

November 2022



**MONTGOMERY**  
**C O U N T Y NY**

Made of Something Stronger

## PROJECT MANUAL

### Montgomery County Phase 1 Generator

1 Venner Road  
Amsterdam, New York 12010

**RFP# - 15-22**

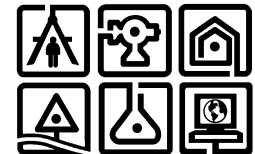
*Prepared for:*

#### **MONTGOMERY COUNTY**

Purchasing Department  
County Annex Building  
P.O. Box 1500 - 20 Park Street  
Fonda, New York 12068-1500

*Prepared by:*

**C.T. MALE ASSOCIATES**  
50 Century Hill Drive  
Latham, New York 12110



(518) 786-7400 | FAX (518) 786-7299  
[www.ctmale.com](http://www.ctmale.com)

*C.T. Male Associates Project No.: 20.0651*

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ENGINEERING, SURVEYING, ARCHITECTURE, LANDSCAPE ARCHITECTURE & GEOLOGY, D.P.C.

DOCUMENT 000101 - PROJECT TITLE PAGE

1.1 PROJECT MANUAL

- A. Project Name: **Montgomery County Phase 1 Generator**
- B. Project Location: 1 Venner Road  
Amsterdam, New York
- C. Owner: Montgomery County
- D. Owner's Address: County Annex Building  
P.O. Box 1500  
20 Park Street  
Fonda, New York 12068-1500
- E. Owner Project No.: 15-22
- F. Architect Project No.: 20.0651
- Architect: C.T. MALE ASSOCIATES  
Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.  
50 Century Hill Drive, Latham, NY 12110  
Phone: (518) 786-7400.  
Website: [www.ctmale.com](http://www.ctmale.com).
- G. Issued: November 16, 2022
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END OF DOCUMENT 000101

**MONTGOMERY COUNTY**  
BID No. 15-22

**COUNTY ANNEX BUILDING**  
P.O. BOX 1500, 20 PARK STREET  
FONDA, NY 12068-1500

**OFFICE OF THE EXECUTIVE**  
MATTHEW L. OSSENFORT  
COUNTY EXECUTIVE

**COUNTY LEGISLATURE**  
MICHAEL J. PEPE  
CHAIRMAN OF THE LEGISLATURE

MARTIN P. KELLY  
Legislator District 1

BRIAN D. SWEET  
Legislator District 2

ROY S. DIMOND  
Legislator District 3

ROBERT HEADWELL, JR.  
Legislator District 4

DANIEL P. WILSON  
Legislator District 5

JOHN M. DUCHESSI  
Legislator District 6

MICHAEL J. PEPE  
Legislator District 7

JOSEPH M. ISABEL  
Legislator District 8

ROBERT A. PURTELL  
Legislator District 9

**DEPARTMENT OF SOCIAL SERVICES**  
MICHAEL MCMAHON  
COMMISSIONER

THOMAS LIPPIE  
DEPUTY COMMISSIONER

JESSICA BATES  
DEPUTY COMMISSIONER - FISCAL OPERATIONS

**COUNTY ATTORNEY**  
MEGHAN M. MANION, ESQ.

**COUNTY PURCHASING DEPARTMENT**  
JACLYN HERNIGLE, PURCHASING BUYER

**DEPARTMENT OF PUBLIC WORKS**  
ERIC M. MEAD, COMMISSIONER

DOCUMENT 000107 – SEALS PAGE

1.1 DESIGN PROFESSIONALS OF RECORD

A. Architect:

**C.T. MALE ASSOCIATES**

Engineering, Surveying, Architecture,  
Landscape Architecture & Geology, D.P.C.  
50 Century Hill Drive, Latham, NY 12110

---

Nicholas M. Lobosco, R.A.  
R.A. License No. 034280

---

Date

B. Structural Engineer:

**C.T. MALE ASSOCIATES**

Engineering, Surveying, Architecture,  
Landscape Architecture & Geology, D.P.C.  
50 Century Hill Drive, Latham, NY 12110

---

Christopher M. Shaver, P.E.  
License No. 071071

---

Date

C. Electrical Engineer:

**ERDMAN ANTHONY**

11 Century Hill Drive, Latham, NY 12110

---

Bruce R. Wallman  
License No. 069601

---

Date

END OF DOCUMENT 000107



## PROJECT MANUAL

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**TITLE:** MONTGOMERY COUNTY  
PHASE 1 GENERATOR

**DATE:** November 16, 2022

**PROJECT NO.:** 20.0651

**BY:** C.T. MALE ASSOCIATES

<b>SHEET NO.</b>	<b>DESCRIPTION</b>
G-001	COVER SHEET
AE-101	EXISTING FLOOR PLAN
A-101	NEW GENERATOR PAD LAYOUT
E-000	ELECTRICAL COVER SHEET
E-101	OVERALL FIRST FLOOR PLAN
E-401	ENLARGED FIRST FLOOR PLANS
E-601	ONE-LINE DIAGRAMS

END OF DOCUMENT 000115

SECTION 001116 - INVITATION TO BID

Sealed Bids will be received by **Montgomery County**, at the Office of the Purchasing Department, located at the County Annex Building, 20 Park Street, Fonda, NY 12068, (Phone: 518-853-3351) until **2:00 PM** local time on **Tuesday, December 13, 2022**, and then, at said office, publicly opened and read aloud for:

**MONTGOMERY COUNTY**  
**Phase 1 Generator**

**Montgomery County** will award a Single Prime Contract for General Construction

Bids will be received on a Stipulated Sum basis, including unit prices, alternates and allowances, in accordance with the Summary of Work as described in the Contract Documents.

The Work shall be substantially complete, for occupancy and use by the Owner, within **335** calendar days, and completed and ready for final payment within **365** days after the date when the contract time commences to run. The Contractor(s) and the Contractor(s)' surety, if any, shall be assessed liquidated damages for each calendar day of delay after the date established for substantial completion in the Documents until the work is complete.

The labor on this contract shall be performed in all respects in full accordance with the Labor Law of the State of New York. Contractors must conform to the New York State prevailing wage rate schedules which are annexed to and form a part of the specifications for this project.

Bids should not include New York State sales and compensating use taxes on materials incorporated into the work.

Bids actually received by mail or by hand after the appointed time on the date specified shall be rejected, notwithstanding that such Bid may have been placed in a mail box or other mail receptacle regularly maintained by the United States Postal Service before such time, and ordinarily in sufficient time to have been delivered on time.

Bid security in the amount of **5%** of the Bid must accompany each Bid in accordance with the Instructions to Bidders.

