence

JOB DESCRIPTION Teamster - Building

PARTIAL COUNTIES

Lewis: Only the Townships of Croghan, Denmark, Diana, New Bremen, Harrisburg, Montague, Osceola and Pinckney. Oswego: Only the Towns of Boylston, Redfield, and Sandy Creek.

Warren: Only the Townships of Hague, Horicon, Chester and Johnsburg.

WAGES

GROUP # 1: Fuel Trucks, Fork Lift (Warehouse & Storage Area Only), Bus, Warehouse, Yardman, Truck Helper, Pickups, Panel Truck, Flatbody Material Trucks (straight Jobs), Single axle Dump Trucks, Dumpsters, Material Checkers & Receivers, Greasers, Tiremen, Mechanic Helpers and Parts Chasers.

GROUP # 2: Tandems, Mechanics & Batch Trucks.

GROUP # 3: Semi Trailers, Low Boys, Asphalt Distributor Trucks, and Agitator Mixer Truck, Dump Crete Type Vehicles and 3 axle Dump trucks.

GROUP # 4: Asbestos Removal, Special earth moving Euclid type or similar off highway equip.(non self load.) Articulated and all-track dump trucks.

Wages per hour

| | 07/01/2019 |
|-----------|------------|
| Building: | |
| Group #1 | \$ 23.58 |
| Group #2 | 24.58 |

| Group #3 | 24.68 |
|----------|-------|
| Group #4 | 23.84 |

SUPPLEMENTAL BENEFITS

Per hour:

All groups

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid:See (1) on HOLIDAY PAGEOvertime:See (5, 6) on HOLIDAY PAGE

\$ 21.51

Teamster - Heavy&Highway

JOB DESCRIPTION Teamster - Heavy&Highway

ENTIRE COUNTIES

Clinton, Essex, Franklin, Jefferson, St. Lawrence

PARTIAL COUNTIES

Lewis: Only the Townships of Croghan, Denmark, Diana, New Bremen, Harrisburg, Montague, Osceola and Pinckney. Oswego: Only the Towns of Boylston, Redfield, and Sandy Creek. Warren: Only the Townships of Hague, Horicon, Chester and Johnsburg.

WAGES

GROUP 1: Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks(straight jobs), Single Axle Dump Trucks, Dumpsters, Material Checkers and Receivers, Greasers, Truck Tiremen, Mechanics Helpers and Parts Chasers. Fork Lift (storage & warehouse areas only) Tandems and Batch Trucks, Mechanics, Dispatcher. Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel Truck.

GROUP 2: Specialized Earth Moving Equipment, Euclid type, or similar off-highway where not self-loading, Straddle (Ross) Carrier, and selfcontained concrete mobile truck. Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not selfloading.

Per hour:

07/01/2019 Heavy/Highway: Group #1 \$ 25.82 Group #2 26.04

Additional \$1.50 per hour for hazardous waste removal work on a City, County, and/or Federal Designated waste site and regulations require employee to use or wear respiratory protection.

For work bid on or after April 1, 1982 there shall be a 12 month carryover of the negotiated rate in effect at the time of the bid.

SUPPLEMENTAL BENEFITS

Per hour:

All classes

\$ 23.52

OVERTIME PAY See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE NOTE: If a holiday falls on a Sunday, it will be celebrated on Monday.

Welder

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour

Welder: To be paid the same rate of the mechanic performing the work.*

07/01/2019

DISTRICT 7

7-687B

7-687

03/01/2020

03/01/2020

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY HOLIDAY

1-As Per Trade

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (A) Time and one half of the hourly rate after 7 hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday. Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E5) Double time after 8 hours on Saturdays
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays
- (S) Two and one half times the hourly rate for Holidays

- (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- (T) Triple the hourly rate for Holidays
- (U) Four times the hourly rate for Holidays
- (V) Including benefits at SAME PREMIUM as shown for overtime
- (W) Time and one half for benefits on all overtime hours.
- (X) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- (1) None
- (2) Labor Day
- (3) Memorial Day and Labor Day
- (4) Memorial Day and July 4th
- (5) Memorial Day, July 4th, and Labor Day
- (6) New Year's, Thanksgiving, and Christmas
- (7) Lincoln's Birthday, Washington's Birthday, and Veterans Day
- (8) Good Friday
- (9) Lincoln's Birthday
- (10) Washington's Birthday
- (11) Columbus Day
- (12) Election Day
- (13) Presidential Election Day
- (14) 1/2 Day on Presidential Election Day
- (15) Veterans Day
- (16) Day after Thanksgiving
- (17) July 4th
- (18) 1/2 Day before Christmas
- (19) 1/2 Day before New Years
- (20) Thanksgiving
- (21) New Year's Day
- (22) Christmas
- (23) Day before Christmas
- (24) Day before New Year's
- (25) Presidents' Day
- (26) Martin Luther King, Jr. Day
- (27) Memorial Day
- (28) Easter Sunday

| New York State Department of Labor - Bureau of Public Work State Office Building Campus Building 12 - Room 130 Albany, New York 12240 REQUEST FOR WAGE AND SUPPLEMENT INFORMATION As Required by Articles 8 and 9 of the NYS Labor Law | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| | hedules or for determination for additional occupations. Just Be Typed | | | | |
| Submitted By: (Check Only One) Contracting Agency Architect or Engineering | Firm Public Work District Office Date: | | | | |
| A. Public Work Contract to be let by: (Enter Data Pertaining to C | Contracting/Public Agency) | | | | |
| 1. Name and complete address [(Check if new or change) Telephone: () E-Mail: | 2. NY State Units (see Item 5) 07 City 01 DOT 08 Local School District 02 OGS 09 Special Local District, i.e., 03 Dormitory Authority 10 Village 04 State University 11 Town 05 Mental Hygiene 12 County Facilities Corp. 13 Other Non-N.Y. State 06 OTHER N.Y. STATE UNIT (Describe) | | | | |
| 3. SEND REPLY TO , | 4. SERVICE REQUIRED. Check appropriate box and provide project information. New Schedule of Wages and Supplements. APPROXIMATE BID DATE : Additional Occupation and/or Redetermination | | | | |
| Telephone:() | PRC NUMBER ISSUED PREVIOUSLY FOR THIS PROJECT : OFFICE USE ONLY | | | | |
| B. PROJECT PARTICULARS | | | | | |
| Project Title Description of Work Contract Identification Number Note: For NYS units, the OSC Contract No. | Eocation of Project: Location on Site Route No/Street Address Village or City Town County | | | | |
| 7. Nature of Project - Check One: 1. New Building 2. Addition to Existing Structure 3. Heavy and Highway Construction (New and Repair) 4. New Sewer or Waterline 5. Other New Construction (Explain) 6. Other Reconstruction, Maintenance, Repair or Alteration 7. Demolition 8. Building Service Contract | 8. OCCUPATION FOR PROJECT : Construction (Building, Heavy Highway/Sewer/Water) Guards, Watchmen Janitors, Porters, Cleaners, Elevator Operators Tunnel Janitors, Porters, Cleaners, Elevator Operators Residential Moving furniture and equipment Elevator maintenance Trash and refuse removal Exterminators, Fumigators Window cleaners Fire Safety Director, NYC Only Other (Describe) | | | | |
| 9. Has this project been reviewed for compliance with the Wick | s Law involving separate bidding? YES NO | | | | |
| 10.Name and Title of Requester | Signature | | | | |



NEW YORK STATE DEPARTMENT OF LABOR Bureau of Public Work - Debarment List

LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE AWARDED ANY PUBLIC WORK CONTRACT

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements;
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements.

The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = New York State Department of Labor; NYC = New York City Comptroller's Office; AG = New York State Attorney General's Office; DA = County District Attorney's Office.

Debarment Database: To search for contractors, sub-contractors and/or their successors debarred from bidding or being awarded any public work contract or subcontract under NYS Labor Law Articles 8 and 9, <u>or</u> under NYS Workers' Compensation Law Section 141-b, access the database at this link: <u>https://applications.labor.ny.gov/EDList/searchPage.do</u>

For inquiries where WCB is listed as the "Agency", please call 1-866-546-9322

| AGENCY | Fiscal Officer | FEIN | EMPLOYER NAME | EMPLOYER DBA NAME | ADDRESS | DEBARMENT START DATE | DEBARMENT END DATE |
|--------|----------------|-----------|------------------------------------------|--------------------------------------|--------------------------------------------------------------------------|-------------------------|-----------------------|
| DOL | NYC | *****9839 | A.J.S. PROJECT MANAGEMENT, INC. | | 149 FIFTH AVENUE NEW YORK NY 10010 | 12/29/2016 | 12/29/2021 |
| DOL | NYC | | ABDUL KARIM | | C/O NORTH AMERICAN IRON W | 05/15/2015 | 05/15/2020 |
| | | | | | 1560 DECATUR STREETRIDGEWOOD NY 11385 | | |
| DOL | DOL | *****4539 | ACCOMPLISHED WALL SYSTEMS INC | | 112 OSCAWANNA HEIGHTS RD PUTNAM VALLEY NY 10542 | 03/13/2015 | 03/12/2020 |
| DOL | DOL | ****3344 | ACT INC | | 6409 LAND O LAKES BLVD LAND O LAKES FL 34638 | 11/10/2015 | 11/10/2020 |
| DOL | DOL | *****4018 | ADIRONDACK BUILDING RESTORATION INC. | | 4156 WILSON ROAD EAST TABERG NY 13471 | 03/26/2019 | 03/26/2024 |
| DOL | DOL | *****1687 | ADVANCED SAFETY SPRINKLER INC | | 261 MILL ROAD P.O BOX 296EAST AURORA NY 14052 | 07/29/2015 | 07/29/2020 |
| DOL | DOL | *****1687 | ADVANCED SAFETY SPRINKLER INC | | 261 MILL ROAD P.O BOX 296EAST AURORA NY 14052 | 05/29/2019 | 05/29/2024 |
| DOL | NYC | ****6775 | ADVENTURE MASONRY CORP. | | 1535 RICHMOND AVENUE STATEN ISLAND NY 10314 | 12/13/2017 | 12/13/2022 |
| DOL | NYC | | AGOSTINHO TOME | | 405 BARRETTO ST BRONX NY 10474 | 05/31/2018 | 05/31/2023 |
| DOL | DOL | | AJ TORCHIA | | 10153 ROBERTS RD SAUQUOIT NY 13456 | 08/09/2016 | 08/09/2021 |
| DOL | DOL | *****3344 | ALL CATASTROPHE CONSTRUCTION TEAM INC | ACT INC | 6409 LAND O LAKES BLVD LAND O LAKES FL 34638 | 11/10/2015 | 11/10/2020 |
| DOL | DOL | *****8740 | ALLSTATE ENVIRONMENTAL CORP | | C/O JOSE MONTAS 27 BUTLER PLACEYONKERS NY 10710 | 03/18/2011 | 03/19/2020 |
| DOL | DOL | | AMADEO J TORCHIA | TORCHIA'S HOME IMPROVEMEN T | 10153 ROBERTS RD SAUQUOIT NY 13456 | 08/09/2016 | 08/09/2021 |
| DOL | NYC | | AMJAD NAZIR | | 2366 61ST ST BROOKLYN NY 11204 | 12/15/2016 | 12/15/2021 |
| DOL | DOL | | ANGELO F COKER | | | 12/04/2018 | 12/04/2023 |
| DOL | NYC | | ANISUL ISLAM | | C/O RELIANCE GENERAL CONS 644 OCEAN PARKWAYBROOKLYN NY 11230 | 09/02/2015 | 09/02/2020 |
| DOL | DOL | | ANITA SALERNO | | 158 SOLAR ST SYRACUSE NY 13204 | 01/07/2019 | 01/07/2024 |
| DOL | DA | | ANTHONY CARDINALE | | 58-48 59TH STREET MASPETH NY 11378 | 05/16/2012 | 05/08/2020 |
| DOL | DOL | | ANTHONY J MINGARELLI JR | | C/O T & T CONCRETE INC 2560 HAMBURG TURNPIKELACKAWANNA NY 14218 | 07/08/2015 | 07/08/2020 |
| DOL | NYC | | ANTHONY J SCLAFANI | | 149 FIFTH AVE NEW YORK NY 10010 | 12/29/2016 | 12/29/2021 |
| DOL | DOL | | ANTHONY PERGOLA | | 3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10323 | 01/23/2017 | 01/23/2022 |
| DOL | DOL | | ANTONIO ESTIVEZ | | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | DOL | ****3020 | APCO CONTRACTING CORP | | 24 SOUTH MARYLAND AVENUE PORT WASHINGTON NY 11050 | 09/24/2012 | 09/02/2020 |
| DOL | NYC | ****9232 | ARKAY CONSTRUCTION INC | | 102-104 GREYLOCK AVENUE BELLEVILLE NJ 07109 | 07/15/2015 | 07/15/2020 |
| DOL | NYC | | ARSHAD MEHMOOD | | 168-42 88TH AVENUE JAMAICA NY 11432 | 11/20/2019 | 11/20/2024 |
| DOL | DOL | | ARVINDER ATWAL | | 65 KENNETH PLACE NEW HYDE PARK NY 11040 | 07/19/2017 | 07/19/2022 |
| DOL | NYC | ****4779 | ASTORIA GENERAL CONTRACTING CORP | | 35-34 31ST STREET LONG ISLAND CITY NY 11106 | 09/02/2015 | 09/02/2020 |
| DOL | NYC | ****7217 | ASTRO COMMUNICATIONS OF NY CORP | | 79 ALEXANDER AVE- STE 36A BRONX NY 10454 | 10/30/2015 | 10/30/2020 |
| DOL | NYC | *****6046 | ATLANTIC SUN CONTRUCTION CORP | | 58-46 59TH AVENUE MASPETH NY 11378 | 05/08/2015 | 05/08/2020 |
| DOL | NYC | *****6683 | ATLAS RESTORATION CORP. | | 35-12 19TH AVENUE ASTORIA NY 11105 | 08/02/2017 | 08/02/2022 |
| DOL | NYC | ****5532 | ATWAL MECHANICALS, INC | | 65 KENNETH PLACE NEW HYDE PARK NY 11040 | 07/19/2017 | 07/19/2022 |

| DOL | NYC | | AUDLEY O'BRIEN | | 1273 NORTH AVENUE/#1 CP NEW ROCHELLE NY 10804 | 04/07/2015 | 04/07/2020 |
|-----|-----|-----------|-------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------|------------|------------|
| DOL | NYC | *****2591 | AVI 212 INC. | | 260 CROPSEY AVENUE APT 11GBROOKLYN NY 11214 | 10/30/2018 | 10/30/2023 |
| DOL | AG | | AVTAR SINGH | | 116-24 127TH STREET SOUTH OZONE PARK NY 11420 | 12/22/2015 | 12/22/2020 |
| DOL | AG | | BALDEV SINGH | | 116-24 127TH STREET SOUTH OZONE PARK NY 11420 | 12/22/2015 | 12/22/2020 |
| DOL | NYC | | BALWINDER SINGH | | 421 HUDSON ST SUITE C5NEW YORK NY 10014 | 02/20/2019 | 02/20/2024 |
| DOL | DOL | | BARBARA CASSIDY | | 7 BLENIS PLACE VALHALLA NY 10595 | 04/02/2015 | 04/02/2020 |
| DOL | DOL | | BARRY KINNEY | | 6409 LAND O LAKES BLVD LAND O LAKES FL 34638 | 11/10/2015 | 11/10/2020 |
| DOL | NYC | ****3915 | BEACON RESTORATION INC | | SUITE B-8 782 PELHAM PARKWAY SOUTHBRONX NY 10462 | 04/21/2016 | 04/21/2021 |
| DOL | NYC | *****8416 | BEAM CONSTRUCTION, INC. | | 50 MAIN ST WHITE PLAINS NY 10606 | 01/04/2019 | 01/04/2024 |
| DOL | DOL | | BIAGIO CANTISANI | | | 06/12/2018 | 06/12/2023 |
| DOL | DOL | *****4512 | BOB BRUNO EXCAVATING, INC | | 5 MORNINGSIDE DR AUBURN NY 13021 | 05/28/2019 | 05/28/2024 |
| DOL | DOL | | BOGDAN MARKOVSKI | | 370 W. PLEASANTVIEW AVE SUITE 2.329HACKENSACK NJ 07601 | 02/11/2019 | 02/11/2024 |
| DOL | DOL | ****8551 | BRANDY'S MASONRY | | 216 WESTBROOK STREET P O BOX 304SAYRE PA 18840 | 08/09/2016 | 08/09/2021 |
| DOL | NYC | ****6555 | BROOKLYN WELDING CORP | | 1273 NORTH AVENUE/ #1 CP NEW ROCHELLE NY 10804 | 04/07/2015 | 04/07/2020 |
| DOL | DOL | ****1449 | BRRESTORATION NY INC | | 140 ARCADIA AVENUE OSWEGO NY 13126 | 09/12/2016 | 09/12/2021 |
| DOL | DOL | | BRUCE MORSEY | | C/O KENT HOLLOW SIDING LL 29A BRIDGE STREETNEW MILFORD CT 06776 | 01/15/2016 | 01/15/2021 |
| DOL | DOL | | BRUCE P. NASH JR. | | 5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057 | 09/12/2018 | 09/12/2023 |
| DOL | DOL | *****8809 | C.B.E. CONTRACTING CORPORATION | | 310 MCGUINESS BLVD GREENPOINT NY 11222 | 03/07/2017 | 03/07/2022 |
| DOL | DOL | ****9383 | C.C. PAVING AND EXCAVATING, INC. | | 2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205 | 12/04/2018 | 12/04/2023 |
| DOL | NYC | | CALVIN WALTERS | | 465 EAST THIRD ST MT. VERNON NY 10550 | 09/09/2019 | 09/09/2024 |
| DOL | DOL | | CANTISANI & ASSOCIATES LTD | | 442 ARMONK RD MOUNT KISCSO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | CANTISANI HOLDING LLC | | | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | CARIBBEAN POOLS | | C/O DOUGLAS L MALARKEY 64 VICTORIA DRIVEBINGHAMTON NY 13904 | 02/04/2016 | 02/04/2021 |
| DOL | DOL | *****3812 | CARMODY "2" INC | | | 06/12/2018 | 06/12/2023 |
| DOL | DOL | *****1143 | CARMODY BUILDING CORP | CARMODY CONTRACTIN G AND CARMODY CONTRACTIN G CORP. | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | CARMODY CONCRETE CORPORATION | | | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | CARMODY ENTERPRISES, LTD. | | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | CARMODY INC | | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | DOL | *****3812 | CARMODY INDUSTRIES INC | | | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | CARMODY MAINTENANCE CORPORATION | | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | CARMODY MASONRY CORP | | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | NYC | *****9172 | CASSIDY EXCAVATING INC | | 14 RAILROAD AVENUE VALHALLA NY 10595 | 05/15/2014 | 04/02/2020 |
| DOL | DOL | *****8809 | CBE CONTRACTING CORP | | 142 EAST MARKET STREET LONG BEACH NY 11561 | 03/07/2017 | 03/07/2022 |