The successful Bidder will be required to furnish a performance bond and a payment bond, each in an amount equal to **100%** of the contract price.

Drawings and Specifications may be examined on and after **Wednesday, November 16, 2022**, during normal business hours at the following locations:

1. MONTGOMERY COUNTY (**OWNER**), located at 6 Park Street, Fonda, NY 12068, (Phone: 518-853-3814) by appointment only, from 8 AM to 4:00 PM, Monday through Friday;
2. C.T. MALE ASSOCIATES, Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. (**ARCHITECT**), 50 Century Hill Drive, Latham, NY 12110, tel. (518) 786-7400, by appointment only, from 8:00 AM to 4:00 PM Monday through Friday;
3. EASTERN CONTRACTOR'S ASSOCIATION, INC., 6 Airline Dr., Albany, NY 12205, tel. (518) 869-0961, from 8 AM to 5 PM Monday through Friday; and
4. DODGE on-line only at [www.construction.com](http://www.construction.com).

Complete sets of Bidding and Contract Documents in electronic format may be obtained at no charge from the OWNER, by contacting the office of the Purchasing Department, located at 20 Park Street, P.O. Box 1500, Fonda, NY 12068 at telephone (518) 853-3351 during normal business hours, Monday – Friday, from 8:30 AM to 4:00 PM, to download copies from the County Website at:

<https://www.co.montgomery.ny.us/web/sites/departments/purchasing/contact.asp>.

All Bidders who intend to submit bids from documents acquired here **MUST** provide their contact information. Only those Contract Documents obtained in this manner will enable a prospective bidder to be identified as an official plan holder of record. Contract Documents obtained from other sources may not be accurate or may not contain addenda that may have been issued. Printed copies of the Contract Documents will not be available. Bidders wishing to obtain printed copies of the Contract Documents shall arrange at their own cost any required reproduction of the electronic documents.

In accordance with Section 103-d of the General Municipal Law, at the time Contractor submits its bid, an authorized and responsible person shall execute and deliver a non-collusive bidding certification on Contractor's behalf.

There will be a Pre-bid Conference, on **Wednesday, November 30, 2022 at 2:00 PM** local time, at the **project site**, located at 1 Venner Road, Amsterdam, NY 128010 to review the Bidding Documents, as described in the Instructions to Bidders, after which Bidder's will be invited to tour the existing building. Attendance at this meeting by all Bidders is strongly recommended as representatives of the Owner, and Architect will be present. No additional pre-bid conferences will be scheduled.

All requests for interpretations must be submitted in writing to the **ARCHITECT**, at the above address, or via email to **n.lobosco@ctmale.com**, for final clarifications by no later than **Tuesday, December 6, 2022**. Requests received after this date will not receive a response. Addendum will be issued to all Bidders who are known by the issuing office to have received a complete set of Bidding Documents by no later than **Thursday, December 8, 2022**, though addenda may be issued at any time prior to receipt of Bids as noted in the Instructions to Bidders.

reserves the right to waive any informalities or irregularities in the Bids received, or to reject any or all Bids without explanation.

By Order of:

**County Executive  
Montgomery County**

END OF SECTION 001116

SECTION 002113 – INSTRUCTIONS TO BIDDERS

1.1 INSTRUCTIONS TO BIDDERS

- A. AIA Document A701, "Instructions to Bidders," is hereby incorporated into the Procurement and Contracting Requirements by reference.

1. A copy of AIA Document A701, "Instructions to Bidders," is bound in this Project Manual.

END OF SECTION 002113

# DRAFT AIA® Document A701™ – 2018

## Instructions to Bidders

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

### Montgomery County Phase 1 Generator

1 Venner Road, Amsterdam,  
New York 12010

Owners Project No: 15-22

### THE OWNER:

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

### Montgomery County»« »

County Annex Building  
P.O. Box 1500 – 20 Park Street  
Fonda, New York 12068-1500

Jaclyn Hernigle, Purchasing Buyer  
E-mail: jhernigle@co.montgomery.ny.us  
Tel: (518) 853-3351

### THE OWNER'S REPRESENTATIVE:

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

Montgomery County  
Department of Public Works  
6 Park Street - P.O. Box 1500  
Fonda, NY 12068-1500

Eric M. Mead, Commissioner  
E-mail: emead@co.montgomery.ny.us  
Tel: (518) 853-3814

### THE ARCHITECT:

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

### C.T. Male Associates

Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.  
50 Century Hill Drive  
Latham, New York 12110

**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.

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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- 2 BIDDER'S REPRESENTATIONS
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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.

§ 1.10 ARCHITECT/ENGINEER is the person, firm, or corporation named as the **Architect** in the Agreement, or the duly appointed employees and representatives of the named **Architect**.

## 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;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be 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.
- .7 the Bidder has investigated all required fees, permits, and regulatory requirements of authorities having jurisdiction and has properly included in the submitted bid the cost of such fees, permits, and requirements not otherwise indicated as provided by Owner.
- .8 the Bidder is a properly licensed Contractor according to the laws and regulations of Montgomery County and meets qualifications indicated in the Procurement and Contracting Documents.
- .9 the Bidder has incorporated into the Bid adequate sums for work performed by installers whose qualifications meet those indicated in the Procurement and Contracting Documents.

§ 2.2 In accordance with Section 103-d of the General Municipal Law, at the time the Bid is submitted, an authorized and responsible person shall execute and deliver a non-collusive bidding certification on Bidder's behalf.

## 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.)*

Drawings and Specifications may be examined, on and after **Wednesday, November 16, 2022**, during normal business hours, at the following locations:

- .1 MONTGOMERY COUNTY, (Owner), located at 6 Park Street, Fonda, NY 12068, (Phone: 518-853-3814) by appointment only, from 8 AM to 4:00 PM, Monday through Friday;
- .2 C.T. MALE ASSOCIATES, Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. (Architect), 50 Century Hill Drive, Latham, NY 12110, tel. (518) 786-7400, by appointment only, from 8:00 AM to 4:00 PM, Monday through Friday;
- .3 Eastern Contractor's Association, Inc., 6 Airline Dr., Albany, NY 12205, tel. (518) 869-0961, from 8 AM to 5 PM, Monday through Friday; and
- .4 Dodge on-line only at [www.construction.com](http://www.construction.com).

Complete sets of Bidding and Contract Documents in electronic format may be obtained at no charge from the **OWNER**, by contacting the office of the Purchasing Department, located at 20 Park Street, P.O. Box 1500, Fonda, NY 12068 at telephone (518) 853-3351 during normal business hours, Monday–Friday, from 8:30 AM to 4:00 PM, to download copies from the County Website at <https://www.co.montgomery.ny.us/web/sites/departments/purchasing/contact.asp>.

All Bidders who intend to submit bids from documents acquired here **MUST** provide their contact information. Only those Contract Documents obtained in this manner will enable a prospective bidder to be identified as an official plan holder of record. Contract Documents obtained from other sources may not be accurate or may not contain addenda that may have been issued. Printed copies of the Contract Documents will not be available. Bidders wishing to obtain printed copies of the Contract Documents shall arrange at their own cost any required reproduction of the electronic documents.

§ 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.)*

All requests for interpretations must be submitted in writing, using form found in the Project Manual, to the **Architect**, at C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C., 50 Century Hill Drive, Latham, New York 12110, or via email to **n.lobosco@ctmale.com**, for final clarifications by no later than **Tuesday, December 6, 2022**. Requests received after this date will not receive a response.

§ 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.

§ 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.)*

Addenda may be issued by email to all known Bidders at any time prior to the receipt of bids.

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

§ 3.4.3 Addenda may be issued at any time prior to the receipt of bids, including 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. Owner may elect to waive the requirement for acknowledging receipt of Addenda as follows:

- .1 Information received as part of the Bid indicates that the Bid, as submitted, reflects modifications to the Procurement and Contracting Documents included in an unacknowledged Addendum.
- .2 Modifications to the Procurement and Contracting Documents in an unacknowledged Addendum do not, in the opinion of Owner, affect the Contract Sum or Contract Time.

## 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. Owner may elect to disqualify a bid due to failure to submit a bid in the form requested, failure to bid requested alternates or unit prices, failure to complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.

§ 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.

§ 4.1.9 Bids shall not include New York State sales and compensating use taxes on materials incorporated into the work .

### § 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.)*

Bid security in the amount of **5%** of the Bid must accompany each Bid in accordance with the Instructions to Bidders.

§ 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 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 A310™, 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 **<forty-five (45)>** 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.)*

Two paper copies of Sealed Bids will be received by **Montgomery County**, at the Offices of the Purchasing Department, located in the County Annex Building, at 20 Park Street, Fonda, New York 12068 (Phone: 518-853-3351), until **2:00 p.m.** local time on **Tuesday, December 13, 2022**, and then, at said office, publicly opened and read aloud.

Bids actually received by mail or by hand after the appointed time on the date specified shall be rejected, notwithstanding that such Bid may have been placed in a mail box or other mail receptacle regularly maintained by the United States Postal Service before such time, and ordinarily in sufficient time to have been delivered on time.

§ 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.

- .1 Any such modifications to or withdrawal of a bid may only be made by persons authorized to act on behalf of the Bidder. Authorized persons are those so identified in the Bidder's corporate bylaws, specifically empowered by the Bidder's charter or similar legally binding document acceptable to Owner, or by a power of attorney, signed and dated, describing the scope and limitations of the power of attorney. Make such documentation available to Owner at the time of seeking modifications or withdrawal of the Bid.
- .2 Owner will consider modifications to a bid written on the sealed bid envelope by authorized persons when such modifications comply with the following: the modification is indicated by a percent or stated amount to be added to or deducted from the Bid; the amount of the Bid itself is not made known by the modification; a signature of the authorized person, along with the time and date of the modification, accompanies the modification. Completion of an unsealed bid form, awaiting final figures from the Bidder, does not require power of attorney due to the evidenced authorization of the Bidder implied by the circumstance of the completion and delivery of the 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.

### 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.



§ 5.2.1 Owner reserves the right to reject a bid based on Owner's and Architect's evaluation of qualification information submitted following opening of bids.

- .1 Owner's evaluation of the Bidder's qualifications will include: status of licensure and record of compliance with licensing requirements, record of quality of completed work, record of Project completion and ability to complete, record of financial management including financial resources available to complete Project and record of timely payment of obligations, record of Project site management including compliance with requirements of authorities having jurisdiction, record of, and number of current claims and disputes and the status of their resolution, and qualifications of the Bidder's proposed Project staff and proposed subcontractors.

## § 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 A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.1.1 Contractor's Qualification Statement shall be submitted no later than **three (3)** business days following Architect's request.

### § 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 no later than **three (3)** business days following Architect's request 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.

- .1 Provide list of major subcontractors, suppliers, and manufacturers furnishing or installing products on forms provided. Include those subcontractors, suppliers, and manufacturers providing work totaling five (5) percent or more of the Bid amount. Subcontractors, suppliers, and manufacturers shall not be changed from those submitted without approval of Architect.
- .2 Provide a proposed cost breakdown of the bid amount, on forms provided, including alternates, in enough detail to facilitate continued evaluation of bid.

§ 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.

## 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.)*

The successful Bidder will be required to furnish a performance bond and a payment bond, each in an amount equal to **100%** of the contract price.

### § 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 **ten [10]** days after the date of Notice of Intent to Award and no later than the date of execution of the Contract, whichever occurs first. Owner may deem the failure of the Bidder to deliver required bonds within the period of time allowed a default.

§ 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 executed and be in force on the date of the execution 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 A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.

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

«Supplementary Conditions Modifications and other conditions of the Contract as noted herein. »



## ARTICLE 9 EXECUTION OF THE CONTRACT

§ 9.1.1 - Subsequent to the Notice of Intent to Award, and within [7] days after the prescribed Form of Agreement is presented to the Awardee for signature, the Awardee shall execute and deliver the Agreement to Owner through Architect, in such number of counterparts as Owner may require.

§ 9.1.2 - Owner may deem as a default the failure of the Awardee to execute the Contract and to supply the required bonds when the Agreement is presented for signature within the period of time allowed.

§ 9.1.3 - Unless otherwise indicated in the Procurement and Contracting Documents or the executed Agreement, the date of commencement of the Work shall be the date of the executed Agreement or a date set forth in a notice to proceed issued by the Owner, subject to period of time necessary to secure the required approvals from Authorities having jurisdiction.

§ 9.1.4 - In the event of a default, Owner may declare the amount of the Bid security forfeited and elect to either award the Contract to the next responsible bidder or re-advertise for bids.