| DOL | AG | | CESAR J. AGUDELO | | 81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY | 02/07/2018 | 02/07/2023 |
|-----|-----|-----------|---------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------|------------|------------|
| DOL | DOL | ****7655 | CHAMPION CONSTRUCTION SERVICES CORP | | 11372 2131 SCHENECTADY AVENUE BROOKLYN NY 11234 | 11/18/2015 | 11/18/2020 |
| DOL | NYC | | CHARLES CASSIDY JR | | 14 RAILROAD AVENUE | 05/15/2014 | 04/02/2020 |
| DOL | DOL | | CHARLES ZIMMER JR | | VALHALLA NY 10595 216 WESTBROOK STREET | 08/09/2016 | 08/09/2021 |
| DOL | DOL | | CHRISTINE J HEARNE | | P O BOX 304SAYRE PA 18840 C/O CJ-HEARNE CONSTRUCTIO 131 PONCE DE LEON AVE NEATLANTA GA 30308 | 12/01/2015 | 12/01/2020 |
| DOL | DOL | | CHRISTOPHER J MAINI | | 19 CAITLIN AVE JAMESTOWN NY 14701 | 09/17/2018 | 09/17/2023 |
| DOL | DOL | | CHRISTOPHER PAPASTEFANOU A/K/A CHRIS PAPASTEFANOU | | 1445 COMMERCE AVE BRONX NY 10461 | 05/30/2019 | 05/30/2024 |
| DOL | DOL | *****0671 | CJ-HEARNE CONSTRUCTION CO | | SUITE 204 131 PONCE DE LEON AVENUEATLANTA GA 30308 | 12/01/2015 | 12/01/2020 |
| DOL | DOL | *****1927 | CONSTRUCTION PARTS WAREHOUSE, INC. | CPW | 5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057 | 09/12/2018 | 09/12/2023 |
| DOL | NYC | *****2164 | CREATIVE TRUCKING INC | | 58-83 54TH STREET MASPETH NY 11378 | 02/26/2016 | 02/26/2021 |
| DOL | DOL | *****2524 | CSI ELECTRICAL & MECHANICAL INC | | 42-32 235TH ST DOUGLASTON NY 11363 | 01/14/2019 | 01/14/2024 |
| DOL | DOL | ****7761 | D L MALARKEY CONSTRUCTION | | 64 VICTORIA DRIVE BINGHAMTON NY 13904 | 02/04/2016 | 02/04/2021 |
| DOL | DOL | ****7888 | D L MALARKEY CONSTRUCTION INC | | 64 VICTORIA DRIVE BINGHAMTON NY 13904 | 02/04/2016 | 02/04/2021 |
| DOL | DOL | ****5629 | DAKA PLUMBING AND HEATING LLC | | 2561 ROUTE 55 POUGHQUAG NY 12570 | 02/19/2016 | 02/19/2021 |
| DOL | NYC | | DALJIT KAUR BOPARAI | | 185-06 56TH AVE FRESH MEADOW NY 11365 | 10/17/2017 | 10/17/2022 |
| DOL | DOL | | DANICA IVANOSKI | | 61 WILLETT ST. PASSAIC NJ 07503 | 10/26/2016 | 10/26/2021 |
| DOL | DOL | | DARIAN L COKER | | 2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205 | 12/04/2018 | 12/04/2023 |
| DOL | DOL | | DARYL T RIEKS | | C/O RIEKS CONTRACTING LLC 4804 GAHWILER ROADAUBURN NY 13021 | 05/01/2015 | 05/01/2020 |
| DOL | NYC | *****7707 | DASSLE CONTRACTING INC | | 213-37 39TH AVE/SUITE 120 BAYSIDE NY 11360 | 05/08/2015 | 05/08/2020 |
| DOL | DOL | | DAVID MARTINEZ | | C/O EMPIRE TILE INC 6 TREMONT COURTHUNTINGTON STATION NY 11746 | 03/08/2016 | 03/08/2021 |
| DOL | NYC | | DAVID WEINER | | 14 NEW DROP LANE 2ND FLOORSTATEN ISLAND NY 10306 | 11/14/2019 | 11/14/2024 |
| DOL | DOL | | DEBBIE STURDEVANT | | 29 MAPLEWOOD DRIVE BINGHAMTON NY 13901 | 02/21/2017 | 02/21/2022 |
| DOL | AG | | DEBRA MARTINEZ | | 31 BAY ST BROOKLYN NY 11231 | 03/28/2018 | 03/28/2023 |
| DOL | DOL | | DEDA GAZIVODAN | | C/O DAKA PLUMBING AND H 2561 ROUTE 55POUGHQUAG NY 12570 | 02/19/2016 | 02/19/2021 |
| DOL | DOL | | DELPHI PAINTING & DECORATING CO INC | | 1445 COMMERCE AVE BRONX NY 10461 | 05/30/2019 | 05/30/2024 |
| DOL | DOL | | DENNIS SCHWANDTNER | | C/O YES SERVICE AND REPAI 145 LODGE AVEHUNTINGTON STATION NY 11476 | 08/09/2016 | 08/09/2021 |
| DOL | DOL | | DF CONTRACTORS OF ROCHESTER, INC. | | 1835 DAANSEN RD. PALMYRA NY 14522 | 05/16/2017 | 05/16/202 |
| DOL | DOL | | DF CONTRACTORS, INC. | | 1835 DAANSEN RD. PALMYRA NY 14522 | 05/16/2017 | 05/16/2022 |
| DOL | NYC | | DIMITRIOS KOUTSOUKOS | | C/O ASTORIA GENERAL CONTR 35-34 31ST STREETLONG ISLAND CITY NY 11106 | 09/02/2015 | 09/02/2020 |
| DOL | NYC | | DIMITRIOS TSOUMAS | | 35-12 19TH AVENUE ASTORIA NY 11105 | 08/02/2017 | 08/02/2022 |
| DOL | DOL | ****3242 | DONALD R. FORSAY | DF LAWN SERVICE | 1835 DAANSEN RD. PALMYRA NY 14522 | 05/16/2017 | 05/16/2022 |
| DOL | DOL | | DONALD R. FORSAY | - | 1835 DAANSEN RD. PALMYRA NY 14522 | 05/16/2017 | 05/16/2022 |

| DOL | DOL | | DORIS SKODA | | C/O APCO CONTRACTING CORP 24 SOUTH MARYLAND AVENUEPORT WASHINGTON NY 11050 | 09/24/2012 | 09/02/2020 |
|-----|-----|-----------|--------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------|------------|------------|
| DOL | NYC | ****7404 | DOSANJH CONSTRUCTION CORP | | 9439 212TH STREET QUEENS VILLAGE NY 11428 | 02/25/2016 | 02/25/2021 |
| DOL | DOL | | DOUGLAS L MALARKEY | MALARKEY CONSTRUCTI ON | 64 VICTORIA DRIVE B INGHAMTON NY 13904 | 02/04/2016 | 02/04/2021 |
| DOL | NYC | | DUARTE LOPES | | 66-05 WOODHAVEN BLVD. STE 2REGO PARK NY 11374 | 04/20/2017 | 04/20/2022 |
| DOL | DOL | | E C WEBB | | 6409 LAND O LAKES BLVD LAND O LAKES FL 34638 | 11/10/2015 | 11/10/2020 |
| DOL | DOL | | EARL L WILSON | WILSON BROTHER DRYWALL CONTRACTOR S | 36 ABERSOLD STREET ROCHESTER NY 14621 | 08/31/2015 | 08/31/2020 |
| DOL | DOL | | EAST COAST PAVING | - | 2238 BAKER RD GILLETT PA 16923 | 03/12/2018 | 03/12/2023 |
| DOL | NYC | *****4269 | EAST PORT EXCAVATION & UTILITIES | | 601 PORTION RD RONKONKOMA NY 11779 | 11/18/2016 | 11/18/2021 |
| DOL | DOL | *****0780 | EMES HEATING & PLUMBING CONTR | | 5 EMES LANE MONSEY NY 10952 | 01/20/2002 | 01/20/3002 |
| DOL | DOL | ****3270 | EMPIRE TILE INC | | 6 TREMONT COURT HUNTINGTON STATION NY 11746 | 03/08/2016 | 03/08/2021 |
| DOL | NYC | ****5917 | EPOCH ELECTRICAL, INC | | 97-18 50TH AVE CORONA NY 11368 | 04/19/2019 | 04/19/2024 |
| DOL | DOL | ****7403 | F & B PAINTING CONTRACTING INC | | 2 PARKVIEW AVENUE HARRISON NY 10604 | 09/26/2016 | 09/26/2021 |
| DOL | DOL | | FAIGY LOWINGER | | 11 MOUNTAIN RD 28 VAN BUREN DRMONROE NY 10950 | 03/20/2019 | 03/20/2024 |
| DOL | DOL | | FAY MATTHEW | | C/O CHAMPION CONSTRUCTION 2131 SCHENECTADY AVENUEBROOKLYN NY 11234 | 11/18/2015 | 11/18/2020 |
| DOL | DOL | | FAZIA GINA ALI-MOHAMMED | C/O CHAMPION CONSTRUCTI ON | 2131 SCHENECTADY AVENUE BROOKLYN NY 11234 | 11/18/2015 | 11/18/2020 |
| DOL | DOL | | FRANK BENEDETTO | | 19 CATLIN AVE JAMESTOWN NY 14701 | 09/17/2018 | 09/17/2023 |
| DOL | DOL | | FRANK BENEDETTO | | C/O F & B PAINTING CONTRA 2 PARKVIEW AVENUEHARRISON NY 10604 | 09/26/2016 | 09/26/2021 |
| DOL | DOL | ****4722 | FRANK BENEDETTO AND CHRISTOPHER J MAINI | B & M CONCRETE | 19 CAITLIN AVE JAMESTOWN NY 14701 | 09/17/2018 | 09/17/2023 |
| DOL | NYC | | FRANK MAINI | | 1766 FRONT ST YORKTOWN HEIGHTS NY 10598 | 01/09/2018 | 01/09/2023 |
| DOL | NYC | *****6616 | G & G MECHANICAL ENTERPRISES, LLC. | | 1936 HEMPSTEAD TURNPIKE EAST MEDOW NY 11554 | 11/29/2019 | 11/29/2024 |
| DOL | DOL | | GABRIEL FRASSETTI | | | 04/10/2019 | 04/10/2024 |
| DOL | DOL | | GALINDA ROTENBERG | | C/O GMDV TRANS INC 67-48 182ND STREETFRESH MEADOWS NY 11365 | 06/24/2016 | 06/24/2021 |
| DOL | DOL | | GEOFF CORLETT | | 415 FLAGGER AVE #302STUART FL 34994 | 10/31/2018 | 10/31/2023 |
| DOL | DA | | GEORGE LUCEY | | 150 KINGS STREET BROOKLYN NY 11231 | 01/19/1998 | 01/19/2998 |
| DOL | DOL | | GIGI SCHNECKENBURGER | | 261 MILL RD EAST AURORA NY 14052 | 05/29/2019 | 05/29/2024 |
| DOL | NYC | ****3164 | GLOBE GATES INC | GLOBAL OVERHEAD DOORS | 405 BARRETTO ST BRONX NY 10474 | 05/31/2018 | 05/31/2023 |
| DOL | DOL | ****5674 | GMDV TRANS INC | | 67-48 182ND STREET FRESH MEADOWS NY 11365 | 06/24/2016 | 06/24/2021 |
| DOL | NYC | | GREAT ESTATE CONSTRUCTION, INC. | | 327 STAGG ST BROOKLYN NY 11206 | 10/10/2017 | 10/10/2022 |
| DOL | DOL | | GREGORY S. OLSON | | P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845 | 03/08/2018 | 03/08/2023 |
| DOL | NYC | | HARMEL SINGH | | 15 CLINTON LANE HICKSVILLE NY 11801 | 02/25/2016 | 02/25/2021 |
| DOL | NYC | | HAROLD KUEMMEL | | 58-83 54TH STREET MASPETH NY 11378 | 02/26/2016 | 02/26/2021 |

| DOL | NYC | *****3228 | HEIGHTS ELEVATOR CORP. | | 1766 FRONT ST YORKTOWN HEIGHTS NY 10598 | 01/09/2018 | 01/09/2023 |
|-----|-----|-----------|------------------------------------------------|----------------------|------------------------------------------------------------------|------------|------------|
| DOL | DOL | | HENRY VAN DALRYMPLE | | 2663 LANTERN LANE ATLANTA GA 30349 | 12/01/2015 | 12/01/2020 |
| DOL | DOL | *****8282 | IDEMA DEVELOPMENT INC | | 91 COLLEGE AVENUE POUGHKEEPSIE NY 12603 | 12/04/2015 | 12/04/2020 |
| DOL | DOL | *****8282 | IDEMA GENERAL CONTRACTORS INC | | 91 COLLEGE AVENUE POUGHKEEPSIE NY 12603 | 12/04/2015 | 12/04/2020 |
| DOL | DOL | ****7001 | INTEGRATED CONSTRUCTION & POWER SYSTEMS INC | | SUITE 100 2105 W GENESEE STREETSYRACUSE NY 13219 | 01/06/2016 | 01/06/2021 |
| DOL | DOL | ****5131 | INTEGRITY MASONRY, INC. | M&R CONCRETE | 722 8TH AVE WATERVLIET NY 12189 | 06/05/2018 | 06/05/2023 |
| DOL | DOL | | IRENE KASELIS | | 32 PENNINGTON AVE WALDWICK NJ 07463 | 05/30/2019 | 05/30/2024 |
| DOL | AG | | J A M CONSTRUCTION CORP | | SUITE 125 265 SUNRISE HIGHWAYROCKVILLE CENTRE NY 10457 | 04/07/2016 | 04/07/2021 |
| DOL | DOL | | J.A. HIRES CADWALLADER | | P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845 | 03/08/2018 | 03/08/2023 |
| DOL | DOL | | JAMES B RHYNDERS | | 91 COLLEGE AVENUE POUGHKEEPSIE NY 12603 | 12/04/2015 | 12/04/2020 |
| DOL | DOL | | JAMES C. DELGIACCO | | 722 8TH AVE WATERVLIET NY 12189 | 06/05/2018 | 06/05/2023 |
| DOL | DOL | | JAMES E RHYNDERS | | 91 COLLEGE AVENUE POUGHKEEPSIE NY 12603 | 12/04/2015 | 12/04/2020 |
| DOL | AG | | JAMES FALCONE | | SUITE 125 265 SUNRISE HIGHWAYROCKVILLE CENTRE NY 10457 | 04/07/2016 | 04/07/2021 |
| DOL | DOL | | JAMES LIACONE | | 9365 WASHINGTON ST LOCKPORT IL 60441 | 07/23/2018 | 07/23/2023 |
| DOL | DOL | | JAMES RACHEL | | 9365 WASHINGTON ST LOCKPORT IL 60441 | 07/23/2018 | 07/23/2023 |
| DOL | DOL | | JAMES RHYNDERS SR | | 91 COLLEGE AVENUE POUGHKEEPSIE NY 12603 | 12/04/2015 | 12/04/2020 |
| DOL | DOL | | JAMES SICKAU | | 3090 SHIRLEY ROAD NORTH COLLINS NY 14111 | 04/19/2011 | 07/08/2020 |
| DOL | DOL | | JASON W MILLIMAN | | C/O ROCHESTER ACOUSTICAL P O BOX 799HILTON NY 14468 | 02/19/2016 | 02/19/2021 |
| DOL | DOL | ****5368 | JCH MASONRY & LANDSCAPING INC. | | 35 CLINTON AVE OSSINING NY 10562 | 09/12/2018 | 09/12/2023 |
| DOL | NYC | | JEFFREY CASSIDY | | 14 RAILROAD AVENUE VALHALLA NY 10595 | 05/15/2014 | 04/02/2020 |
| DOL | NYC | | JENNIFER GUERRERO | | 1936 HEMPSTEAD TURNPIKE EAST MEADOW NY 11554 | 11/29/2019 | 11/29/2024 |
| DOL | DOL | | JESSICA WHITESIDE | | C/O BRRESTORATION NY INC 140 ARCADIA AVENUEOSWEGO NY 13126 | 09/12/2016 | 09/12/2021 |
| DOL | AG | | JOHN ANTHONY MASSINO | | 36-49 204TH STREET BAYSIDE NY 11372 | 02/07/2018 | 02/07/2023 |
| DOL | DOL | | JOHN F. CADWALLADER | | 200 LATTA BROOK PARK HORSEHEADS NY 14845 | 03/08/2018 | 03/08/2023 |
| DOL | DOL | *****4612 | JOHN F. CADWALLADER, INC. | THE GLASS COMPANY | P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845 | 03/08/2018 | 03/08/2023 |
| DOL | DOL | | JOHN GOCEK | | 14B COMMERCIAL AVE ALBANY NY 12065 | 11/14/2019 | 11/14/2024 |
| DOL | AG | *****0600 | JOHNCO CONTRACTING, INC. | | 36-49 204TH STREET BAYSIDE NY 11372 | 02/07/2018 | 02/07/2023 |
| DOL | DOL | | JON E DEYOUNG | | 261 MILL RD P.O BOX 296EAST AURORA NY 14052 | 07/29/2015 | 07/29/2020 |
| DOL | DOL | | JON E DEYOUNG | | 261 MILL RD P.O BOX 296EAST AURORA NY 14052 | 05/29/2019 | 05/29/2024 |
| DOL | DOL | | JORI PEDERSEN | | 415 FLAGER AVE #302STUART FL 34994 | 10/31/2018 | 10/31/2023 |
| DOL | DOL | | JOSE CHUCHUCA | | 35 CLINTON AVE OSSINING NY 10562 | 09/12/2018 | 09/12/2023 |
| DOL | DOL | | JOSE MONTAS | | 27 BUTLER PLACE YONKERS NY 10710 | 03/18/2011 | 03/19/2020 |