DOCUMENT 002513 - PREBID MEETINGS

1.1 PREBID MEETING

- A. The **Owner's Representative** will conduct a Prebid meeting as indicated below:
  - 1. Meeting Date: **Wednesday, November 30, 2022.**
  - 2. Meeting Time: **2:00 p.m.**, local time.
  - 3. Location: Project Site, located at 1 Venner Road, Amsterdam, NY 12010.
  - 4. No additional pre-bid conferences will be scheduled.
- B. Attendance:
  - 1. Prime Bidders: Attendance at Prebid meeting is **strongly recommended**.
  - 2. Subcontractors: Attendance at Prebid meeting is recommended.
- C. Bidder Questions: Submit written questions to be addressed at Prebid meeting minimum of **three** business days prior to meeting.
- D. Agenda: Prebid meeting agenda will include review of topics that may affect proper preparation and submittal of bids, including the following:
  - 1. Procurement and Contracting Requirements:
    - a. Advertisement for Bids.
    - b. Instructions to Bidders.
    - c. Bidder Qualifications.
    - d. Bonding.
    - e. Insurance.
    - f. Bid Security.
    - g. Bid Form and Attachments.
    - h. Bid Submittal Requirements.
    - i. Bid Submittal Checklist.
    - j. Notice of Award.
  - 2. Communication during Bidding Period:
    - a. Obtaining documents.
    - b. Access to Project Web site.
    - c. Bidder's Requests for Information.
    - d. Bidder's Substitution Request/Prior Approval Request.
    - e. Addenda.
  - 3. Contracting Requirements:
    - a. Agreement.
    - b. The General Conditions.
    - c. The Supplementary Conditions.
    - d. Other Owner requirements.
  - 4. Construction Documents:
    - a. Scopes of Work.
    - b. Temporary Facilities.
    - c. Use of Site.
    - d. Work Restrictions.
    - e. Alternates, Allowances, and Unit Prices.
    - f. Substitutions following award.
  - 5. Separate Contracts:
    - a. Work by Owner.
    - b. Work of Other Contracts.

6. Schedule:
    - a. Project Schedule.
    - b. Contract Time.
    - c. Liquidated Damages.
    - d. Other Bidder Questions.
  7. Site/facility visit or walkthrough.
    - a. Bidder's will be invited to visit the site on their own, though no provisions for on-site parking are currently available
  8. Post-Meeting Addendum.
- E. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes to attendees and others known by the issuing office to have received a complete set of Procurement and Contracting Documents. Minutes of meeting are issued as Available Information and do not constitute a modification to the Procurement and Contracting Documents. Modifications to the Procurement and Contracting Documents are issued by written Addendum only.
1. Sign-in Sheet: Minutes will include list of meeting attendees.
  2. List of Planholders: Minutes will include list of planholders.

END OF DOCUMENT 002513

DOCUMENT 002600 – PROCUREMENT SUBSTITUTION PROCEDURES

1.1 DEFINITIONS

- A. Procurement Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Procurement and Contracting Documents, submitted prior to receipt of bids.
- B. Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Contract Documents, submitted following Contract award.
  - 1. See Section 012500 "Substitution Procedures" for conditions under which Substitution requests will be considered following Contract award.

1.2 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials.
  - 1. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.3 PROCUREMENT SUBSTITUTIONS

- A. Procurement Substitutions, General: By submitting a bid, the Bidder represents that its bid is based on materials and equipment described in the Procurement and Contracting Documents, including Addenda. Bidders are encouraged to request approval of qualifying substitute materials and equipment when the Specifications Sections list materials and equipment by product or manufacturer name.
- B. Procurement Substitution Requests will be received and considered by Owner when the following conditions are satisfied, as determined by Architect; otherwise requests will be returned without action:
  - 1. Extensive revisions to the Contract Documents are not required.
  - 2. Proposed changes are in keeping with the general intent of the Contract Documents, including the level of quality of the Work represented by the requirements therein.
  - 3. The request is fully documented and properly submitted.

1.4 SUBMITTALS

- A. Procurement Substitution Request: Submit to **Owner** through **Architect**. Procurement Substitution Request must be made in writing **by prime contract Bidder only** in compliance with the following requirements:
  - 1. Requests for substitution of materials and equipment will be considered if received no later than **10** days prior to date of bid opening.
  - 2. Submittal Format: Submit **three** copies of each written Procurement Substitution Request, using **CSI Substitution Request Form 1.5C** bound in Project Manual.
    - a. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specifications Sections and drawing numbers.
    - b. Provide complete documentation on both the product specified and the proposed substitute, including the following information as appropriate:
      - 1) Point-by-point comparison of specified and proposed substitute product data, fabrication drawings, and installation procedures.
      - 2) Copies of current, independent third-party test data of salient product or system characteristics.
      - 3) Samples where applicable or when requested by Architect.

- 4) Detailed comparison of significant qualities of the proposed substitute with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
  - 5) Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - 6) Research reports, where applicable, evidencing compliance with building code in effect for Project, from ICC-ES or applicable code organization.
  - 7) Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will become necessary to accommodate the proposed substitute.
- c. Provide certification by manufacturer that the substitute proposed is equal to or superior to that required by the Procurement and Contracting Documents, and that its in-place performance will be equal to or superior to the product or equipment specified in the application indicated.
  - d. Bidder, in submitting the Procurement Substitution Request, waives the right to additional payment or an extension of Contract Time because of the failure of the substitute to perform as represented in the Procurement Substitution Request.

B. Architect's Action:

1. Architect may request additional information or documentation necessary for evaluation of the Procurement Substitution Request. Architect will notify all bidders of acceptance of the proposed substitute by means of an Addendum to the Procurement and Contracting Documents.

C. Architect's approval of a substitute during bidding does not relieve Contractor of the responsibility to submit required shop drawings and to comply with all other requirements of the Contract Documents.

END OF DOCUMENT 002600

EXCEPT FOR ABOVE REFERENCED ITEMS WHICH FOLLOW

002600.1

DOCUMENT 003119 - EXISTING CONDITION INFORMATION

PART 1 - GENERAL

1.1 EXISTING CONDITION INFORMATION

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of the Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions. This Document and its attachments are not part of the Contract Documents.
- B. Copies of applicable drawings for original building construction, titled "Evening Recorder, W.J. Kline & Son, Inc., Pub.", dated February 8, 1966 that include information on existing conditions including previous construction at Project site are available as appended to this Document.
- C. Copies of applicable drawings for recent renovation work at the facility, titled "Montgomery County Health & Human Services", dated March 31, 2022 that include information on recent renovations to the building.
- D. Bidders may examine any available existing conditions information by giving Owner reasonable advance notice.
  - 1. Owner will make copies available for a fee through the Architect/Engineer. A Bidder must give seven (7) days advanced notice if copies are desired.
- E. The Contract Drawings have been prepared using certain existing construction documents furnished by the Owner, which pertain to the construction of the existing conditions and limited observations obtained by the Architect at the Project site.
  - 1. More extensive investigations of existing conditions, including disassembly or testing of existing building components, was not undertaken by the Architect. Portrayal of such existing conditions obscured or concealed from the Owner or Architect's view prior to start of this Project's construction activities, is based on reasonable implications and assumptions. The Owner and Architect do not imply or guarantee, in any way, that such portrayals are accurate or true existing conditions.
  - 2. Contract Drawings represent locations and character of identified existing structures and facilities apt to be encountered or located in such proximity to the Work as to require precautions for protection. The sizes, materials, locations and depths shown are only approximate. Prime Contractor performing such Work shall investigate himself as to the accuracy and completeness of such information. Prime Contractor shall not be relieved from any obligations, nor be entitled to claim for damages or additional compensations, sustained or arising out of inadequacy or inaccuracy of the information provided.
- F. Related Requirements:
  - 1. Document 002113 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.
  - 2. Document 003126 "Existing Hazardous Material Information" for reports of ACM Sampling & Laboratory Analysis that are made available to bidders.

END OF DOCUMENT 003119

EXCEPT FOR ABOVE REFERENCED ITEMS WHICH FOLLOW

003119.1

DOCUMENT 003126 - EXISTING HAZARDOUS MATERIAL INFORMATION

1.1 EXISTING HAZARDOUS MATERIAL INFORMATION

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions. This Document and its attachments are not part of the Contract Documents.
  - 1. An Asbestos Sampling & Laboratory Analysis report for the Project, prepared by C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C., dated October, 2020, is available for viewing as appended to this Document.
  - 2. Bidders may examine any available existing conditions information by giving Owner reasonable advance notice.
- B. Hazardous Materials: Present in building and work to be selectively demolished.
  - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
  - 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
- C. Related Requirements:
  - 1. Document 002113 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.
  - 2. Document 003119 "Existing Condition Information" for information about existing conditions that is made available to bidders.

END OF DOCUMENT 003126

EXCEPT FOR ABOVE REFERENCED ITEMS WHICH FOLLOW

003126.1 - ACM Sampling & Laboratory Analysis

October 2020



# Asbestos Containing Material Survey

1 Venner Road  
City of Amsterdam  
Montgomery County, New York

*Prepared for:*

Mr. Eric Mead  
Montgomery County Public Works Commissioner  
6 Park Street  
P.O. Box 1500  
Fonda, NY 12068-1500

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*C.T. Male Project No: 20.0649*



**ASBESTOS CONTAINING MATERIAL SURVEY**

1 Venner Road  
Amsterdam, NY

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APPENDIX C ACM ANALYSIS RESULTS & CHAIN OF CUSTODY

APPENDIX D BUILDING PLAN

APPENDIX E ACM SURVEY ABATEMENT COST ESTIMATES

## **1.0 INTRODUCTION**

This report presents the findings of an asbestos containing material (ACM) survey of the former Amsterdam Recorder building located at 1 Venner Road in Amsterdam, New York. The building is a two-story brick structure constructed on a slab-on-grade foundation with flat roofs.

The purpose of this report was to determine whether there are asbestos containing materials in the structure prior to renovation activities. The survey included identification of suspect asbestos containing materials, quantification, and bulk sampling of suspect asbestos containing materials. Laboratory analysis was performed to determine the presence and type of asbestos in sampled materials. Any material is considered asbestos containing if it contains one percent, or more, asbestos by weight.

What is known as “destructive” inspection and sampling techniques may have been used when necessary. Destructive techniques are used, where appropriate, to look behind walls, above ceilings, and under floors to access any piping, sub-structures or miscellaneous materials that may exist.

C.T. Male Associates (C.T. Male) personnel conducted this ACM survey. C.T. Male possesses EPA accreditation and asbestos certification, as required by the New York State Department of Labor, as Inspectors for asbestos.

## 2.0 SITE VISIT - ASBESTOS CONTAINING MATERIALS

C.T. Male personnel visited the site on September 30, 2020.

A walk through of the subject areas was conducted during which suspect asbestos containing materials were identified. Three major categories of suspect materials are categorized during asbestos inspections: Surfacing Materials, Thermal System Insulation (TSI) and Miscellaneous Materials. These categories are described below:

**Surfacing Material** - Materials that are sprayed-on, trowelled-on or otherwise applied to surfaces. Examples include acoustical plaster on ceilings and/or walls, fireproofing materials on structural members, or decorative applications.

**Thermal System Insulation** - Materials, usually found on piping, fittings, boilers, tanks, ducts or other mechanical components to prevent heat loss or gain.

**Miscellaneous ACM** - Any other materials including, but not limited to, floor and ceiling tiles, gaskets, felts, paper products, etc. that are neither surfacing materials nor thermal system insulation.

During the course of the site visit, suspect materials of similar type, texture and appearance are grouped together and considered homogeneous. Each homogeneous material is quantified and, depending on overall quantity as well as the locations of the material throughout the site, an appropriate number of bulk samples were secured.

### Suspect Materials Located

Plasters	Drywall
Taping Compound	1'x1' Ceiling Tile
1'x2' Ceiling Tile	2'x2' Ceiling Tile
2'x4' Ceiling Tile	Wall Panel Adhesive
Ceramic Floor Tile Set	Ceramic Floor Tile Grout
Ceramic Wall Tile Adhesive	Ceramic Wall Tile Grout
Floor Tile Mastic	9"x9" Floor Tile
Floor Tile Adhesive	12"x12" Floor Tile
12"x12" Floor Tile (thin)	Self-Adhesive Floor Tile
1'x2' Self-Adhesive Floor Tile	Faux Wood Flooring
Carpet Adhesive	Cove Base Adhesive
4" Cove Base	Fire Door Insulation
Fitting Insulation	Duct Insulation

**Suspect Materials Located (continued)**

Boiler Breeching Insulation

Duct Vibration Joint Cloth

Door Window Glazing Compound

Window Caulk

Tank Insulation

Window Glazing Compound

Door Caulk

### 3.0 SAMPLING AND LABORATORY ANALYSIS

C.T. Male's representative collected eighty (80) bulk samples during the site-visit. The samples were analyzed using Polarized Light Microscopy (PLM). Non-friable organically bound materials were analyzed using the Matrix Reduction Method in conjunction with PLM based on the New York State Department of Health Environmental Laboratory Approval Program recommendations. Any negative sample analysis results by this method are then analyzed further by Transmission Electron Microscopy (TEM). Non-friable organically bound materials are bound by cements or adhesives. Examples include floor tile, floor tile mastic and sheet floor covering. AmeriSci New York of New York, NY performed analysis of the bulk samples by PLM or TEM. Table 3.0 provides a summary of analysis results.