| DOL | AG | | JOSEPH FALCONE | SUITE 125 265 SUNRISE HIGHWAYROCKVILLE CENTRE NY 10457 | 04/07/2016 | 04/07/2021 |
|-----|-----|-----------|-----------------------------------------------------|------------------------------------------------------------------------|------------|------------|
| DOL | NYC | | JOSEPH FOLEY | 66-05 WOODHAVEN BLVD. STE 2REGO PARK NY 11374 | 04/20/2017 | 04/20/2022 |
| DOL | DOL | *****9273 | JOSEPH M LOVETRO | P O BOX 812 BUFFALO NY 14220 | 08/09/2016 | 08/09/2021 |
| DOL | NYC | | JOSEPH MARTINO | 1535 RICHMOND AVENUE STATEN ISLAND NY 10314 | 12/13/2017 | 12/13/2022 |
| DOL | DOL | | JOSEPH MARTONE | 112 OSCAWANA HEIGHTS RD PUTNAM VALLEY NY 10542 | 03/13/2015 | 03/13/2020 |
| DOL | DOL | | JOY MARTIN | 2404 DELAWARE AVE NIGARA FALLS NY 14305 | 09/12/2018 | 09/12/2023 |
| DOL | DOL | | JUANA MARTINEZ | C/O LEAD CONSTRUCTION 27 BUTLER PLACEYONKERS NY 10710 | 03/19/2015 | 03/19/2020 |
| DOL | DOL | | JULIUS AND GITA BEHREND | 5 EMES LANE MONSEY NY 10952 | 11/20/2002 | 11/20/3002 |
| DOL | DOL | *****5062 | K R F SITE DEVELOPMENT INC | 375 LAKE SHORE DRIVE PUTNAM VALLEY NY 10579 | 01/23/2017 | 01/23/2022 |
| DOL | NYC | | K.S. CONTRACTING CORP. | 29 PHILLIP DRIVE PARSIPPANY NJ 07054 | 02/13/2017 | 02/13/2022 |
| DOL | DOL | | KATIE BURDICK | 2238 BAKER RD GILLETT PA 16923 | 03/12/2018 | 03/12/2023 |
| DOL | DOL | | KENNETH FIORENTINO | 375 LAKE SHORE DRIVE PUTNAM VALLEY NY 10579 | 01/23/2017 | 01/23/2022 |
| DOL | DOL | *****9732 | KENT HOLLOW SIDING LLC | 29A BRIDGE STREET NEW MILFORD CT 06776 | 01/15/2016 | 01/15/2021 |
| DOL | DOL | | KIM SOROCENSKI | C/O SOLUTION MATTERS INC 198 NORWOOD ROADPORT JEFFERSON NY 11776 | 11/19/2015 | 11/19/2020 |
| DOL | DOL | *****3490 | L & M CONSTRUCTION/DRYWALL INC. | 1079 YONKERS AVE YONKERS NY 10704 | 08/07/2018 | 08/07/2023 |
| DOL | DA | *****8816 | LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION | 150 KINGS STREET BROOKLYN NY 11231 | 08/19/1998 | 08/19/2998 |
| DOL | DOL | *****6224 | LAKESIDE FIRE SPRINKLERS LLC | 125 CHAUTAUQUA AVENUE LAKEWOOD NY 14750 | 06/24/2015 | 06/24/2020 |
| DOL | AG | *****4643 | LALO DRYWALL, INC. | 221 OLD FORD ROAD NEW PLATZ NY 12561 | 05/20/2016 | 05/20/2021 |
| DOL | DOL | ****4505 | LARAPINTA ASSOCIATES INC | 29 MAPLEWOOD DRIVE BINGHAMTON NY 13901 | 02/21/2017 | 02/21/2022 |
| DOL | DOL | | LAURI MARTONE | 112 OSCAWANA HEIGHTS RD PUTNAM VALLEY NY 10542 | 03/13/2015 | 03/13/2020 |
| DOL | DOL | | LAVERN GLAVE | 161 ROBYN RD MONROE NY 10950 | 01/30/2018 | 01/30/2023 |
| DOL | DOL | *****1364 | LEAD CONSTRUCTION SERVICES INC | 3 ALAN B SHEPARD PLACE YONKERS NY 10705 | 03/19/2015 | 03/19/2020 |
| DOL | DOL | *****4388 | LEN.J CONSTRUCTION, LLC | PO BOX 10007 ALBANY NY 12201 | 06/24/2016 | 09/19/2022 |
| DOL | DOL | *****4388 | LEN.J CONSTRUCTION, LLC | PO BOX 10007 ALBANY NY 12201 | 06/24/2016 | 09/19/2022 |
| DOL | DOL | *****4388 | LEN.J CONSTRUCTION, LLC | PO BOX 10007 ALBANY NY 12201 | 09/19/2017 | 09/19/2022 |
| DOL | DOL | ****4388 | LEN.J CONSTRUCTION, LLC | PO BOX 10007 ALBANY NY 12201 | 09/19/2017 | 09/19/2022 |
| DOL | DOL | ****4388 | LEN.J CONSTRUCTION, LLC | PO BOX 10007 ALBANY NY 12201 | 01/17/2017 | 09/19/2022 |
| DOL | DOL | ****4388 | LEN.J CONSTRUCTION, LLC | PO BOX 10007 ALBANY NY 12201 | 09/19/2017 | 09/19/2022 |
| DOL | DOL | ****4388 | LEN.J CONSTRUCTION, LLC | PO BOX 10007 ALBANY NY 12201 | 09/19/2017 | 09/19/2022 |
| DOL | DOL | ****4388 | LEN.J CONSTRUCTION, LLC | PO BOX 10007 ALBANY NY 12201 | 08/14/2017 | 09/19/2022 |
| DOL | DOL | | LEROY NELSON JR | PO BOX 10007 ALBANY NY 12201 | 09/19/2017 | 09/19/2022 |
| DOL | DOL | | LEROY NELSON JR | PO BOX 10007 ALBANY NY 12201 | 09/19/2017 | 09/19/2022 |
| DOL | DOL | | LEROY NELSON JR | PO BOX 10007 ALBANY NY 12201 | 09/19/2017 | 09/19/2022 |
| DOL | DOL | | LEROY NELSON JR | PO BOX 10007 ALBANY NY 12201 | 09/19/2017 | 09/19/2022 |
| DOL | DOL | | LEROY NELSON JR | PO BOX 10007 ALBANY NY 12201 | 08/14/2017 | 08/14/2022 |

| DOL | DOL | | LEROY NELSON JR | | PO BOX 10007 ALBANY NY 12201 | 01/17/2017 | 09/19/2022 |
|-----|-----|-----------|------------------------------------------|----------------------------------------------|-------------------------------------------------------------------|------------|------------|
| DOL | DA | *****4460 | LONG ISLAND GLASS & STOREFRONTS, LLC | | 4 MANHASSET TRL RIDGE NY 11961 | 09/06/2018 | 09/06/2023 |
| DOL | AG | *****4216 | LOTUS-C CORP. | | 81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY 11372 | 02/07/2018 | 02/07/2023 |
| DOL | NYC | | LUBOMIR PETER SVOBODA | | 27 HOUSMAN AVE STATEN ISLAND NY 10303 | 12/26/2019 | 12/26/2024 |
| DOL | AG | | LUIS MARTINEZ | LALO DRYWALL | 211 MAIN ST. NEW PALTZ NY 12561 | 05/20/2016 | 05/20/2021 |
| DOL | NYC | | M & L STEEL & ORNAMENTAL IRON CORP. | | 27 HOUSMAN AVE STATEN ISLAND NY 10303 | 12/26/2019 | 12/26/2024 |
| DOL | DOL | | M ANVER BEIG | | 142 EAST MARKET STREET LONG BEACH NY 11561 | 03/07/2017 | 03/07/2022 |
| DOL | AG | *****6957 | M B DIN CONSTRUCTION INC | | 8831 20TH AVENUE/SUITE 6E BROOKLYN NY 11214 | 11/17/2015 | 11/17/2020 |
| DOL | NYC | *****6317 | M S QUALITY CONSTRUCTION | | 27 MAPLEWOOD AVENUE COLONIA NJ 07067 | 02/04/2015 | 02/04/2020 |
| DOL | DOL | | M. ANVER BEIG | | 142 EAST MARKET STREET LONG BEACH NY 11561 | 03/07/2017 | 03/07/2022 |
| DOL | NYC | | MACIEJ SONTOWSKI | | 27 MAPLEWOOD AVENUE COLONIA NJ 07067 | 02/04/2015 | 02/04/2020 |
| DOL | NYC | ****9590 | MACK GLASSNAUTH IRON WORKS INC | | 137 LIBERTY AVENUE BROOKLYN NY 11212 | 12/21/2015 | 12/21/2020 |
| DOL | DOL | *****1784 | MADISON AVE CONSTRUCTION CORP | | 39 PENNY STREET WEST ISLIP NY 11795 | 11/02/2016 | 11/02/2021 |
| DOL | DOL | | MALARKEY'S BAR & GRILL LLC | | 64 VICTORIA DRIVE BINGHAMTON NY 13904 | 02/04/2016 | 02/04/2021 |
| DOL | DOL | *****0705 | MALARKEY'S PUB & GRUB | | 64 VICTORIA DRIVE BINGHAMTON NY 13904 | 02/04/2016 | 02/04/2021 |
| DOL | DA | | MANUEL P TOBIO | | 150 KINGS STREET BROOKLYN NY 14444 | 08/19/1998 | 08/19/2998 |
| DOL | DA | | MANUEL TOBIO | | 150 KINGS STREET BROOKLYN NY 11231 | 08/19/1998 | 08/19/2998 |
| DOL | NYC | | MAREK FABIJANOWSKI | | 50 MAIN ST WHITE PLAINS NY 10606 | 01/04/2019 | 01/04/2024 |
| DOL | DOL | | MARIACHI'S PIZZERIA | | C/O DOUGLAS L MALARKEY 64 VICTORIA DRIVEBINGHAMTON NY 13904 | 02/04/2016 | 02/04/2021 |
| DOL | DOL | | MARK MIONIS | | 6409 LAND O LAKES BLVD LAND O LAKES FL 34638 | 11/10/2015 | 11/10/2020 |
| DOL | NYC | | MARTINE ALTER | | 1010 NORTHERN BLVD. GREAT NECK NY 11021 | 03/09/2017 | 03/09/2022 |
| DOL | DOL | | MARVIN A STURDEVANT | | 29 MAPLEWOOD DRIVE BINGHAMTON NY 13901 | 02/21/2017 | 02/21/2022 |
| DOL | DOL | | MASONRY CONSTRUCTION, INC. | | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | DOL | ****3333 | MASONRY INDUSTRIES, INC. | | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | NYC | | MATINA KARAGIANNIS | | 97-18 50TH AVE CORONA NY 11368 | 04/19/2018 | 04/19/2023 |
| DOL | DOL | | MATTHEW IDEMA GENERAL CONTRACTORS INC | | 91 COLLEGE AVENUE POUGHKEEPSIE NY 12603 | 12/04/2015 | 12/04/2020 |
| DOL | DOL | | MATTHEW P. KILGORE | | 4156 WILSON ROAD EAST TABERG NY 13471 | 03/26/2019 | 03/26/2024 |
| DOL | DOL | | MAURICE GAWENO | | 442 ARMONK RD MOUNT KISCO NY 10549 | 06/12/2018 | 06/12/2023 |
| DOL | DOL | ****6416 | MCCALL MASONRY | | P O BOX 304 SAYRE PA 18840 | 08/09/2016 | 08/09/2021 |
| DOL | DOL | | MCLEAN "MIKKI BEANE" | | 1229 JAMES STREET SYRACUSE NY 13203 | 05/02/2017 | 05/02/2022 |
| DOL | DOL | | MCLEAN "MIKKI" DRAKE | | 1229 JAMES STREET SYRACUSE NY 13203 | 05/02/2017 | 05/02/2022 |
| DOL | DOL | | MCLEAN M DRAKE-BEANE | | 1229 JAMES STREET SYRACUSE NY 13203 | 05/02/2017 | 05/02/2022 |
| DOL | DOL | ****9445 | MCLEAN M WALSH | ELITE PROFESSION AL PAINTING | 1229 JAMES STREET SYRACUSE NY 13203 | 05/02/2017 | 05/02/2022 |
| DOL | DOL | *****9445 | MCLEAN M WALSH | OF CNY ELITE PROFESSION AL PAINTING | 1229 JAMES STREET SYRACUSE NY 13203 | 05/02/2017 | 05/02/2022 |
| | | | | OF CNY | | | |

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| DOL | DOL | | MICHAEL A PASCARELLA | | SUITE 100 2105 WEST GENESEE STREET SYRACUSE NY 13219 | 01/06/2016 | 01/06/2021 |
| DOL | NYC | | MICHAEL HIRSCH | | C/O MZM CORP 163 S MAIN STREETNEW CITY NY 10956 | 01/28/2016 | 01/28/2021 |
| DOL | DOL | | MICHAEL LENIHAN | | 1079 YONKERS AVE UNIT 4YONKERS NY 10704 | 08/07/2018 | 08/07/2023 |
| DOL | AG | | MICHAEL RIGLIETTI | | 31 BAY ST BROOKLYN NY 11231 | 03/28/2018 | 03/28/2023 |
| DOL | DOL | | MICHAEL WILSON | WILSON BROTHER DRYWALL CONTRACTOR S | 36 ABERSOLD STREET ROCHESTER NY 14621 | 08/31/2015 | 08/31/2020 |
| DOL | NYC | | MILANCE HADZIC | | 22 CALIFORNIA AVE - STE 1 PATERSON NJ 07503 | 03/11/2015 | 03/11/2020 |
| DOL | DOL | *****4829 | MILESTONE ENVIRONMENTAL CORPORATION | | 704 GINESI DRIVE SUITE 29MORGANVILLE NJ 07751 | 04/10/2019 | 04/10/2024 |
| DOL | NYC | *****9926 | MILLENNIUM FIRE PROTECTION, LLC | | 325 W. 38TH STREET SUITE 204NEW YORK NY 10018 | 11/14/2019 | 11/14/2024 |
| DOL | NYC | *****0627 | MILLENNIUM FIRE SERVICES, LLC | | 14 NEW DROP LNE 2ND FLOORSTATEN ISLAND NY 10306 | 11/14/2019 | 11/14/2024 |
| DOL | AG | | MOHAMMED N CHATHA | | 8831 20TH AVENUE/SUITE 6E BROOKLYN NY 11214 | 11/17/2015 | 11/17/2020 |
| DOL | DOL | *****2737 | MOUNTAIN'S AIR INC | | 2471 OCEAN AVENUE- STE 7A BROOKLYN NY 11229 | 09/24/2012 | 09/18/2020 |
| DOL | NYC | *****3826 | MOVING MAVEN OF NY, INC. | | 1010 NORTHERN BLVD. GREAT NECK NY 11021 | 03/09/2017 | 03/09/2022 |
| DOL | NYC | *****3550 | MOVING MAVEN, INC | | 1010 NORTHERN BLVD. GREAT NECK NY 11021 | 03/09/2017 | 03/09/2022 |
| DOL | AG | | MSR ELECTRICAL CONSTRUCTION CORP. | | 31 BAY ST BROOKLYN NY 11231 | 03/28/2018 | 03/28/2023 |
| DOL | DOL | | MUHAMMAD BEIG | | 142 EAST MARKET STREET LONG BEACH NY 11561 | 03/07/2017 | 03/07/2022 |
| DOL | DOL | | MUHAMMAD BEIG | | 142 EAST MARKET STREET LONG BEACH NY 11561 | 03/07/2017 | 03/07/2022 |
| DOL | DOL | | MUHAMMAD PERVAIZ | | C/O CHAMPION CONSTRUCTION 2131 SCHENECTADY AVENUEBROOKLYN NY 11234 | 11/18/2015 | 11/18/2020 |
| DOL | NYC | ****3613 | MZM CORP | | 163 S MAIN STREET NEW CITY NY 10956 | 01/28/2016 | 01/28/2021 |
| DOL | DA | ****9786 | NATIONAL INSULATION & GC CORP | | 180 MILLER PLACE HICKSVILLE NY 11801 | 12/12/2018 | 12/12/2023 |
| DOL | NYC | ****1284 | NEW AMERICAN RESTORATION INC | | 22 CALIFORNIA AVE - STE 1 PATERSON NJ 07503 | 03/11/2015 | 03/11/2020 |
| DOL | DA | ****6988 | NEW YORK INSULATION INC | | 58-48 59TH STREET MASPETH NY 11378 | 05/16/2012 | 05/08/2020 |
| DOL | NYC | ****4839 | NEW YORK RIGGING CORP | | 58-83 54TH STREET MASPETH NY 11378 | 02/26/2016 | 02/26/2021 |
| DOL | NYC | ****1968 | NORTH AMERICAN IRON WORKS INC | | 1560 DECATUR STREET RIDGEWOOD NY 11385 | 05/15/2015 | 05/15/2020 |
| DOL | DOL | ****6966 | NORTH COUNTRY DRYWALL AND PAINT | | 23167 COUNTY ROUTE 59 DEXTER NY 13634 | 10/24/2016 | 10/24/2021 |
| DOL | DOL | *****0065 | NORTHEAST LANDSCAPE AND MASONRY ASSOC | | 3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10523 | 01/23/2017 | 01/23/2022 |
| DOL | DOL | ****1845 | OC ERECTERS, LLC A/K/A OC ERECTERS OF NY INC. | | 1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442 | 01/16/2018 | 01/16/2023 |
| DOL | NYC | ****0818 | ONE TEN RESTORATION, INC. | | 2366 61ST ST BROOKLYN NY 11204 | 12/15/2016 | 12/15/2021 |
| DOL | NYC | | ORSON ARROYO | | C/O METRO DUCT SYSTEMS 12-19 ASTORIA BOULEVARDLONG ISLAND CITY NY 11102 | 04/16/2014 | 11/19/2020 |
| DOL | NYC | | PARESH SHAH | | 29 PHILLIP DRIVE PARSIPPANY NJ 07054 | 02/13/2017 | 02/13/2022 |
| DOL | NYC | *****9422 | PELIUM CONSTRUCTION, INC. | | 22-33 35TH ST. ASTORIA NY 11105 | 12/30/2016 | 12/30/2021 |
| DOL | DOL | | PETER M PERGOLA | | 3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10523 | 01/23/2017 | 01/23/2022 |
| DOL | DOL | | PIERRE LAPORT | | 224 COUNTY HIGHWAY 138 BROADALBIN NY 12025 | 03/07/2017 | 03/07/2022 |
| DOL | DOL | ****1543 | PJ LAPORT FLOORING INC | | 224 COUNTY HIGHWAY 138 BROADALBIN NY 12025 | 03/07/2017 | 03/07/2022 |

| DOL | NYC | *****4532 | PROFESSIONAL PAVERS CORP. | | 66-05 WOODHAVEN BLVD. REGO PARK NY 11374 | 04/20/2017 | 04/20/2022 |
|-----|-----|-----------|--------------------------------------|----------------------------|--------------------------------------------------------|------------|------------|
| DOL | DOL | *****6895 | PROLINE CONCRETE OF WNY | | 3090 SHIRLEY ROAD NORTH COLLINS NY 14111 | 04/19/2011 | 07/08/2020 |
| DOL | DA | *****6817 | QUADRANT METAL BUILDINGS LLC | | 2740 SW MARTIN DOWNS BLVD PALM CITY FL 34990 | 08/25/2016 | 08/25/2021 |
| DOL | NYC | | RAMESHWAR ASU | | 137 LIBERTY AVENUE BROOKLYN NY 11212 | 12/21/2015 | 12/21/2020 |
| DOL | NYC | | RANTIK PARIKH | | 13 LORIANN ROAD WARREN NJ 07059 | 07/15/2015 | 07/15/2020 |
| DOL | DOL | *****2633 | RAW POWER ELECTRIC CORP | | 3 PARK CIRCLE MIDDLETOWN NY 10940 | 01/30/2018 | 01/30/2023 |
| DOL | AG | *****7015 | RCM PAINTING INC. | | 69-06 GRAND AVENUE 2ND FLOORMASPETH NY 11378 | 02/07/2018 | 02/07/2023 |
| DOL | DOL | | REGINALD WARREN | | 161 ROBYN RD MONROE NY 10950 | 01/30/2018 | 01/30/2023 |
| DOL | NYC | *****3461 | RELIANCE GENERAL CONSTRUCTION INC | | 644 OCEAN PARKWAY BROOKLYN NY 11230 | 09/02/2015 | 09/02/2020 |
| DOL | DA | | RIANN MULLER | | 2740 SW MARTIN DOWNS BLVD PALM CITY FL 34990 | 08/25/2016 | 08/25/2021 |
| DOL | DOL | *****9148 | RICH T CONSTRUCTION | | 107 WILLOW WOOD LANE CAMILLUS NY 13031 | 11/13/2018 | 11/13/2023 |
| DOL | DOL | | RICHARD MACONE | | 8617 THIRD AVE BROOKLYN NY 11209 | 09/17/2018 | 09/17/2023 |
| DOL | DOL | *****9148 | RICHARD TIMIAN | RICH T CONSTRUCTI ON | 108 LAMONT AVE SYRACUSE NY 13209 | 10/16/2018 | 10/16/2023 |
| DOL | DOL | | RICHARD TIMIAN JR. | | 108 LAMONT AVE SYRACUSE NY 13209 | 10/16/2018 | 10/16/2023 |
| DOL | DOL | | RICHARD TIMIAN JR. | | 108 LAMONT AVE SYRACUSE NY 13209 | 11/13/2018 | 11/13/2023 |
| DOL | DOL | *****8618 | RIEKS CONTRACTING LLC | | 4804 GAHWILER ROAD AUBURN NY 13021 | 05/01/2015 | 05/01/2020 |
| DOL | DOL | | ROBBYE BISSESAR | | 89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427 | 01/11/2003 | 01/11/3003 |
| DOL | DOL | | ROBERT A. VALERINO | | 3841 LANYARD COURT NEW PORT RICHEY FL 34652 | 07/09/2019 | 07/09/2024 |
| DOL | DOL | | ROBERT BRUNO | | 3 GAYLORD ST AUBURN NY 13021 | 11/15/2016 | 11/15/2021 |
| DOL | DOL | | ROBERT BRUNO | | 5 MORNINGSIDE DRIVE AUBURN NY 13021 | 05/28/2019 | 05/28/2024 |
| DOL | NYC | | ROBERT HOHMAN | | 149 FIFTH AVE NEW YORK NY 10010 | 12/29/2016 | 12/29/2021 |
| DOL | DOL | | ROBERT TORDELLA | | 125 CHAUTAUQUA AVENUE LAKEWOOD NY 14750 | 06/24/2015 | 06/24/2020 |
| DOL | DOL | *****3859 | ROCHESTER ACOUSTICAL CORP | | P O BOX 799 HILTON NY 14468 | 02/19/2016 | 02/19/2021 |
| DOL | DOL | | RODERICK PUGH | | 404 OAK ST SUITE 101SYRACUSE NY 13203 | 07/23/2018 | 07/23/2023 |
| DOL | DOL | *****4880 | RODERICK PUGH CONSTRUCTION INC. | | 404 OAK ST SUITE 101SYRACUSE NY 13203 | 07/23/2018 | 07/23/2023 |
| DOL | NYC | | RODNEY SCOTT | | 201 HEMPSTEAD AVE WEST HEMPSTEAD NY 11552 | 10/30/2015 | 10/30/2020 |
| DOL | DOL | | ROMEO WARREN | | 161 ROBYN RD MONROE NY 10950 | 01/30/2018 | 01/30/2023 |
| DOL | DOL | | RONALD MESSEN | | 14B COMMERCIAL AVE ALBANY NY 12065 | 11/14/2019 | 11/14/2024 |
| DOL | DOL | | ROSEANNE CANTISANI | | | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | RYAN ALBIE | | 21 S HOWELLS POINT ROAD BELLPORT NY 11713 | 02/21/2017 | 02/21/2022 |
| DOL | DOL | ****3347 | RYAN ALBIE CONTRACTING INC | | 21 S HOWELLS POINT ROAD BELLPORT NY 11713 | 02/21/2017 | 02/21/2022 |
| DOL | DOL | *****1365 | S & L PAINTING, INC. | | 11 MOUNTAIN ROAD P.O BOX 408MONROE NY 10950 | 03/20/2019 | 03/20/2024 |
| DOL | DOL | *****7730 | S C MARTIN GROUP INC. | | 2404 DELAWARE AVE NIAGARA FALLS NY 14305 | 09/12/2018 | 09/12/2023 |
| DOL | NYC | | SABIR MUHAMMED | | SUITE B-8 782 PELHAM PARKWAY SOUTHBRONX NY 10462 | 04/21/2016 | 04/21/2021 |
| DOL | DOL | | SALVATORE A FRESINA | | | 08/26/2016 | 08/26/2021 |

| DOL | DOL | | SAM FRESINA | | | 08/26/2016 | 08/26/2021 |
|-----|-----|-----------|----------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------|------------|------------|
| DOL | NYC | *****0349 | SAM WATERPROOFING INC | | 168-42 88TH AVENUE APT.1 AJAMAICA NY 11432 | 11/20/2019 | 11/20/2024 |
| DOL | NYC | | SANDEEP BOPARAI | | 185-06 56TH AVE FRESH MEADOW NY 11365 | 10/17/2017 | 10/17/2022 |
| DOL | NYC | *****2117 | SCOTT ELECTRICAL SERVICE, LLC. | | 201 HEMPSTEAD AVE WEST HEMPSTEAD NY 11552 | 10/30/2015 | 10/30/2020 |
| DOL | DOL | *****9751 | SCW CONSTRUCTION | | 544 OLD ROUTE 23 ACRE NY 12405 | 02/14/2017 | 02/14/2022 |
| DOL | AG | | SERGIO RAYMUNDO | | 109 DUBOIS RD. NEW PALTZ NY 12561 | 05/20/2016 | 05/20/2021 |
| DOL | NYC | ****6597 | SHAIRA CONSTRUCTION CORP. | | 421 HUDSON STREET SUITE C5NEW YORK NY 10014 | 02/20/2019 | 02/20/2024 |
| DOL | DOL | *****1961 | SHANE BURDICK | CENTRAL TRAFFIC CONTROL, LLC. | 2238 BAKER ROAD GILLETT PA 16923 | 03/12/2018 | 03/12/2023 |
| DOL | DOL | | SHANE BURDICK | | 2238 BAKER ROAD GILLETT PA 16923 | 03/12/2018 | 03/12/2023 |
| DOL | DOL | | SHANE NOLAN | | 9365 WASHINGTON ST LOCKPORT IL 60441 | 07/23/2018 | 07/23/2023 |
| DOL | DOL | | SHULEM LOWINGER | | 11 MOUNTAIN ROAD 28 VAN BUREN DRMONROE NY 10950 | 03/20/2019 | 03/20/2024 |
| DOL | DOL | *****0816 | SOLAR ARRAY SOLUTIONS, LLC | | 9365 WASHINGTON ST LOCKPORT IL 60441 | 07/23/2018 | 07/23/2023 |
| DOL | DOL | ****4025 | SOLUTION MATTERS INC | | 198 NORWOOD ROAD PORT JEFFERSON NY 11776 | 11/19/2015 | 11/19/2020 |
| DOL | DOL | ****3496 | STAR INTERNATIONAL INC | | 89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427 | 08/11/2003 | 08/11/3003 |
| DOL | DOL | *****6844 | STEAM PLANT AND CHX SYSTEMS INC. | | 14B COMMERCIAL AVENUE ALBANY NY 12065 | 11/14/2019 | 11/14/2024 |
| DOL | DOL | *****9933 | STEED GENERAL CONTRACTORS, INC. | | 1445 COMMERCE AVE BRONX NY 10461 | 05/30/2019 | 05/30/2024 |
| DOL | DOL | | STEFANOS PAPASTEFANOU, JR. A/K/A STEVE PAPASTEFANOU, JR. | | 256 WEST SADDLE RIVER RD UPPER SADDLE RIVER NJ 07458 | 05/30/2019 | 05/30/2024 |
| DOL | DOL | *****9751 | STEPHEN C WAGAR | | 544 OLD ROUTE 23 ACRE NY 12405 | 02/14/2017 | 02/14/2022 |
| DOL | DOL | | STEVE TATE | | 415 FLAGER AVE #302STUART FL 34994 | 10/31/2018 | 10/31/2023 |
| DOL | NYC | | STEVEN GOVERNALE | | 601 PORTION RD RONKONKOMA NY 11779 | 11/18/2016 | 11/18/2021 |
| DOL | DOL | | STEVEN MARTIN | | 2404 DELWARE AVE NIAGARA FALLS NY 14305 | 09/12/2018 | 09/12/2023 |
| DOL | DOL | | STEVEN P SUCATO | | 15-68 208TH STREET BAYSIDE NY 11360 | 06/23/2016 | 06/23/2021 |
| DOL | DOL | | STEVEN TESTA | | 50 SALEM STREET - BLDG B LYNNFIELD MA 01940 | 01/23/2017 | 01/23/2022 |
| DOL | NYC | ****9432 | SUBLINK LTD | | 346 THIRD AVENUE PELHAM NY 10803 | 11/19/2015 | 11/19/2020 |
| DOL | NYC | ****5863 | SUKHMANY CONSTRUCTION, INC. | | 185-06 56TH AVE FRESH MEADOW NY 11365 | 10/17/2017 | 10/17/2022 |
| DOL | DOL | *****1060 | SUNN ENTERPRISES GROUP, LLC | | 370 W. PLEASANTVIEW AVE SUITE 2.329HACKENSACK NJ 07601 | 02/11/2019 | 02/11/2024 |
| DOL | DOL | ****8209 | SYRACUSE SCALES, INC. | | 158 SOLAR ST SYRACUSE NY 13204 | 01/07/2019 | 01/07/2024 |
| DOL | DOL | ****7441 | T & T CONCRETE INC | | 2560 HAMBURG TURNPIKE P O BOX 367LACKAWANNA NY 14218 | 07/08/2015 | 07/08/2020 |
| DOL | DOL | | TALAILA OCAMPA | | 1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442 | 01/16/2018 | 01/16/2023 |
| DOL | DOL | ****9852 | TAP STEEL INC | | ROUTE 26 3101 P O BOX 457CONSTABLEVILLE NY 13325 | 01/28/2016 | 01/28/2021 |
| DOL | DOL | ****5570 | TESTA CORP | | 50 SALEM STREET - BLDG B LYNNFIELD MA 01940 | 01/23/2017 | 01/23/2022 |
| DOL | DOL | ****0887 | THE BRINSON PAINTING CORPORATION | | 72 TAUNTON PLACE BUFFALO NY 14216 | 04/14/2015 | 04/14/2020 |
| DOL | DOL | ****5766 | THE COKER CORPORATION | COKER CORPORATIO N | 2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205 | 12/04/2018 | 12/04/2023 |
| DOL | DOL | ****8174 | THE DALRYMPLE CORPORATION | | UNIT 278 541 10TH STREET NWATLANTA GA 30318 | 12/01/2015 | 12/01/2020 |

| DOL | DOL | *****8174 | THE DALRYMPLE GROUP LLC | | 289 JONESBORO RD/ STE 216 MCDONOUGH GA 30253 | 12/01/2015 | 12/01/2020 |
|-----|-----|-----------|------------------------------------------|------------------------------------------|----------------------------------------------------------------------------|------------|------------|
| DOL | DOL | | TIMOTHY A PALUCK | | C/O TAP STEEL INC RTE 26 3101/ P O BOX 457CONSTABLEVILLE NY 13325 | 01/28/2016 | 01/28/2021 |
| DOL | DOL | *****3453 | TORCHIA'S HOME IMPROVEMENT | | 10153 ROBERTS RD SAUQUOIT NY 13456 | 08/09/2016 | 08/09/2021 |
| DOL | DOL | *****8311 | TRIPLE B FABRICATING, INC. | | 61 WILLETT ST. PASSAIC NJ 07503 | 10/26/2016 | 10/26/2021 |
| DOL | DOL | ****9407 | TURBO GROUP INC | | 15-68 208TH STREET BAYSIDE NY 11360 | 06/23/2016 | 06/23/2021 |
| DOL | DOL | ****6392 | V.M.K CORP. | | 8617 THIRD AVE BROOKLYN NY 11209 | 09/17/2018 | 09/17/2023 |
| DOL | NYC | | VALERIE VISCONTI | | 346 THIRD AVENUE PELHAM NY 10803 | 11/19/2015 | 11/19/2020 |
| DOL | NYC | ****7361 | VIABLE HOLDINGS, INC. | MOVING MAVEN | 1010 NORTHERN BLVD. GREAT NECK NY 11021 | 03/09/2017 | 03/09/2022 |
| DOL | DOL | | VICTOR ALICANTI | | 42-32 235TH ST DOUGLASTON NY 11363 | 01/14/2019 | 01/14/2024 |
| DOL | DOL | | VICTOR ROTENBERG | | C/O GMDV TRANS INC 67048 182ND STREETFRESH MEADOWS NY 11365 | 06/24/2016 | 06/24/2021 |
| DOL | NYC | | VIKTAR PATONICH | | 2630 CROPSEY AVE BROOKLYN NY 11214 | 10/30/2018 | 10/30/2023 |
| DOL | NYC | | VITO GARGANO | | 1535 RICHMOND AVE STATEN ISLAND NY 10314 | 12/13/2017 | 12/13/2022 |
| DOL | NYC | *****3673 | WALTERS AND WALTERS, INC. | | 465 EAST AND THIRD ST MT. VERNON NY 10550 | 09/09/2019 | 09/09/2024 |
| DOL | DOL | | WAYNE LIVINGSTON JR | NORTH COUNTRY DRYWALL AND PAINT | 23167 COUNTY ROUTE 59 DEXTER NY 13634 | 10/24/2016 | 10/24/2021 |
| DOL | DOL | ****3296 | WESTERN NEW YORK CONTRACTORS, INC. | | 3841 LAYNARD COURT NEW PORT RICHEY FL 34652 | 07/09/2019 | 07/09/2024 |
| DOL | DOL | | WHITE PLAINS CARPENTRY CORP | | 442 ARMONK RD | 06/12/2018 | 06/12/2023 |
| DOL | DOL | | WILLIAM C WATKINS | | 1229 JAMES STREET SYRACUSE NY 13203 | 05/02/2017 | 05/02/2022 |
| DOL | DOL | | WILLIAM DEAK | | C/O MADISON AVE CONSTR CO 39 PENNY STREETWEST ISLIP NY 11795 | 11/02/2016 | 11/02/2021 |
| DOL | DOL | | WILLIE BRINSON | | 72 TAUNTON PLACE BUFFALO NY 14216 | 04/14/2015 | 04/14/2020 |
| DOL | DOL | ****6195 | WILSON BROTHER DRYWALL CONTRACTORS | | 36 ABERSOLD STREET ROCHESTER NY 14621 | 08/31/2015 | 08/31/2020 |
| DOL | DOL | *****4043 | WINDSHIELD INSTALLATION NETWORK, INC. | | 200 LATTA BROOK PARK HORSEHEADS NY 14845 | 03/08/2018 | 03/08/2023 |
| DOL | DOL | *****4730 | XGD SYSTEMS, LLC | TDI GOLF | 415 GLAGE AVE #302STUART FL 34994 | 10/31/2018 | 10/31/2023 |
| DOL | DOL | *****7345 | YES SERVICE AND REPAIRS CORPORATION | | 145 LODGE AVE HUNTINGTON STATION NY 11476 | 08/09/2016 | 08/09/2021 |
| DOL | DOL | | YURIY IVANIN | | C/O MOUNTAIN'S AIR INC 2471 OCEAN AVENUE-STE 7ABROOKLYN NY 11229 | 09/24/2012 | 09/18/2020 |
| DOL | NYC | | ZAKIR NASEEM | | 30 MEADOW ST BROOKLYN NY 11206 | 10/10/2017 | 10/10/2022 |
| DOL | NYC | *****8277 | ZHN CONTRACTING CORP | | 30 MEADOW ST BROOKLYN NY 11206 | 10/10/2017 | 10/10/2022 |



Architectural & Engineering DESIGN Associates P.C.