**TABLE 3.0**  
**BULK SAMPLE ANALYSIS RESULTS**

<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP01 1 <sup>st</sup> Floor Lobby Closet (3) Plaster (scratch coat)	NA	NAD
093020SP02 1 <sup>st</sup> Floor Editorial Area (18) Plaster (scratch coat)	NA	NAD
093020SP03 1 <sup>st</sup> Floor Editorial Area Storage (23) Plaster (scratch coat)	NA	NAD

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP04 1 <sup>st</sup> Floor Publisher Closet (33) Plaster (scratch coat)	NA	NAD
093020SP05 1 <sup>st</sup> Floor General Manager Closet (36) Plaster (scratch coat)	NA	NAD
093020SP06 1 <sup>st</sup> Floor Lobby Closet (3) Plaster (finish coat)	NA	NAD
093020SP07 1 <sup>st</sup> Floor Editorial Area (18) Plaster (finish coat)	NA	NAD
093020SP08 1 <sup>st</sup> Floor Editorial Area Storage (23) Plaster (finish coat)	NA	NAD
093020SP09 1 <sup>st</sup> Floor Publisher Closet (33) Plaster (finish coat)	NA	NAD
093020SP10 1 <sup>st</sup> Floor General Manager Closet (36) Plaster (finish coat)	NA	NAD

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP11 1 <sup>st</sup> Floor Lunch & Assembly Room (7) Drywall	NA	NAD
093020SP12 1 <sup>st</sup> Floor Camera (81) Drywall	NA	NAD
093020SP13 1 <sup>st</sup> Floor Lunch & Assembly Room (7) Taping Compound	NA	NAD
093020SP14 1 <sup>st</sup> Floor Camera (81) Taping Compound	NA	NAD
093020SP15 1 <sup>st</sup> Floor Machine Shop (9) 1'x1' Metal Faced Ceiling Tile	NA	NAD
093020SP16 1 <sup>st</sup> Floor Men's Locker Room (62) 1'x1' Metal Faced Ceiling Tile	NA	NAD
093020SP17 1 <sup>st</sup> Floor Publisher (32) 1'x1' Z-Spline Ceiling Tile	NA	NAD

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP18 1 <sup>st</sup> Floor Publisher (32) 1'x1' Z-Spline Ceiling Tile	NA	NAD
093020SP19 1 <sup>st</sup> Floor Studio (28) 1'x2' Z-Spline Ceiling Tile	NA	NAD
093020SP20 1 <sup>st</sup> Floor Advertising Storage (57) 1'x2' Z-Spline Ceiling Tile	NA	NAD
093020SP21 1 <sup>st</sup> Floor Waiting Room (37) 2'x2' Z-Spline Ceiling Tile	NA	NAD
093020SP22 1 <sup>st</sup> Floor General Manager (38) 2'x2' Z-Spline Ceiling Tile	NA	NAD
093020SP23 1 <sup>st</sup> Floor Lunch & Assembly Room (7) 2'x4' Ceiling Tile	NA	NAD
093020SP24 1 <sup>st</sup> Floor Composing Area - Network Room (64) 2'x4' Ceiling Tile	NA	NAD

**NA = Not Applicable**

**NAD = No Asbestos Detected**



## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP25 1 <sup>st</sup> Floor Business Manager (39) Wall Panel Adhesive	4.0%	Chrysotile
093020SP26 1 <sup>st</sup> Floor Business Manager (39) Wall Panel Adhesive	Not Analyzed	Positive Stop
093020SP27 1 <sup>st</sup> Floor Women's Toilet (12) Ceramic Floor Tile Set	NA	NAD
093020SP28 1 <sup>st</sup> Floor Passage (59) Ceramic Floor Tile Set	NA	NAD
093020SP29 1 <sup>st</sup> Floor Women's Toilet (12) Ceramic Floor Tile Grout	NA	NAD
093020SP30 1 <sup>st</sup> Floor Passage (59) Ceramic Floor Tile Grout	NA	NAD
093020SP31 1 <sup>st</sup> Floor Women's Toilet (12) Ceramic Wall Tile Adhesive	NA	NAD

**NA = Not Applicable**

**NAD = No Asbestos Detected**

# C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP32 1 <sup>st</sup> Floor Women's Toilet (12) Ceramic Wall Tile Adhesive	NA	NAD
093020SP33 1 <sup>st</sup> Floor Women's Toilet (12) Ceramic Wall Tile Grout	NA	NAD
093020SP34 1 <sup>st</sup> Floor Women's Toilet (12) Ceramic Wall Tile Grout	NA	NAD
093020SP35 1 <sup>st</sup> Floor Storage (49) Floor Tile Mastic (black)	2.7%	Chrysotile
093020SP36 1 <sup>st</sup> Floor Storage (49) Floor Tile Mastic (black)	Not Analyzed	Positive Stop
093020SP37 1 <sup>st</sup> Floor Storage (49) 9"x9" Floor Tile	5.7%	Chrysotile
093020SP38 1 <sup>st</sup> Floor Storage (49) 9"x9" Floor Tile	Not Analyzed	Positive Stop

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP39 1 <sup>st</sup> Floor Lunch & Assembly Room (7) Floor Tile Adhesive (yellow)	NA	NAD
093020SP40 1 <sup>st</sup> Floor Proofreading Room (21) Floor Tile Adhesive (yellow)	NA	NAD
093020SP41 1 <sup>st</sup> Floor Lunch & Assembly Room (7) 12"x12" Floor Tile	NA	NAD
093020SP42 1 <sup>st</sup> Floor Plate Room (79) 12"x12" Floor Tile	NA	NAD
093020SP43 1 <sup>st</sup> Floor Proof Room (21) 12"x12" Floor Tile (thin)	4.9%	Chrysotile
093020SP44 1 <sup>st</sup> Floor Proof Room (21) 12"x12" Floor Tile (thin)	Not Analyzed	Positive Stop
093020SP45 1 <sup>st</sup> Floor Storage Room (5) Self-Adhesive Floor Tile (gray)	NA	NAD

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP46 1 <sup>st</sup> Floor Storage Room (5) Self-Adhesive Floor Tile (gray)	NA	NAD
093020SP47 1 <sup>st</sup> Floor Storage Room (5) 1'x2' Self-Adhesive Floor Tile	NA	NAD
093020SP48 1 <sup>st</sup> Floor Storage Room (5) 1'x2' Self-Adhesive Floor Tile	NA	NAD
093020SP49 1 <sup>st</sup> Floor Publisher (32) Faux Wood Flooring	NA	NAD
093020SP50 1 <sup>st</sup> Floor Publisher (32) Faux Wood Flooring	NA	NAD
093020SP51 1 <sup>st</sup> Floor Publisher Closet (33) Carpet Adhesive	NA	NAD
093020SP52 1 <sup>st</sup> Floor Advertising Passage (56) Carpet Adhesive	NA	NAD