APPENDIX B

PRE-DEMOLITION ASBESTOS AND HAZARDOUS MATERIAL INSPECTION REPORT BY KAS, DATED JUNE 3, 2019

Municipal Buildings 32 Green Street Plattsburgh, New York 12901

PRE-DEMOLITION ASBESTOS AND HAZARDOUS MATERIAL INSPECTION REPORT

June 3, 2019 KAS Job #: 304195021

Prepared for:

City of Plattsburgh 41 City Hall Place Plattsburgh, New York 12901



13 Latour Avenue, Suite 204 PO Box 2787 Plattsburgh, NY 12901

www.kas-consulting.com

518 563.9445 p 518 563.5189 f



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| 4.0 | CERTIFICATION/ ACCREDITATION | _ 3 |
| 5.0 | INSPECTION RESULTS | _ 5 |
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 Table 1 – Inspection Results Summary

APPENDICES

- Appendix 1 KAS License/Certification
- Appendix 2 Laboratory Analysis Reports
- Appendix 3 Sample Location/ACM Identification Maps



1.0 INSPECTION SUMMARY

KAS, Inc. (KAS) inspected the six (6) municipal buildings located at 32 Green Street, Plattsburgh, Clinton County, New York for the presence of asbestos-containing materials (ACMs), and hazardous materials on May 13, 2019. The asbestos inspection was a pre-demolition inspection conducted to fulfill New York State Industrial Code Rule 56 (NYS ICR 56) and US EPA NESHAP-Asbestos requirements. The hazardous materials inspection included a visual inspection to identify items that require special handling in accordance with local, state and federal regulations prior to or during demolition.

ACMs, defined as materials containing greater than 1% asbestos or assumed, included the following:

<u>Building 1</u>

• None.

<u>Building 2</u>

• None.

<u>Building 3</u>

- Built-up Roofing Flat Roof and Sloped Roof;
- Tar Paper Flat Roof;
- 9" x 9" Floor Tiles Offices; and,
- Vermiculite Ceilings Above Office Space, Breakroom and Changing Room.

The mastic adhered to the $9" \times 9"$ floor tiles in offices contains less than 1%, which is not considered an ACM, but is regulated by OSHA.

<u>Building 4</u>

• Transite Wall Panel – Interior Wall.

<u>Building 5</u>

• None.

<u>Building 6</u>

• None.



Hazardous materials identified during the inspection included the following:

<u>Building 1</u>

• None.

<u>Building 2</u>

• None.

<u>Building 3</u>

• Light Ballast.

<u>Building 4</u>

• Used Lamps – Inside Waste Container.

<u>Building 5</u>

• None.

<u>Building 6</u>

• Used and Unused Transformer Fluid.

ACMs must be abated in accordance with NYS ICR 56 and NESHAP-Asbestos prior to demolition. OSHA worker protection standards for asbestos must be followed when interfacing with materials containing less than 1% asbestos. Based on the construction date of the residential building, painted surfaces are assumed to contain lead and OSHA worker protection standards for lead must be followed during demolition. The hazardous materials identified should be removed and properly disposed prior to demolition of the building.

2.0 INSPECTION METHODS

This inspection consisted of a visual inspection for suspect asbestos-containing materials (ACMs) and hazardous materials from the municipal buildings. Samples of suspect ACMs were collected for laboratory analysis. The number of samples generally ranges from 2 to 7 samples per homogenous material based on type and quantity. The inspection was conducted by EPA accredited, State of New York-certified, Asbestos Inspector Joshua Douglass in accordance with NYS ICR 56, NESHAP - Asbestos and OSHA requirements. The number of samples for asbestos was collected in accordance with industry standards. Suspect materials collected were



submitted to SanAir Technologies Laboratory of Powhatan, Virginia, a NYS ELAPapproved laboratory for analysis of samples for asbestos content.

The hazardous material inspection included a determinization of suspect lead containing paint based on construction date and a visual inspection for the presence thermostats or light fixtures, hydraulic lifts with subgrade pistons, above ground storage tanks (ASTs), evidence of underground storage tanks (USTs), and suspect polychlorinated biphenyls (PCBs) containing light ballasts. This work was limited to a visual assessment and did not include sampling suspect PCBs or mercury containing materials.

3.0 ASBESTOS-CONTAINING, HAZARDOUS MATERIALS AND APPLICABLE REGULATIONS

NYS ICR 56 details the procedures, regulations, certifications and licenses required when disturbance of ACMs occurs in the State of New York. In essence, any company, individual or organization that disturbs ACMs or provides asbestos consulting or laboratory services must be certified/licensed by the State of New York. Personnel that conducted this inspection, bulk sample collections and laboratory analysis were properly certified by the State of New York and possess current EPA approved training in asbestos site inspections and asbestos laboratory analysis. KAS' corporate license, individual inspector certification and the laboratories certifications are included in Appendix 1.

PCB-containing light ballasts, ASTs, USTs, hydraulic lifts with subgrade pistons and mercury-containing fluorescent light tubes and thermostats, must be handled and disposed of in accordance with local, state and federal regulations. Light ballasts must be considered to contain PCBs unless labeled "No PCBs" as required by EPA between 1978 and 1998. Tubular and compact fluorescent bulbs contain varying amounts of mercury and must be handled and disposed of accordingly.

4.0 CERTIFICATION/ ACCREDITATION

Per paragraph 56-5.1 (f) 3 of NYS ICR 56, the following information is required for the asbestos inspection. Additional information regarding cursory inspections are included:



Inspection Location: Six (6) Municipal Buildings 32 Green Street Plattsburgh, New York 12901

The inspection was a pre-demolition asbestos inspection to fulfill NYS ICR 56 and federal NESHAP requirements and a visual hazardous material inspection to ensure proper handling and disposal of materials in accordance with local, state and federal regulations.

Inspection Date: May 13, 2019

Contact Name and Address: Mr. Matthew Miller City of Plattsburgh 41 City Hall Place Plattsburgh, New York 12901

Firm Performing the Inspection: KAS, Inc. Asbestos Handling License Number: 29547, expires December 31, 2019 P.O. Box 787 Williston, Vermont 05495

Name of Performing Certified Inspector: Joshua Douglass, NYSDOL Asbestos Certificate # 12-15442, Asbestos Inspector, Expires December 2019

Listing of the homogenous suspect ACMs sample groups collected is included in Section 5.0.

Asbestos bulk samples were submitted to SanAir Technologies Laboratory of Powhatan, Virginia (NYS ELAP #11983) for analysis.



5.0 INSPECTION RESULTS

ACMs, defined as materials containing greater than 1% asbestos or assumed, identified included the following:

<u>Building 1</u>

• None.

<u>Building 2</u>

• None.

<u>Building 3</u>

- Built-up Roofing Flat Roof and Sloped Roof;
- Tar Paper Flat Roof;
- 9" x 9" Floor Tiles Offices; and,
- Vermiculite Ceilings Above Office Space, Breakroom and Changing Room.

The mastic adhered to the $9" \times 9"$ floor tiles in offices contains less than 1%, which is not considered an ACM, but is regulated by OSHA.

<u>Building 4</u>

• Transite Wall Panel – Interior Wall.

<u>Building 5</u>

• None.

<u>Building 6</u>

• None.

Hazardous materials identified during the inspection included the following:

Building 1

• None.

<u>Building 2</u>

• None.

<u>Building 3</u>

• Light Ballast.

June 3, 2019



<u>Building 4</u>

• Used Lamps – Inside Waste Container.

<u>Building 5</u>

• None.

<u>Building 6</u>

• Used and Unused Transformer Fluid.

Based on the construction date of the residential building, painted surfaces are assumed to contain lead.

6.0 OBSERVATIONS AND RECOMMENDATIONS

Building Comments:

Building 1 was a concrete block structure with a basement and flat roof. The roof was recently abated and not included in the inspection. The walls and ceilings consist of concrete block and concrete. No Vermiculite was encountered inside the concrete block walls during the inspection. The floors consisted of painted concrete with the exception of the bathroom. The bathroom was a raised floor that consisted of wood and sheet flooring over concrete. The basement contained boilers that were no longer in use. The basement floods regularly and no suspect materials were encountered during the inspection.

Building 2 was a concrete block structure with a basement and a flat roof. The roof was recently abated and not included in the inspection. The interior walls consisted of painted gypsum board. No joint compound was encountered during the inspection. Exterior walls consisted of concrete block. Flooring consisted of ceramic floor tile over the concrete poured floor. The basement consisted of poured concrete floors, ceilings and walls. No suspect materials were observed in the basement. Destructive sampling was limited as the building is not to be demolished immediately.

Building 3 was a concrete block structure build slab on grade with a sloped and flat roof. The sloped roof consisted of a rubber membrane, fiber insulation board, builtup roofing on a wood deck. No hot mop was encountered on the sloped roof. The flat roof consisted of concrete pavers, fiberglass insulation board, built-up roofing and hot mop on a metal corrugated deck. Around the perimeter of the flat roof, a wood



strip was present under the built-up roofing with tar paper in place of the metal deck. The exterior walls consisted of concrete block. No Vermiculite was encountered inside the concrete block walls during the inspection. The interior was divided by the garage area, office area and breakroom/changing room areas. The walls and floors in the garage area consisted of concrete block and the concrete slab. The walls and ceilings in the office area and breakroom/changing room areas consisted of plaster. In the office area a 2' x 4' ceiling gird was present below the plaster. Vermiculite was present above the office and breakroom/changing room areas. Vermiculite contamination was observed in the office adjoining the break room. Flooring in the office area consisted of 9" x 9" floor tile with mastic. Flooring in the break room consisted of concrete and wood flooring. The changing room area flooring consisted of ceramic tiles. The second level office consisted of sheet flooring and wood paneled walls. The ceiling of the office consisted of compressed wood ceiling tiles stapled to wood strips.

Building 4 was a metal framed building with metal siding and a metal sloped roof built slab on grade. The windows contained window glazing. The interior wall contained a Transite wall board between two wood framed, wood paneled walls.

Buildings 5 and 6 were storage garages and did not contain any suspect ACMs.

A Sample Location/ACM Identification Maps are included in Appendix 3.

Recommendations:

- Removal or handling of ACMs must be performed in accordance with NYS ICR 56 and NESHAPs by a NYS-licensed asbestos company with NYS-certified asbestos handlers.
- Materials that contain <1% asbestos are not ACMs, but require special handling in accordance with OSHA worker protection standards for asbestos.
- Painted surfaces are assumed to contain lead and OSHA worker protection standards for lead must be followed when interfacing with them and painted materials must be properly disposed in accordance with local, state and federal regulations.
- Hazardous materials identified must be properly removed and disposed of in accordance with local, state and federal regulations prior to demolition.
- A copy of this report must be submitted to the New York State Department of Labor Asbestos Bureau.



• A pre-demolition asbestos and hazardous material inspection will identify the vast majority of ACMs and hazardous materials; however, building materials suspect for ACMs or hazardous materials are encountered that are not consistent with this report work must immediately stop. Building materials not previously identified must be assumed to be ACM until sampled and proven otherwise. Hazardous materials previously not identified must be properly handled and disposed of in accordance with local, state and federal regulations.



| | E 1 – INSPECTION RES ildings, 32 Green Stree | | ′ork |
|-------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------|----------------------------|
| HA/SAMPLE # LOCATION | MATERIAL | ANALYTICAL RESULTS | ACM QUANTITY/ CONDITION |
| | Building 1 | | |
| 1/1A-1B Bathroom | Sheet Flooring | NAD | - |
| | | | |
| 1/1A-1C Meter Room Walls | Gypsum Board | NAD | - |
| | Building 3 | | |
| 1/1A-1C Flat Roof | Built-Up Roofing | 16.78% Chrysotile | ~3,000 sf/Good |
| 2/2A-2B Flat Roof | Hot Mop | NAD | - |
| 3/3A-3C Sloped Roof | Built-Up Roofing | 13.76% Chrysotile | ~5,000 sf/Good |
| 4/4A-4B Flat Roof | Tar Paper | 1.99% Chrysotile | ~1,000 sf/Good |
| 5/5A-5B Offices | 9" x 9" Floor Tile and Mastic | Floor Tile – 14.34% Chrysotile Mastic - < 1% Chrysotile | ~600 sf/Good |
| 6/6A-6C Offices, Breakroom and Changing Room Walls/Ceilings | Plaster | NAD | - |
| 7/7A-7B Second Level Office | Sheet Flooring | NAD | - |
| 8/8A-8B Offices | 2' x 4' Ceiling Tiles | NAD | - |
| 9/9A-9B Changing Room | Wall Mastic | NAD | - |
| - Office Adjoining Break Room and Above Office Ceilings | Vermiculite | Assumed | ~3,000 sf/Good |
| | Building 4 | | |
| 1/1A-1C Windows | Window Glaze | NAD | - |
| Interior Wall | Transite | Assumed | ~300 sf/Good |

Notes:

1. HA – homogeneous area, sf – square feet, NAD – no asbestos detected

ACM – asbestos containing material, >1% asbestos content or assumed and are bolded in table,
 Quantities are approximate and should be field verified by the abatement contractor.

4. Chrysotile is a type of asbestos.



APPENDIX 1

KAS LICENSE/CERTIFICATION

New York State – Department of Labor Division of Safety and Health License and Certificate Unit State Campus, Building 12 Albany, NY 12240

ASBESTOS HANDLING LICENSE

Kas, Inc.

P.O. Box 787

Williston, VT 05495

FILE NUMBER: 05-0787 LICENSE NUMBER: 29547 LICENSE CLASS: RESTRICTED DATE OF ISSUE: 12/13/2018 EXPIRATION DATE: 12/31/2019

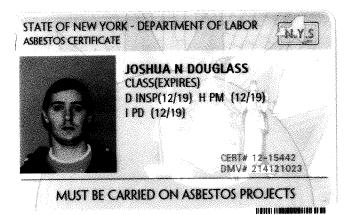
Duly Authorized Representative - Amy King:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

SH 432 (8/12)

Eileen M. Franko, Director For the Commissioner of Labor





APPENDIX 2

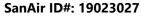
LABORATORY ANALYSIS REPORTS



The Identification Specialists

Analysis Report prepared for KAS, Inc.

Report Date: 5/21/2019 Project Name: City Of Plattsburgh Project #: 304195021





NVLAP LAB CODE 200870-0



1551 Oakbridge Dr. Suite B | Powhatan, Virginia 23139-8061 888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com



SanAir ID Number **19023027** FINAL REPORT 5/21/2019 5:26:31 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Dear Josh Douglass,

We at SanAir would like to thank you for the work you recently submitted. The 21 sample(s) were received on Tuesday, May 14, 2019 via FedEx. The final report(s) is enclosed for the following sample(s): 1A, 1B, 1C, 2B, 3A, 3B, 3C, 4A, 4B, 5A, 5B, 6A, 6B, 6C, 7A, 7B, 8A, 8B, 9A, 9B. The following sample(s) were unusable and were not tested: 2A

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobiint

Sandra Sobrino Asbestos & Materials Laboratory Manager SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:

- 20 samples in Good condition.
- 1 samples in QNS condition. (#4)



SanAir ID Number 19023027 FINAL REPORT 5/21/2019 5:26:31 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Pisula, Nicholas

Asbestos Bulk PLM NY ELAP 198.1

| | Stereoscopic | Com | ponents | |
|-----------------------------------------------------------------------|-------------------------------------|-----------|---------------|-----------------|
| SanAir ID / Description | Appearance | % Fibrous | % Non-fibrous | Asbestos Fibers |
| 6A / 19023027-013 Offices Walls Plaster W/ Skim Coat, Plaster | Grey Non-Fibrous Homogeneous | | 100% Other | None Detected |
| 6A / 19023027-013 Offices Walls Plaster W/ Skim Coat, Skim Coat | White Non-Fibrous Homogeneous | | 100% Other | None Detected |
| 6B / 19023027-014 Offices Walls Plaster W/ Skim Coat, Plaster | Grey Non-Fibrous Homogeneous | | 100% Other | None Detected |
| 6B / 19023027-014 Offices Walls Plaster W/ Skim Coat, Skim Coat | White Non-Fibrous Homogeneous | | 100% Other | None Detected |
| 6C / 19023027-015 Offices Walls Plaster W/ Skim Coat, Plaster | Grey Non-Fibrous Homogeneous | | 100% Other | None Detected |
| 6C / 19023027-015 Offices Walls Plaster W/ Skim Coat, Skim Coat | White Non-Fibrous Homogeneous | | 100% Other | None Detected |

Analyst: the like

Approved Signatory:

Sandra Asbiing

Analysis Date:

5/21/2019

Date:



SanAir ID Number **19023027** FINAL REPORT 5/21/2019 5:26:31 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Pisula, Nicholas

Asbestos Bulk PLM NOB NY ELAP 198.6

| | | % Other | % Non-Asbestos | Asbestos | % Total |
|----------------------------------------------------|---------------------------------------|----------|-----------------|---------------|----------|
| Sample | Appearance | Material | Fibers | Types | Asbestos |
| 1A 19023027-001 | Non-Fibrous Heterogeneous Black | 83.22 | <1% | Chrysotile | 16.78 |
| Flat Roof Built Up Roofing | | | | Total: | 16.78 |
| 1B 19023027-002 | Non-Fibrous Heterogeneous Black | 100% | | Not Analyzed | |
| Flat Roof Built Up Roofing | | | | | |
| 1C 19023027-003 | Non-Fibrous Heterogeneous Black | 100% | | Not Analyzed | |
| Flat Roof Built Up Roofing | | | | | |
| 2B 19023027-005 | Fibrous Homogeneous Black | 100% | | None Detected | |
| Flat Roof Hot Mop | | | | | |
| 3A 19023027-006 | Non-Fibrous Heterogeneous Black | 86.24 | <1% | Chrysotile | 13.76 |
| Sloped Roof Built Up Roofing | | | | Total: | 13.76 |
| 3B 19023027-007 Sloped Roof Built Up Roofing | Non-Fibrous Heterogeneous Black | 100% | | Not Analyzed | |
| 3C 19023027-008 | Non-Fibrous Heterogeneous Black | 100% | | Not Analyzed | |
| Sloped Roof Built Up Roofing | | | | | |
| | | | | | |
| Analyst: | - lil | Appro | oved Signatory: | andra Aob | int |
| Analysis Date: 5/21 | /2019 | | Date: | 5/21/2019 | |



SanAir ID Number **19023027** FINAL REPORT 5/21/2019 5:26:31 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Pisula, Nicholas

Asbestos Bulk PLM NOB NY ELAP 198.6

| | | % Other | % Non-Asbestos | Asbestos | % Total |
|--------------------------------------------------------------------|-------------------------------------|----------|----------------|---------------|----------|
| Sample | Appearance | Material | Fibers | Types | Asbestos |
| 4A 19023027-009 Flat Roof Tar Paper Vapor Barrier | Non-Fibrous Homogeneous Black | 100% | | None Detected | |
| 4B 19023027-010 Flat Roof Tar Paper Vapor Barrier | Non-Fibrous Homogeneous Black | 100% | | None Detected | |
| 5A Floor Tile19023027-011 | Non-Fibrous Homogeneous Tan | 85.66 | <1% | Chrysotile | 14.34 |
| Offices 9 X 9 Floor Tile/ Mastic | | | | Total: | 14.34 |
| 5A Mastic19023027-011 | Non-Fibrous Homogeneous Black | 100% | <1% | Chrysotile | <1% |
| Offices 9 X 9 Floor Tile/ Mastic | | | | Total: | <1% |
| 5B Floor Tile19023027-012 Offices 9 X 9 Floor Tile/ Mastic | Non-Fibrous Homogeneous Beige | 100% | | Not Analyzed | |
| 5B Mastic19023027-012 | Non-Fibrous Homogeneous Black | 99.41 | <1% | Chrysotile | <1% |
| Offices 9 X 9 Floor Tile/ Mastic | | | | Total: | <1% |
| 7A Floor Tile19023027-016 2nd Level Office Sheet Flooring | Non-Fibrous Homogeneous Cream | 100% | | None Detected | |

Analyst:

The El

Approved Signatory:

Jandra Asbiing 5/21/2019 Date:

Analysis Date:

5/21/2019

1551 Oakbridge Dr. Suite B, Powhatan, VA 23139 | 804.897.1177 | Fax: 804.897.0070 | www.SanAir.com | IAQ@SanAir.com Page 5 of 14



SanAir ID Number **19023027** FINAL REPORT 5/21/2019 5:26:31 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Pisula, Nicholas

Asbestos Bulk PLM NOB NY ELAP 198.6

| Sample | Appearance | % Other Material | % Non-Asbestos Fibers | Asbestos Types | % Total Asbestos |
|---------------------------------------|---------------------------------------|---------------------|--------------------------|-----------------------|---------------------|
| 7A Mastic/ Thinset19023027-016 | Non-Fibrous Heterogeneous | 100% | <1% | Chrysotile | <1% |
| 2nd Level Office Sheet Flooring | Various | | | Total: | <1% |
| 7B Floor Tile19023027-017 | Non-Fibrous Homogeneous | 100% | | None Detected | |
| 2nd Level Office Sheet Flooring | Cream | | | | |
| 7B Mastic/ Thinset19023027-017 | | 0 | | Insufficient Material | |
| 2nd Level Office Sheet Flooring | | | | | |
| 8A 19023027-018 | Fibrous Homogeneous | 100% | | None Detected | |
| Offices 2 X 4 Ceiling Tiles | Beige | | | | |
| 8B 19023027-019 | Fibrous Homogeneous Beige | 100% | | None Detected | |
| Offices 2 X 4 Ceiling Tiles | beige | | | | |
| 9A 19023027-020 | Non-Fibrous Heterogeneous Brown | 100% | | None Detected | |
| Break Room Locker Room Wall Mastic | biown | | | | |
| 9B 19023027-021 | Non-Fibrous Heterogeneous | 100% | | None Detected | |
| Break Room Locker Room Wall Mastic | Brown | | | | |
| | | | | | |
| Analyst: 11h | lik | Appro | oved Signatory: | andra Asb | int |
| Analysis Date: 5/21/2 | 2019 | | Date: | 5/21/2019 | 906 (\$95) |



SanAir ID Number **19023027** FINAL REPORT 5/21/2019 5:26:31 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Sobrino, Sandra | Tallert, Jonathan

Asbestos Bulk TEM NY ELAP 198.4

| | | % Other | % Non-Asbestos | Asbestos | % Total |
|--------------------------------------------------------------------|---------------------------------------|----------|-----------------|---------------|----------|
| Sample | Appearance | Material | Fibers | Types | Asbestos |
| 1C 19023027-003 | Non-Fibrous Heterogeneous Black | 100% | | None Detected | |
| Flat Roof Built Up Roofing | | | | | |
| 2B 19023027-005 | Fibrous Homogeneous Black | 100% | | None Detected | |
| Flat Roof Hot Mop | | | | | |
| 4A 19023027-009 | Non-Fibrous Homogeneous Black | 98.01 | <1% | Chrysotile | 1.99 |
| Flat Roof Tar Paper Vapor Barrier | Didek | | | Total: | 1.99 |
| 5A Mastic19023027-011 | Non-Fibrous Homogeneous Black | 100% | <1% | Chrysotile | <1% |
| Offices 9 X 9 Floor Tile/ Mastic | DIACK | | | Total: | <1% |
| 5B Mastic19023027-012 | Non-Fibrous Homogeneous Black | 100% | <1% | Chrysotile | <1% |
| Offices 9 X 9 Floor Tile/ Mastic | DIACK | | | Total: | <1% |
| 7A Floor Tile19023027-016 2nd Level Office Sheet Flooring | Non-Fibrous Homogeneous Cream | 100% | | None Detected | |
| 7A Mastic/ Thinset19023027-016 | Non-Fibrous Heterogeneous | 100% | <1% | Chrysotile | <1% |
| 2nd Level Office Sheet Flooring | Various | | | Total: | <1% |
| Analyst: | dia Asta | Appro | oved Signatory: | andra Asb | int |
| Analysis Date: 5/21/2 | dra Abbi 2019 | 11W | Date: | 5/21/2019 | 411W |



SanAir ID Number **19023027** FINAL REPORT 5/21/2019 5:26:31 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Sobrino, Sandra | Tallert, Jonathan

Asbestos Bulk TEM NY ELAP 198.4

| | | % Other | % Non-Asbestos | Asbestos | % Total |
|---------------------------------------|---------------------------------------|----------|-----------------|------------------------|----------|
| Sample | Appearance | Material | Fibers | Types | Asbestos |
| 7B Floor Tile19023027-017 | Non-Fibrous Homogeneous Cream | 100% | | None Detected | |
| 2nd Level Office Sheet Flooring | cicum | | | | |
| 7B Mastic/ Thinset19023027-017 | | 0 | | Insufficient Material | |
| 2nd Level Office Sheet Flooring | | | | | |
| 8A 19023027-018 | Fibrous Homogeneous Beige | 100% | | None Detected | |
| Offices 2 X 4 Ceiling Tiles | Delge | | | | |
| 8B 19023027-019 | Fibrous Homogeneous Beige | 100% | | None Detected | |
| Offices 2 X 4 Ceiling Tiles | | | | | |
| 9A 19023027-020 | Non-Fibrous Heterogeneous Brown | 100% | | None Detected | |
| Break Room Locker Room Wall Mastic | Diomi | | | | |
| 9B 19023027-021 | Non-Fibrous Heterogeneous Brown | 100% | | None Detected | |
| Break Room Locker Room Wall Mastic | | | | | |
| | | | | | |
| Analyst: Jan | dra Jobi | Appro | oved Signatory: | andra Aok 5/21/2019 | vint |
| Analysis Date: 5/21/2 | 2019 | | Date: | 5/21/2019 | |

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Final reports cannot be reproduced, except in full, without written authorization from SanAir. The accuracy of the results of the analysis is dependent upon the method of sample procurement and information provided by the client. SanAir assumes no responsibility or liability for the manner in which the results are used or interpreted. Samples were received in good condition unless otherwise noted on the report. This report may not be used by the client to claim product endorsement by NVLAP, AIHA or any other agency of the U.S. government; and may not be certified by every local, state and federal regulatory agency.

Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.



1551 Oakbridge Dr. STE B Powhatan, VA 23139 804.897.1177 / 888.895.1177 Fax 804.897.0070 sanair.com

Asbestos Chain of Custody Form 140, Rev 1, 1/20/2017

SanAir ID Number 19023027

| | | | | | | | _ | | | | |
|---------------|---------------------|--------------|--------|------------------|--------|-----------------------|-------|--------|-------------|----------------------|----------|
| Company: | KAS, Inc. | | | _ | | Project #: 30419 | SUD | | Collect by: | | |
| Address: | PO Box 787 | 7 | | F | Projec | t Name: City of Pla | ictt. | ourgh | Phone #: | 518-563-9445 | |
| City, St., Zi | williston, V | T 05495 | | Ι | Date (| Collected 5/13/19 | | 0 | Fax #: | 518-563-5189 | |
| State of Col | llection NY | Account#: | 36 | 605 _I | P.O. 1 | Number: | | | Email 105 | h de kas-ansul | thingles |
| | Bulk | | | | | Air | | | Soil | | 0 |
| ABB | PLM EPA 600/R- | 93/116 | | ABA | | PCM NIOSH 7400 | | ABSE | PLM EPA 6 | 600/R-93/116 (Qual.) | |
| | Positive Stop | | | ABA | | OSHA w/ TWA* | | | Vermicul | ite & Soil | |
| ABEPA | PLM EPA 400 Poi | | | ABTI | EM | TEM AHERA | | ABSP | PLM CARB | 3 435 (LOD <1%) | |
| ABB1K | PLM EPA 1000 P | | | ABA | TN | TEM NIOSH 7402 | | ABSP1 | PLM CARB | 3 435 (LOD 0.25%) | |
| ABBEN | PLM EPA NOB** | | | ABT2 | 2 | TEM Level II | | ABSP2 | PLM CARB | 435 (LOD 0.1%) | |
| ABBCH | TEM Chatfield** | | | Other | | | | | Dus | t | |
| ABBTM | TEM EPA NOB** | | | - | | New York ELAP | | ABWA | TEM Wipe | ASTM D-6480 | |
| ABQ | PLM Qualitative | | | PLM N | | PLM EPA 600/M4-82-020 | | ABDMV | TEM Micro | vac ASTM D-5755 | |
| ** | Available on 24-hr. | to 5-day TAT | | ABEP. | A2 | NY ELAP 198.1 | | | | | • |
| | Water | | | ABEN | JY | NY ELAP 198.6 PLM NOB | | Matrix | Othe | er | |
| ABHE | EPA 100.2 | | | ABBN | IY | NY ELAP 198.4 TEM NOB | | | | | |
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If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST Friday will begin at 8 am Monday morning. Weekend or holiday work must be scheduled ahead of time and is charged for rush turnaround time. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

Page of 3

| | | - | | Page of |
|-------------------------|--------------------------|------------------------------------------------|--------------------------------|----------------------------------------|
| | KAS, INC., | NAG, INC., P.O. BOA 2/8/, 13 LAI OUR AVENUE, 3 | UITE 204, PLATT | - |
| PROJECT NO. | Co | Jesh D | NG LICENSE 29547 SIGNATURE: | |
| CLIENT | ity at M | Flatte birgs | | Building S 32 Green st |
| SAMPLE TYPE: | BULK | | | latto bign ~ / |
| Homogenous Area (HA) | Sample Identification | Sample Location | | Building Surface |
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| | D BV. | | | +++ |
| COMMENTS: | | | | Date. |

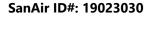
| PROJECT NO.: CLIENT: | 3041 | NC., P.O. BOX 2787, 13 LATOUR AVENUE, SU NYS ASBESTOS HANDLING SAMPLER: JOM DOUGUS | JITE 204, PLATTS G LICENSE 29547 SIGNATURE: LOCATION: | RAS, INC., P.O. BOX 2787, 13 LATOUR AVENUE, SUITE 204, PLATTSBURGH, NY (518) 563-9445 Page 95001 and sampler: bit Dut th bit bit Dut th bit bit Dut th bit bit Dut th bit |
|-------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Homogenous Area (HA) | Sample Identification 88 90 90 30 | Office Office Brether Ream Hocken room | | Building Surface Building Surface Wall Master Wall Master |
| RELINQUISHED BY: COMMENTS: | ED BY: DATE: SIBILY RECEIVED BY: CD | DATE: SUNTRECEIVED BY: | CL ² | Date: 5/14/10 9/35.00 |



The Identification Specialists

Analysis Report prepared for KAS, Inc.

Report Date: 5/21/2019 Project Name: City Of Plattsburgh Project #: 304195021





NVLAP LAB CODE 200870-0



1551 Oakbridge Dr. Suite B | Powhatan, Virginia 23139-8061 888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com



SanAir ID Number **19023030** FINAL REPORT 5/21/2019 2:36:56 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Dear Josh Douglass,

We at SanAir would like to thank you for the work you recently submitted. The 3 sample(s) were received on Tuesday, May 14, 2019 via FedEx. The final report(s) is enclosed for the following sample(s): 1A, 1B, 1C.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobiint

Sandra Sobrino Asbestos & Materials Laboratory Manager SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions: - 3 samples in Good condition.



SanAir ID Number **19023030** FINAL REPORT 5/21/2019 2:36:56 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Steiner, Tara

Asbestos Bulk PLM NY ELAP 198.1

| | Stereoscopic | Com | ponents | |
|----------------------------------------------|-------------------------------------|-----------|------------------------------------|-----------------|
| SanAir ID / Description | Appearance | % Fibrous | % Non-fibrous | Asbestos Fibers |
| 1A / 19023030-001 Meter Room Gypsum Board | White Non-Fibrous Homogeneous | | 100% Other | None Detected |
| 1B / 19023030-002 Meter Room Gypsum Board | White Non-Fibrous Homogeneous | | 100% Other | None Detected |
| 1C / 19023030-003 Meter Room Gypsum Board | White Non-Fibrous Homogeneous | | 100% Other | None Detected |
| Analyst: Analysis Date: 5/21/201 | 6. Jain 9 | Approved | Signatory: John the Date: 5/21/ | - Wlan 2019 |

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Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

| | anAir Iologies Laboratory | 1551 Oal Powhatai 804.897. Fax 804.3 sanair.co | n, VA 1177/ 897.00 | 23139 / 888.89 |) | Asbes Chain of C Form 140, Rev 1 | Custo | | | anAir ID Number | |
|--------------|------------------------------|------------------------------------------------------------|--------------------------|-------------------|----------------|----------------------------------------|------------|--------|-------------|----------------------|--------|
| Company: | KAS, Inc. | | | | | Project #: 324195 | 1021 | | Collect by: | | |
| Address: | PO Box 787 | 7 | | Pr | roject Name: | City of Plat | tobin | rsh | Phone #: | 518-563-9445 | |
| City, St., Z | williston, V | T 05495 | | D | Date Collected | - 1. | | | Fax #: | 518-563-5189 | |
| State of Co | llection: NY | Account#: | 36 | 605 P. | O. Number | | | | Email. JOST | delcas-conubli | itycin |
| | Bulk | | | | Ai | r | | | Soil | | 2 |
| ABB | PLM EPA 600/R-9 | 93/116 | | ABA | | IOSH 7400 | | ABSE | PLM EPA 6 | 600/R-93/116 (Qual.) | |
| | Positive Stop | | | ABA-2 | | w/ TWA* | | | Vermicul | | |
| ABEPA | PLM EPA 400 Poi | | | ABTE | | | | ABSP | | 8 435 (LOD <1%) | |
| ABB1K | PLM EPA 1000 Po | | | ABAT | IN TEM N | IOSH 7402 | | ABSP1 | | 3 435 (LOD 0.25%) | |
| ABBEN | PLM EPA NOB** | | | ABT2 | | evel II | | ABSP2 | PLM CARE | 3 435 (LOD 0.1%) | |
| ABBCH | TEM Chatfield** | | | Other: | | | | | Dus | | |
| ABBTM | TEM EPA NOB** | ¢ | | | | ork ELAP | | ABWA | TEM Wipe | ASTM D-6480 | |
| ABQ | PLM Qualitative | | | PLM N | | PA 600/M4-82-020 | | ABDMV | TEM Micro | vac ASTM D-5755 | |
| ** | Available on 24-hr. | to 5-day TAT | • | ABEPA | 42 NY EL. | AP 198.1 | | | | | |
| | Water | | | ABENY | | AP 198.6 PLM NOB | u ⁄ | Matrix | Othe | er | |
| ABHE | EPA 100.2 | | | ABBN | Y NY EL. | AP 198.4 TEM NOB | | | | | |
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| Special Instructions | See Attacky CO | C | | | |
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| Sample # | Sample Identification/Location | Volume or Area | Sample Date | Flow Rate* | Start – Stop Time* |
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If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST Friday will begin at 8 am Monday morning. Weekend or holiday work must be scheduled ahead of time and is charged for rush turnaround time. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

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| Page of | Page 04, PLATTSBURGH, NY (518) 563-9445 NSE 29547 | KAS, INC., P.O. BOX 2787, 13 LATOUR AVENUE, SUITE 204, PLAT | ح | |
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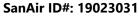
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The Identification Specialists

Analysis Report prepared for KAS, Inc.

Report Date: 5/21/2019 Project Name: City Of Plattsburgh Project #: 304195021





NVLAP LAB CODE 200870-0



1551 Oakbridge Dr. Suite B | Powhatan, Virginia 23139-8061 888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com



SanAir ID Number **19023031** FINAL REPORT 5/21/2019 5:38:06 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Dear Josh Douglass,

We at SanAir would like to thank you for the work you recently submitted. The 2 sample(s) were received on Tuesday, May 14, 2019 via FedEx. The final report(s) is enclosed for the following sample(s): 1A, 1B.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobiint

Sandra Sobrino Asbestos & Materials Laboratory Manager SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions: - 2 samples in Good condition.