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP53 1 <sup>st</sup> Floor Publisher Closet (33) Cove Base Adhesive	NA	NAD
093020SP54 1 <sup>st</sup> Floor Business Manager (39) Cove Base Adhesive	NA	NAD
093020SP55 1 <sup>st</sup> Floor Publisher Closet (33) 4" Cove Base	NA	NAD
093020SP56 1 <sup>st</sup> Floor Business Manager (39) 4" Cove Base	NA	NAD
093020SP57 1 <sup>st</sup> Floor Press Room (65) (stored door) Fire Door Insulation	2.3% 3.8%	Chrysotile Amosite
093020SP58 1 <sup>st</sup> Floor Press Room (65) (stored door) Fire Door Insulation	Not Analyzed	Positive Stop
093020SP59 1 <sup>st</sup> Floor Business Manager (39) (above ceiling) Fitting Insulation	3.0%	Chrysotile

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP60 1 <sup>st</sup> Floor Men's Locker Room (62) (above ceiling) Fitting Insulation	Not Analyzed	Positive Stop
093020SP61 1 <sup>st</sup> Floor Development Room (80) (above ceiling) Fitting Insulation	Not Analyzed	Positive Stop
093020SP62 1 <sup>st</sup> Floor Press Room (65) Duct Insulation	23.5%	Chrysotile
093020SP63 1 <sup>st</sup> Floor Press Room (65) Duct Insulation	Not Analyzed	Positive Stop
093020SP64 1 <sup>st</sup> Floor Press Room (65) Duct Insulation	Not Analyzed	Positive Stop
093020SP65 1 <sup>st</sup> Floor Boiler Room (70) Boiler Breeching Insulation	30.8%	Chrysotile
093020SP66 1 <sup>st</sup> Floor Boiler Room (70) Boiler Breeching Insulation	Not Analyzed	Positive Stop

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP67 1 <sup>st</sup> Floor Boiler Room (70) Boiler Breeching Insulation	Not Analyzed	Positive Stop
093020SP68 1 <sup>st</sup> Floor Boiler Room (70) Tank Insulation	3.5%	Chrysotile
093020SP69 1 <sup>st</sup> Floor Boiler Room (70) Tank Insulation	Not Analyzed	Positive Stop
093020SP70 1 <sup>st</sup> Floor Boiler Room (70) Tank Insulation	Not Analyzed	Positive Stop
093020SP71 1 <sup>st</sup> Floor Entry Vestibule (1) Duct Vibration Cloth	80.0%	Chrysotile
093020SP72 1 <sup>st</sup> Floor Entry Vestibule (1) Duct Vibration Cloth	Not Analyzed	Positive Stop
093020SP73 1 <sup>st</sup> Floor Lunch & Assembly Room (7) (interior) Window Glazing Compound	<1.0%	Chrysotile

**NA = Not Applicable**

**NAD = No Asbestos Detected**

## C.T. MALE ASSOCIATES

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<u>Sample Location</u>	<u>% ASBESTOS BY WEIGHT</u>	<u>TYPE OF ASBESTOS</u>
093020SP74 1 <sup>st</sup> Floor Publisher (32) (interior) Window Glazing Compound	<1.0%	Chrysotile
093020SP75 1 <sup>st</sup> Floor Passage (30) Door Window Glazing Compound	NA	NAD
093020SP76 1 <sup>st</sup> Floor Machine Room (9) Door Window Glazing Compound	<1.0%	Chrysotile
093020SP77 Exterior Entry Vestibule (1) Door Caulk	NA	NAD
093020SP78 Exterior Entry Vestibule (1) Door Caulk	NA	NAD
093020SP79 Exterior Front of Building Window Caulk	NA	NAD
093020SP80 Exterior Front of Building Window Caulk	NA	NAD

**NA = Not Applicable**

**NAD = No Asbestos Detected**



**4.0 CONCLUSIONS AND RECOMMENDATIONS**

Based upon observations during the inspection and the laboratory analysis results, the following asbestos containing materials were located.

<u>Location</u>	<u>ACM Located</u>	<u>Quantity</u>	<u>Friable/Condition</u>
<b>Throughout</b>			
Fire Doors*	Fire Door Insulation	30 Ea.	Friable/Intact
<b>Throughout</b>			
Behind Metal Radiator Covers**	Fitting Insulation	Unknown	Friable/Unknown
<b>1<sup>st</sup> Floor</b>			
Vestibule (1)			
Above Ceiling	Fitting Insulation	15 Ln. Ft.	Friable/Intact
	Duct Vibration Joint Cloth	10 Sq. Ft.	Friable/Intact
Lobby (2)			
Throughout	Wall Panel Adhesive	320 Sq. Ft.	Non-Friable/Intact
Circulation (4)			
Throughout	Wall Panel Adhesive	80 Sq. Ft.	Non-Friable/Intact
Storage Room (5)			
Above Ceiling***	Fitting Insulation (no access above ceiling)	Unknown	Friable/Unknown
Throughout	Floor Tile & Mastic (under 2 layers non-ACM tile)	120 Sq. Ft.	Non-Friable/Intact
Men's Toilet (6)			
Above Ceiling/In Walls***	Fitting Insulation (no access above ceiling, behind walls)	Unknown	Friable/Unknown

## C.T. MALE ASSOCIATES

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<u>Location</u>	<u>ACM Located</u>	<u>Quantity</u>	<u>Friable/Condition</u>
<b>1<sup>st</sup> Floor</b>			
Lunch & Assembly Rm. (7)			
Office Area			
Above Ceiling	Fitting Insulation	8 Ln. Ft.	Friable/Intact
Lunch & Assembly Rm. (7)			
Break Area			
Above Ceiling***	Fitting Insulation (no access above ceiling)	Unknown	Friable/Unknown
Lunch & Assembly Rm. (7)			
Corridor			
Above Ceiling***	Fitting Insulation (no access above ceiling)	Unknown	Friable/Unknown
Machine Shop (9)			
Throughout	Floor Tile & Mastic	144 Sq. Ft.	Non-Friable/Intact
Storage (10)			
Throughout	Floor Tile & Mastic	96 Sq. Ft.	Non-Friable/Intact
Women's Toilet (12)			
Above Ceiling/In Walls***	Fitting Insulation (no access above ceiling)	Unknown	Friable/Unknown
Women's Restroom (13)			
Above Ceiling***	Fitting Insulation (no access above ceiling)	Unknown	Friable/Unknown
Vault (14)			
Throughout	Floor Tile & Mastic	80 Sq. Ft.	Non-Friable/Intact
Men's Toilet (15)			
Above Ceiling/In Walls	Fitting Insulation	16 Ln. Ft.	Friable/Intact