SanAir ID Number 19023031 FINAL REPORT 5/21/2019 5:38:06 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Steiner, Tara

Asbestos Bulk PLM NOB NY ELAP 198.6

| Sample | Appearance | % Other Material | % Non-Asbestos Fibers | Asbestos Types | % Total Asbestos |
|-------------------------------------------------------------|---------------------------------------|---------------------|--------------------------|-------------------|---------------------|
| 1A Sheet Flooring19023031-001 Bathroom Sheet Flooring | Non-Fibrous Heterogeneous Beige | 100% | | None Detected | |
| 1A Mastic19023031-001 Bathroom Sheet Flooring | Non-Fibrous Homogeneous Yellow | 100% | | None Detected | |
| 1B Sheet Flooring19023031-002 Bathroom Sheet Flooring | Non-Fibrous Heterogeneous Beige | 100% | | None Detected | |
| 1B Mastic19023031-002 Bathroom Sheet Flooring | Non-Fibrous Homogeneous Yellow | 100% | | None Detected | |
| Analyst: | - C. J. | Appro | oved Signatory: | Insten Wan | |

Analysis Date:

5/21/2019

Date: 5/21/2019



SanAir ID Number 19023031 FINAL REPORT 5/21/2019 5:38:06 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Sobrino, Sandra

Asbestos Bulk TEM NY ELAP 198.4

| | | % Other | % Non-Asbestos | Asbestos | % Total |
|-------------------------------------------------------------|---------------------------------------|-----------|--------------------------|-----------------------|----------|
| Sample | Appearance | Material | Fibers | Types | Asbestos |
| 1A Sheet Flooring19023031-001 Bathroom Sheet Flooring | Non-Fibrous Heterogeneous Beige | 100% | | None Detected | |
| 1A Mastic19023031-001 Bathroom Sheet Flooring | Non-Fibrous Homogeneous Yellow | 100% | | None Detected | |
| 1B Sheet Flooring19023031-002 Bathroom Sheet Flooring | Non-Fibrous Heterogeneous Beige | 100% | | None Detected | |
| 1B Mastic19023031-002 Bathroom Sheet Flooring | Non-Fibrous Homogeneous Yellow | 100% | | None Detected | |
| Analyst: Analysis Date: 5/21, | dra Asbi 12019 | ing Appro | oved Signatory: Date: | ndra Asb 5/21/2019 | int |

5/21/2019

5/21/2019

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1551 Oakbridge Dr. STE B Powhatan, VA 23139 804.897.1177 / 888.895.1177 Fax 804.897.0070

Asbestos Chain of Custody Form 140, Rev 1, 1/20/2017

| | SanAir | ID Numl | ber |
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|-------------------------------------|-----------------------|-------------|-----------|----------------------------------|------|-----------------------|-----|----------|--------------|----------------------|--------|
| Company: | KAS, Inc. | | | | | Project #: 30419 | 502 | | Collect by: | | |
| Address: PO Box 787 | | | | Project Name: City of Plutbburgh | | | | Phone #: | 518-563-9445 | | |
| City, St., Zip: Williston, VT 05495 | | | | Date Collected: 5/13/19 | | | | Fax #: | 518-563-5189 | | |
| State of Col | lection: M | Account#: | 36 | 605 | P.O. | Number: | | | Email: 05h | de kas-anoutr | 1, Cop |
| | Bulk | | | | | Air | | | Soil | | |
| ABB | PLM EPA 600/R-9 | 3/116 | | ABA | 1 | PCM NIOSH 7400 | | ABSE | PLM EPA 6 | 600/R-93/116 (Qual.) | |
| | Positive Stop | | | ABA | 4-2 | OSHA w/ TWA* | | | Vermicul | ite & Soil | |
| ABEPA | PLM EPA 400 Poi | nt Count | | ABT | ГЕМ | TEM AHERA | | ABSP | PLM CARE | 8 435 (LOD <1%) | |
| ABB1K | PLM EPA 1000 Pc | int Count | | ABA | ATN | TEM NIOSH 7402 | | ABSP1 | PLM CARE | 3 435 (LOD 0.25%) | |
| ABBEN | PLM EPA NOB** | | | ABT | [2 | TEM Level II | | ABSP2 | PLM CARE | 8 435 (LOD 0.1%) | |
| ABBCH | TEM Chatfield** | | | Othe | er: | | | | Dus | t | |
| ABBTM | TEM EPA NOB** | | | e | | New York ELAP | | ABWA | TEM Wipe | ASTM D-6480 | |
| ABQ | PLM Qualitative | | | PLM | NY | PLM EPA 600/M4-82-020 | | ABDMV | TEM Micro | vac ASTM D-5755 | |
| ** | Available on 24-hr. t | o 5-day TAT | | ABEI | PA2 | NY ELAP 198.1 | Ø | | | | |
| | Water | | • | ABEN | NY | NY ELAP 198.6 PLM NOB | Ø | Matrix | Othe | er | |
| ABHE | EPA 100.2 | | | ABBI | NY | NY ELAP 198.4 TEM NOB | Ø | | | | |
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| Tu | Irn Around | 3 HR (4 | HR TE | M) 🗆 |] | 6 HR (8HR TEM) | | 12 HR | | 24 HR 🗆 | |
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Special Instructions See Attended COC

| Sample # | Sample Identification/Location | Volume or Area | Sample Date | Flow Rate* | Start – Stor Time* |
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If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST Friday will begin at 8 am Monday morning. Weekend or holiday work must be scheduled ahead of time and is charged for rush turnaround time. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

Page 1 of 2

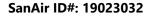
| VY (518) 563-9445 | Building Surface | mrdE: p 11/11 |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------|
| AVENUE, SUITE 204, PLATTSBURGH, N Estos Handling License 29547 Signature: Build Location: Build | Sample Location | 13/19 RECEIVED BY: |
| OX 2787, 13 | Becthra | BY: DATE: S//3//9RE BY: DATE: S//3//9RE BY: DATE: RE |
| KAS, INC., P.O. B PROJECT NO.: 304193031 SAMPLER: CLIENT: CITY of Platting | Homogenous Sample Area (HA) Identification | RELINQUISHED BY: |



The Identification Specialists

Analysis Report prepared for KAS, Inc.

Report Date: 5/21/2019 Project Name: City Of Plattsburgh Project #: 304195021





NVLAP LAB CODE 200870-0



1551 Oakbridge Dr. Suite B | Powhatan, Virginia 23139-8061 888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com



SanAir ID Number **19023032** FINAL REPORT 5/21/2019 5:29:03 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Dear Josh Douglass,

We at SanAir would like to thank you for the work you recently submitted. The 3 sample(s) were received on Tuesday, May 14, 2019 via FedEx. The final report(s) is enclosed for the following sample(s): 1A, 1B, 1C.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobiint

Sandra Sobrino Asbestos & Materials Laboratory Manager SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions: - 3 samples in Good condition.



SanAir ID Number **19023032** FINAL REPORT 5/21/2019 5:29:03 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Steiner, Tara

Asbestos Bulk PLM NOB NY ELAP 198.6

| | | % Other | % Non-Asbestos | Asbestos | % Total |
|--------------------------------------------------------|-------------------------------------|----------|-----------------|---------------|----------|
| Sample | Appearance | Material | Fibers | Types | Asbestos |
| 1A 19023032-001 Interior-Windows Window Glaze | Non-Fibrous Homogeneous Beige | 100% | | None Detected | |
| 1B 19023032-002 Interior-Windows Window Glaze | Non-Fibrous Homogeneous Beige | 100% | | None Detected | |
| 1C 19023032-003 Interior-Windows Window Glaze | Non-Fibrous Homogeneous Beige | 100% | | None Detected | |
| | | | | | |
| Analyst: | n le. Jele | Appro | oved Signatory: | mathin Whan | |
| Analysis Date: 5/2 | 1/2019 | | Date: | 5/21/2019 | |



SanAir ID Number **19023032** FINAL REPORT 5/21/2019 5:29:03 PM

Project Number: 304195021 P.O. Number: Project Name: City Of Plattsburgh Collected Date: 5/13/2019 Received Date: 5/14/2019 9:35:00 AM

Analyst: Sobrino, Sandra

Asbestos Bulk TEM NY ELAP 198.4

| | | % Other | % Non-Asbestos | Asbestos | % Total |
|-----------------------------------------------------------------------------------------|-------------------------------------|----------|----------------|---------------|----------|
| Sample | Appearance | Material | Fibers | Types | Asbestos |
| 1A 19023032-001 | Non-Fibrous Homogeneous Beige | 100% | | None Detected | |
| Interior-Windows Window Glaze | | | | | |
| 1B 19023032-002 | Non-Fibrous Homogeneous Beige | 100% | | None Detected | |
| Interior-Windows Window Glaze | J | | | | |
| 1C 19023032-003 | Non-Fibrous Homogeneous Beige | 100% | | None Detected | |
| Interior-Windows Window Glaze | | | | | |
| | | | | | |
| Analysis Date: 5/21/2019 Approved Signatory: Jandra Abbiing Analysis Date: 5/21/2019 | | | | | |
| Analysis Date: 5/2 | | Date: | 5/21/2019 | | |

Disclaimer

Final reports cannot be reproduced, except in full, without written authorization from SanAir. The accuracy of the results of the analysis is dependent upon the method of sample procurement and information provided by the client. SanAir assumes no responsibility or liability for the manner in which the results are used or interpreted. Samples were received in good condition unless otherwise noted on the report. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government.

NY ELAP lab ID 11983

Disclaimer

Final reports cannot be reproduced, except in full, without written authorization from SanAir. The accuracy of the results of the analysis is dependent upon the method of sample procurement and information provided by the client. SanAir assumes no responsibility or liability for the manner in which the results are used or interpreted. Samples were received in good condition unless otherwise noted on the report. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing. Under NY state regulations, None Detected by this method is inconclusive result.

NY ELAP lab ID 11983



Company:

Address:

City, St., Zip:

KAS, Inc.

PO Box 787

Williston, VT 05495

1551 Oakbridge Dr. STE B Powhatan, VA 23139 804.897.1177 / 888.895.1177 Fax 804.897.0070 sanair com

Project Name

SanAir ID Number

| Asbestos Chain of Custody Form 140, Rev 1, 1/20/2017 | 19023032 |
|------------------------------------------------------------|-----------------------|
| Project #: 304195021 | Collect by: |
| City of Plattonigh | Phone #: 518-563-9445 |
| 5/13/19 | Fax #: 518-563-5189 |

| City, St., Zi | ip: VVIIIISton, V | 1 05495 | | Date | Collected: 5/13/19 | | | Fax #: | 518-563-5189 | |
|---------------|---------------------|--------------|--------|-------------------|-----------------------|---|--------------------|-------------|----------------------|-------|
| State of Co | llection: NY | Account#: | 36 | 05 _{P.O} | Number: | | | Email: josh | ide Kas-consulti | Kicon |
| | Bulk | | | | Air | | | Soil | | 0 |
| ABB | PLM EPA 600/R- | 93/116 | | ABA | PCM NIOSH 7400 | | ABSE | PLM EPA 6 | 500/R-93/116 (Qual.) | |
| | Positive Stop | | | ABA-2 | OSHA w/ TWA | | Vermiculite & Soil | | | |
| ABEPA | PLM EPA 400 Po | int Count | | ABTEM | TEM AHERA | | ABSP | PLM CARE | 3 435 (LOD <1%) | |
| ABB1K | PLM EPA 1000 P | | | ABATN | TEM NIOSH 7402 | | ABSP1 | PLM CARE | 3 435 (LOD 0.25%) | |
| ABBEN | PLM EPA NOB** | | | ABT2 | TEM Level II | | ABSP2 | PLM CARE | 3 435 (LOD 0.1%) | |
| ABBCH | TEM Chatfield** | 0 | | Other: | | | | Dus | it | |
| ABBTM | TEM EPA NOB** | ¢ | | | New York ELAP | | ABWA | TEM Wipe | ASTM D-6480 | |
| ABQ | PLM Qualitative | | | PLM NY | PLM EPA 600/M4-82-020 | | ABDMV | TEM Micro | vac ASTM D-5755 | |
| ** | Available on 24-hr. | to 5-day TAT | | ABEPA2 | NY ELAP 198.1 | Ø | | | | - |
| | Water | | ð | ABENY | NY ELAP 198.6 PLM NOB | đ | Matrix | Othe | er | |
| ABHE | EPA 100.2 | | | ABBNY | NY ELAP 198.4 TEM NOB | | | | | |
| | | | | | | | | • | | |
| | Irn Around | 3 HR (4 1 | HR TE | M) 🗆 | 6 HR (8HR TEM) 🛛 | | 12 HR | | 24 HR 🗖 | |
| | Times | | 2 Days | 5 | □ 3 Days | | 🗆 4 D | ays | 🗹 5 Days | |

| pecial Instructions | See Attachel COC | | | | |
|---------------------|--------------------------------|-------------------|----------------|---------------|-----------------------|
| Sample # | Sample Identification/Location | Volume or Area | Sample Date | Flow Rate* | Start – Stop Time* |
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|-----------------|---------|-------|-------------|---------|---------|
| ON/ | 5/13/19 | 11000 | (1) | 5/14/19 | a: 35am |
| /- | | 10 | | 2111 | 9.00 |

If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST Friday will begin at 8 am Monday morning. Weekend or holiday work must be scheduled ahead of time and is charged for rush turnaround time. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

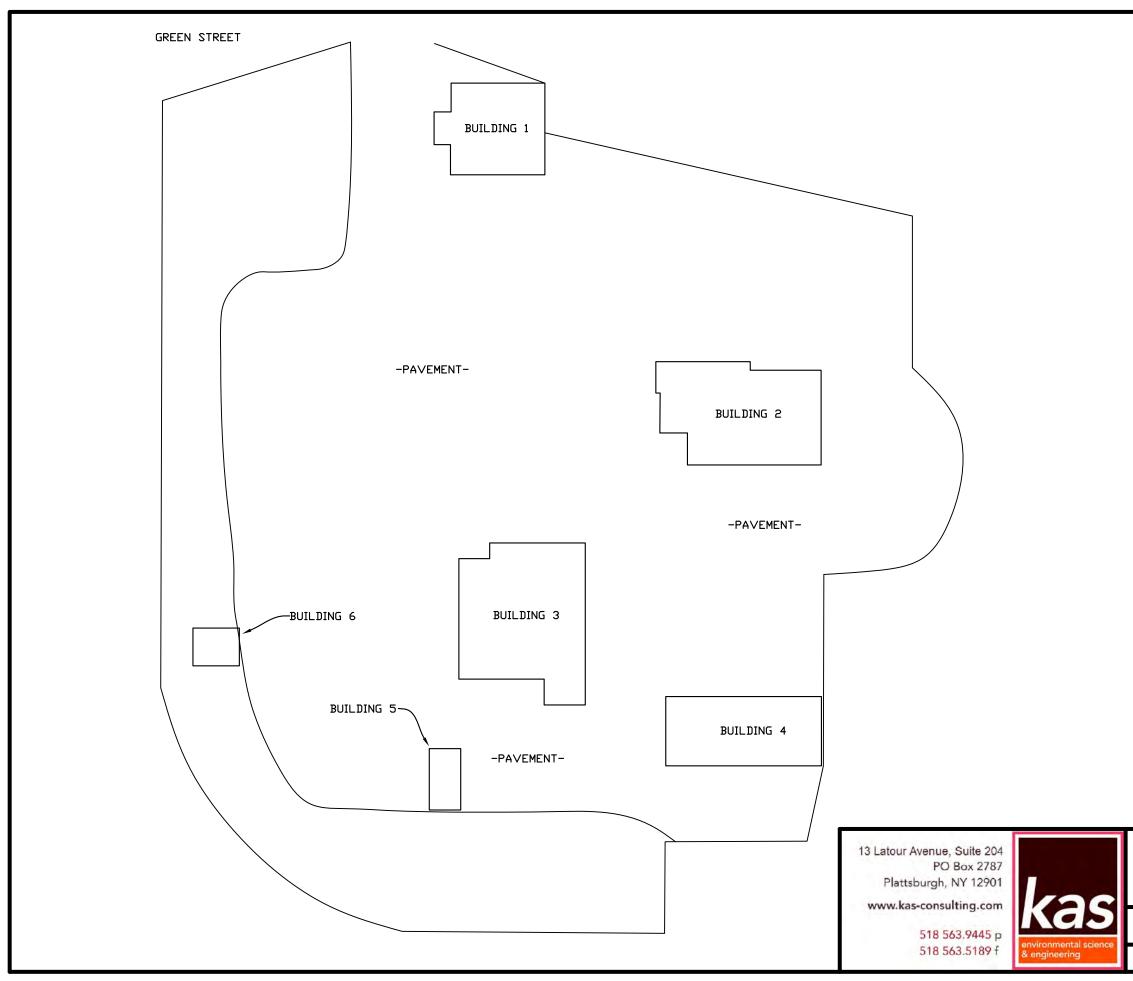
Page___of___

| 1 13 | | | 9 | |
|------------------|---------------------------|---|----------------------|----|
| RELINQUISHED BY: | DATE:S/13/14 RECEIVED BY: | G | Date: 5/14/19 9:35mm | S. |
| RELINQUISHED BY: | | | Date. |) |