## C.T. MALE ASSOCIATES

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<u>Location</u>	<u>ACM Located</u>	<u>Quantity</u>	<u>Friable/Condition</u>
<b>1<sup>st</sup> Floor</b>			
Editorial (18)			
Above Ceiling	Fitting Insulation	25 Ln. Ft.	Friable/Intact
Proofreading (21)			
Throughout	Floor Tile – Not Mastic (under carpet)	96 Sq. Ft.	Non-Friable/Intact
Storage (23)			
Throughout	Floor Tile & Mastic	96 Sq. Ft.	Non-Friable/Intact
Storage (24)			
Throughout	Floor Tile & Mastic	144 Sq. Ft.	Non-Friable/Intact
Photo Area/Dark Room (25-26)			
Above Ceiling	Fitting Insulation	5 Ln. Ft.	Friable/Intact
Throughout	Floor Tile Mastic (no tile, under carpet)	306 Sq. Ft.	Non-Friable/Intact
Editorial Manager (27)			
Above Ceiling	Fitting Insulation	7 Ln. Ft.	Friable/Intact
Conference (29)			
Above Ceiling	Fitting Insulation	8 Ln. Ft.	Friable/Intact
Publisher (32)			
Above Ceiling***	Fitting Insulation (no access above ceiling)	Unknown	Friable/Unknown
Throughout	Wall Panel Adhesive	608 Sq. Ft.	Non-Friable/Intact
General Manager Toilet (34)			
Above Ceiling/In Walls	Fitting Insulation	4 Ln. Ft.	Friable/Intact

## C.T. MALE ASSOCIATES

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<u>Location</u>	<u>ACM Located</u>	<u>Quantity</u>	<u>Friable/Condition</u>
<b>1<sup>st</sup> Floor</b>			
Publisher Toilet (35)			
Above Ceiling/In Walls	Fitting Insulation	4 Ln. Ft.	Friable/Intact
General Manager (38)			
Above Ceiling	Fitting Insulation	5 Ln. Ft.	Friable/Intact
Throughout	Wall Panel Adhesive	136 Sq. Ft.	Non-Friable/Intact
Business Manager (39)			
Above Ceiling	Fitting Insulation	12 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	8 Sq. Ft.	Friable/Damaged
Throughout	Wall Panel Adhesive	136 Sq. Ft.	Non-Friable/Intact
Supplies (43)			
Throughout	Floor Tile & Mastic	72 Sq. Ft.	Non-Friable/Intact
Business/Business Machine Room (45-46)			
Above Ceiling	Fitting Insulation	4 Ln. Ft.	Friable/Intact
Throughout	Wall Panel Adhesive	216 Sq. Ft.	Non-Friable/Intact
Storage (49)			
Throughout	Floor Tile & Mastic	72 Sq. Ft.	Non-Friable/Intact
Classified Advertising (50)			
Throughout	Wall Panel Adhesive	224 Sq. Ft.	Non-Friable/Intact
Layout (52)			
Above Ceiling	Fitting Insulation	2 Ln. Ft.	Friable/Intact
Advertising (53)			
Above Ceiling	Fitting Insulation	14 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	12 Sq. Ft.	Friable/Damaged
Throughout	Wall Panel Adhesive	304 Sq. Ft.	Non-Friable/Intact

## C.T. MALE ASSOCIATES

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<u>Location</u>	<u>ACM Located</u>	<u>Quantity</u>	<u>Friable/Condition</u>
<b>1<sup>st</sup> Floor</b>			
Advertising Manager (54)			
Above Ceiling	Fitting Insulation	4 Ln. Ft.	Friable/Intact
Closet/Passage (55-56)			
Above Ceiling	Fitting Insulation	3 Ln. Ft.	Friable/Intact
Storage Room (57)			
Above Ceiling	Fitting Insulation	10 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	2 Sq. Ft.	Friable/Damaged
Below Ceiling	Fitting Insulation	1 Ln. Ft.	Friable/Intact
Throughout	Floor Tile & Mastic	108 Sq. Ft.	Non-Friable/Intact
Passage (59)			
Above Ceiling	Fitting Insulation	1 Ln. Ft.	Friable/Intact
	Roof Drain Insulation	2 Sq. Ft.	Friable/Intact
Showers (60)			
Above Ceiling/In Walls	Fitting Insulation	8 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	12 Sq. Ft.	Friable/Damaged
PBX - Telephone Equipment Room (61)			
Throughout	Floor Tile & Mastic	90 Sq. Ft.	Non-Friable/Intact
Locker Room (62)			
Above Ceiling	Fitting Insulation	10 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	12 Sq. Ft.	Friable/Damaged
Toilet (63)			
Above Ceiling/In Walls	Fitting Insulation	16 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	12 Sq. Ft.	Friable/Damaged

## C.T. MALE ASSOCIATES

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<u>Location</u>	<u>ACM Located</u>	<u>Quantity</u>	<u>Friable/Condition</u>
<b>1<sup>st</sup> Floor</b>			
Composing Area (64)			
Area Built Out into 9 Rooms & 2 Closets			
Above Ceiling	Fitting Insulation	40 Ln. Ft.	Friable/Intact
Throughout	Floor Tile & Mastic	2,925 Sq. Ft.	Non-Friable/Intact
	(1,460 Sq. Ft. under carpet, 300 Sq. Ft. under raised floor)		
Press Room (65)			
Throughout	Fitting Insulation	20 Ln. Ft.	Friable/Intact
	Duct Insulation	65 Ln. Ft.	Friable/Damaged
Toilet (67)			
Above Ceiling/In Walls	Fitting Insulation	12 Ln. Ft.	Friable/Intact
Storage (68)			
Throughout	Fitting Insulation	11 Ln. Ft.	Friable/Intact
Boiler Room (70)			
Throughout	Fitting Insulation	75 Ln. Ft.	Friable/Damaged
	Breeching Insulation	80 Sq. Ft.	Friable/Damaged
	Tank Insulation	100 Sq. Ft.	Friable/Damaged
	Tank Insulation Debris	4 Sq. Ft.	Friable/Damaged
Toilet (74)			
Above Ceiling/In Walls	Fitting Insulation	10 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	12 Sq. Ft.	Friable/Damaged
Delivery & Mail (75)			
Throughout	Fitting Insulation	4 Ln. Ft.	Friable/Intact
Truck Port (76)			
Throughout	Fitting Insulation	20 