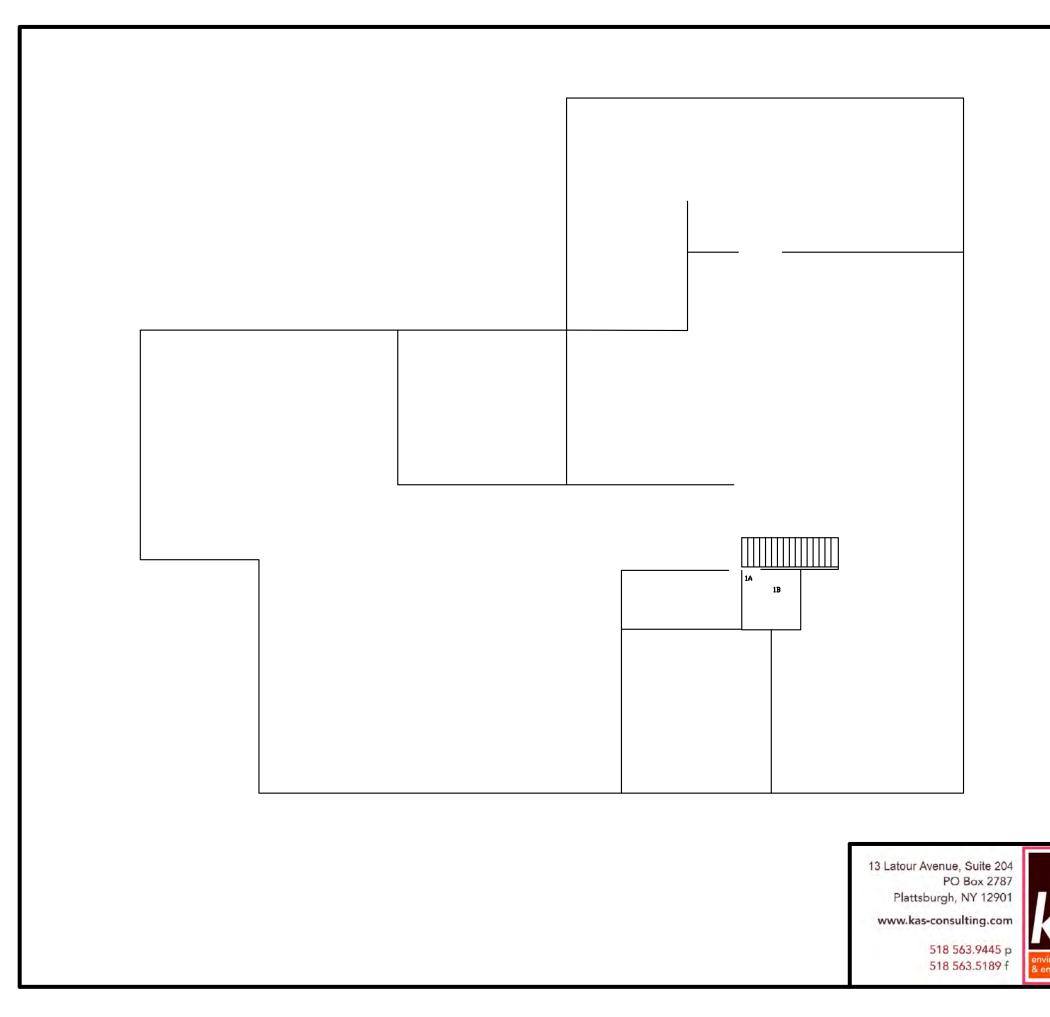
APPENDIX 3

ASBESTOS SAMPLE LOCATION MAP

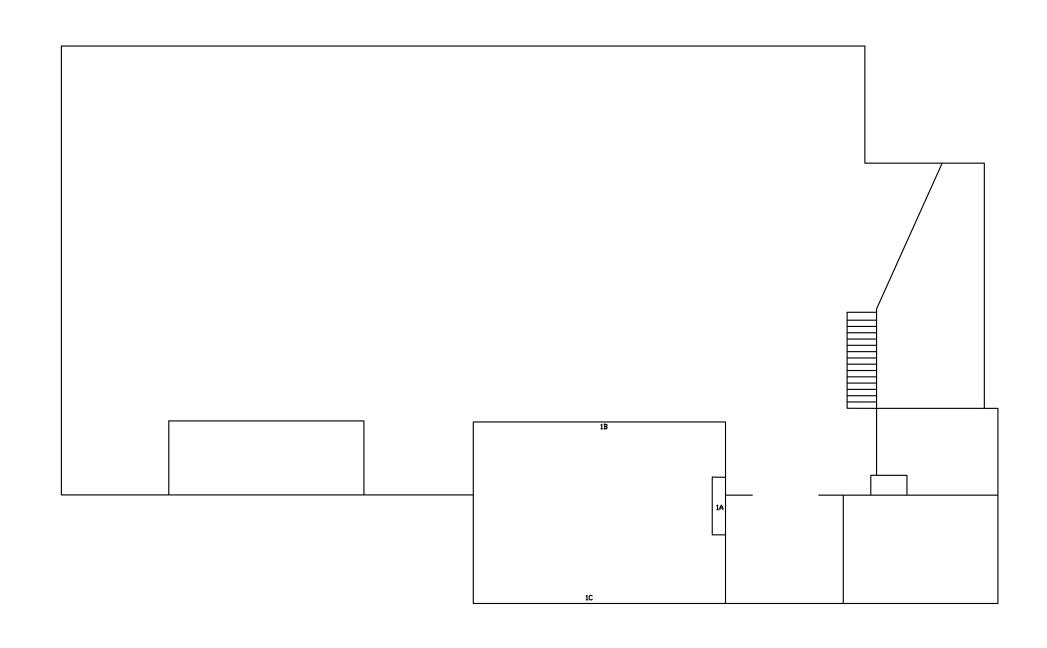


| NDTES: SITE MAP BASED | on pmld site | SKETCH | | | |
|----------------------------------------------------------------------------------------------|--------------|------------|----------|----------|--|
| | | | | | |
| | | | | | |
| KAS #i304195021 | | | | | |
| <u>PLATTSBURGH MUNICIPAL LIGHTING DEPARTMENT</u> 32 GREEN STREET PLATTSBURGH, NEW YORK | | | | | |
| SITE MAP | | | | | |
| DATE: 5/30/19 | DWG, #: 1 | SCALE: NTS | DRN.: JD | APP.: JD | |
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| | <u>LEGEND</u> | | | |
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| 1A | SAMF | PLE LOCATION/IDE | NTIFICATION | |
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| NDTES: 1. DRAWING BASEI |) ON PMLD BUIL | DING SKETCH | | |
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| | | | KAS # | 304195021 |
| PLATTSBURG | H MUNICIP | AL LIGHTING | | TMENT |
| PI A | | EN STREE GH, NEW | | |
| | | PLE LOCA | | МАР |
| DOICDING | | | SAMPLE | D: 5/13/19 |
| DATE: 5/30/19 | DWG. #: 2 | SCALE: NTS | DRN.: JD | APP.: JD |
| | | | | |





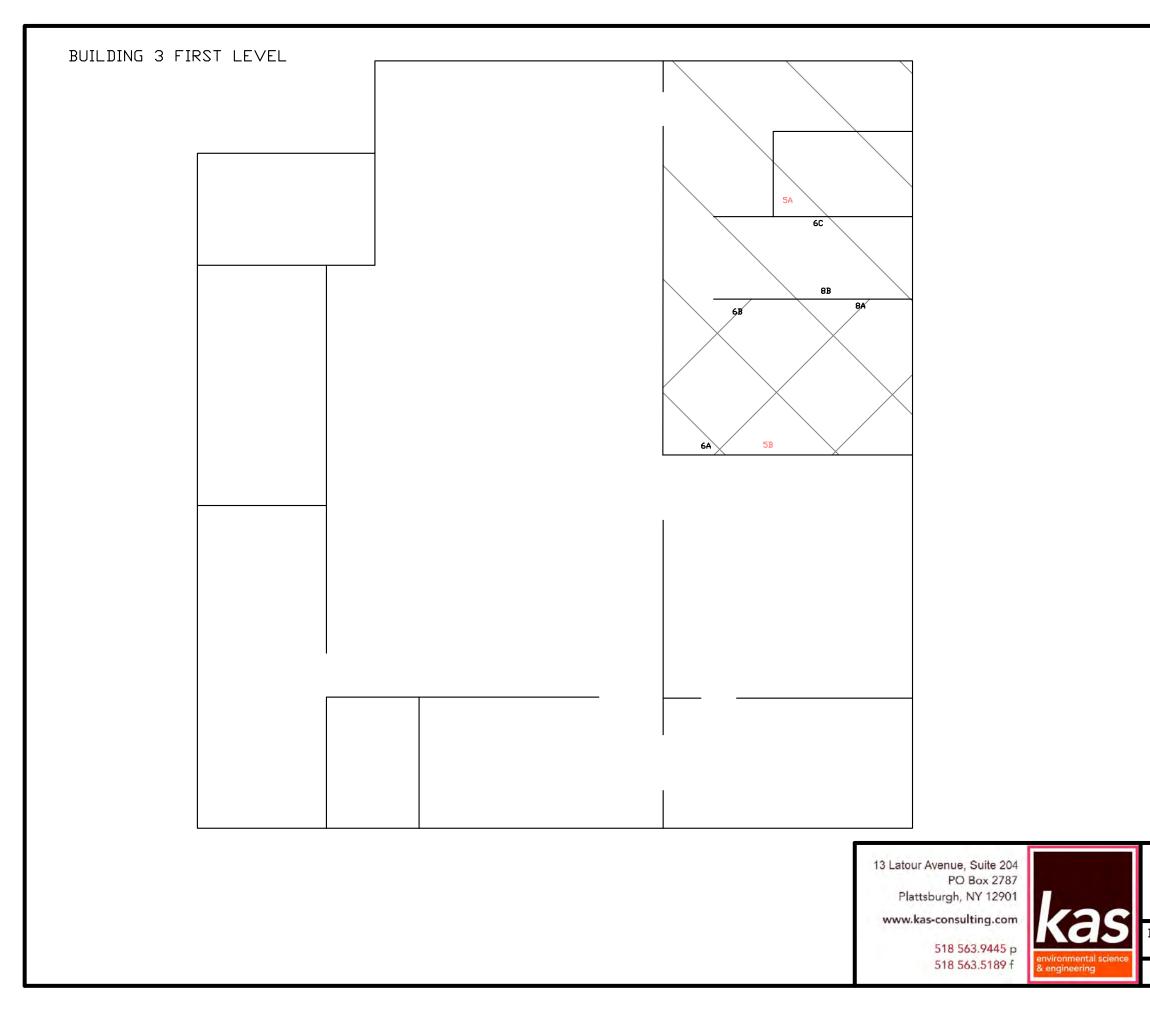
| NOTES: 1. DRAWING BASEI |) ON PMLD BUIL | .DING SKETCH | KAS #: | 304195021 |
|----------------------------|----------------|-------------------------------------------|----------|-------------------|
| | 32 GREE | <u>al lighting</u> En Stree GH, NEW | Т | <u>TMENT</u> |
| BUILDING | 2 SAM | PLE LOC4 | | MAP d: 5/13/19 |
| DATE: 5/30/19 | DWG. #: 3 | SCALE: NTS | DRN.: JD | APP.: JD |
| | | | | |

1A

<u>LEGEND</u>

SAMPLE LOCATION/IDENTIFICATION





| | 32 GRE | AL <u>lighting</u> En Stree GH, NEW | Т | <u>TMENT</u> |
|---------------|-----------|-------------------------------------------|----------|--------------|
| | | | | |
| BUILDING 3 SA | MPLE LOCA | TION/ACM IDE | | |
| | | | SAMPLE | D: 5/13/19 |
| DATE: 5/30/19 | DWG. #: 4 | SCALE: NTS | DRN.: JD | APP.: JD |

KAS #:304195021

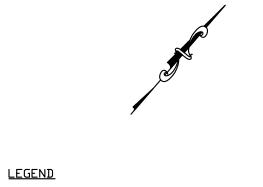
NDTES: 1. DRAWING BASED ON PMLD BUILDING SKETCH

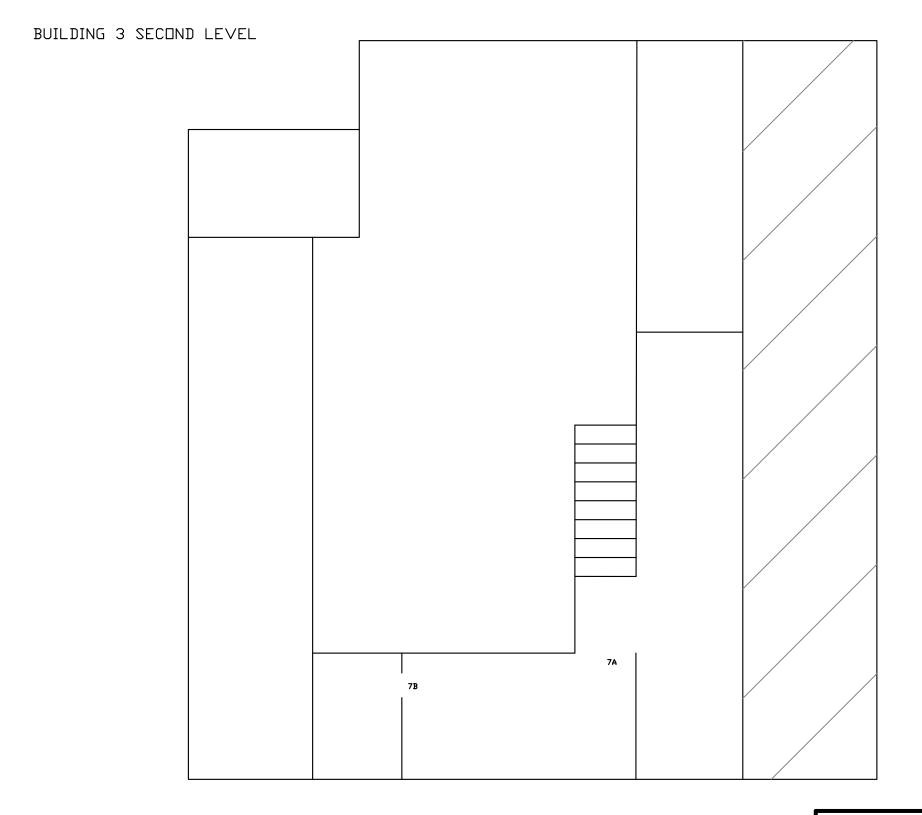


5A

SAMPLE LOCATION/IDENTIFICATION ACM SAMPLE LOCATION/IDENTIFICATION APPROXIMATE AREA OF VERMICULITE/CONTAMINATION

APPROXIMATE AREA OF ACM FLOOR TILE





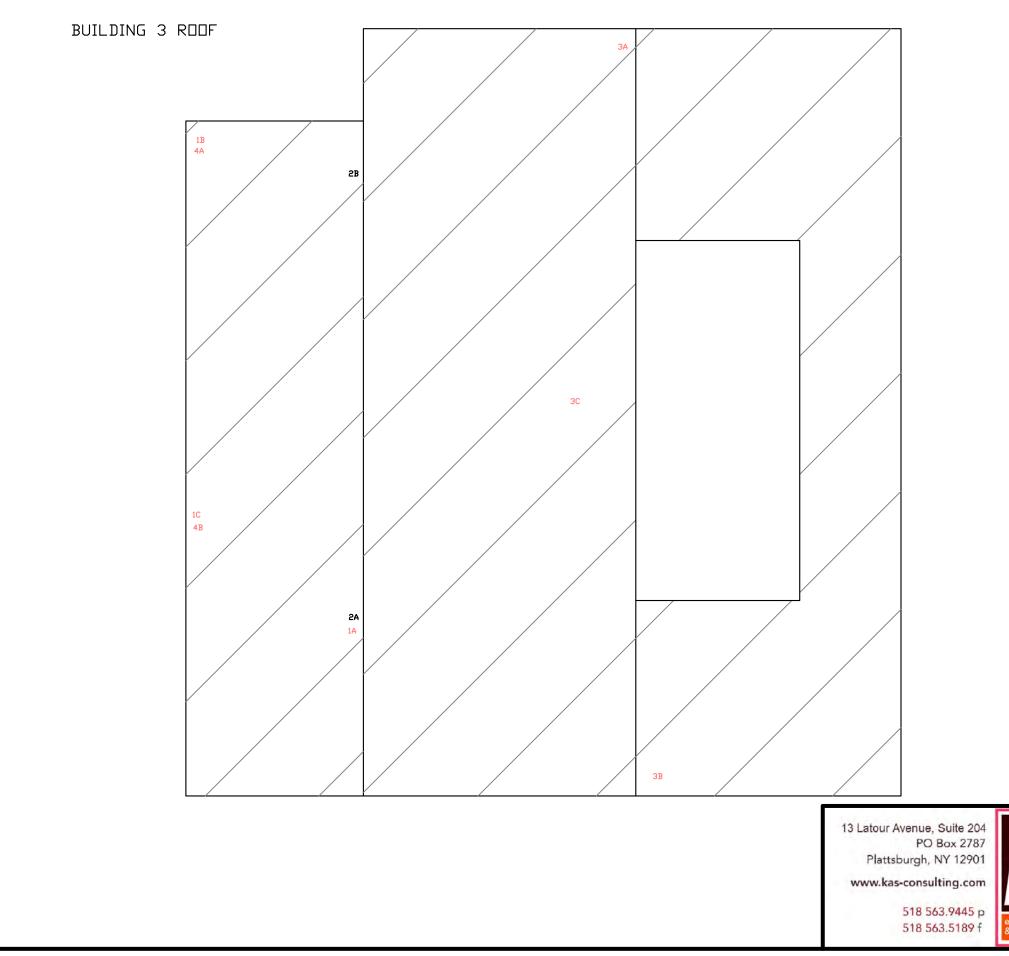


| []/]/] | APPI VER | ROXIMATE AREA OF MICULITE | | |
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| NDTES: 1. DRAWING BASEI |) ON PMLD BUIL | DING SKETCH | | |
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| | | | KAS # | 304195021 |
| PLATTSBURG | | <u>al lighting</u> En Stree | | TMENT |
| PLA | | GH, NEW | | |
| BUILDING 3 SA | MPLE LOCA | TION/ACM IDE | | ION MAP D: 5/13/19 |
| DATE: 5/30/19 | DWG. #: 5 | SCALE: NTS | DRN.: JD | APP.: JD |
| | | | | |

<u>LEGEND</u>

7A

SAMPLE LOCATION/IDENTIFICATION



| | 32 GRE | A <u>l lighting</u> En Stree GH, NEW | Т | <u>TMENT</u> | |
|-----------------------------------------------------------------------|-----------|--------------------------------------------|---|--------------|--|
| BUILDING 3 SAMPLE LOCATION/ACM IDENTIFICATION MAP SAMPLED: 5/13/19 | | | | | |
| DATE: 5/30/19 | DWG. #: 6 | SCALE: NTS | | APP.: JD | |

KAS #:304195021

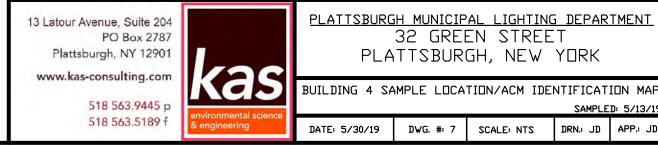
NDTES: 1. DRAWING BASED DN PMLD BUILDING SKETCH

1A 1A []////

<u>LEGEND</u> SAMPLE LOCATION/IDENTIFICATION ACM SAMPLE LOCATION/IDENTIFICATION APPROXIMATE AREA OF ACM BUILT-UP RODFING



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| PLA | TTSBUR | GH, NEW | YORK | | |
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| BUILDING 4 SA | MPLE LOCA | TION/ACM IDE | NTIFICAT | ION MAP | |
| SAMPLED: 5/13/19 | | | | | |
| DATE: 5/30/19 | DWG. #: 7 | SCALE: NTS | DRN.: JD | APP.: JD | |

KAS #:304195021

| LEGEND | |
|--------|---------------------------------------------|
| 1A | SAMPLE LOCATION/IDENTIFICATION |
| × | AIR SAMPLE LOCATION |
| | APPROXIMATE LOCATION OF TRANSITE WALL PANEL |

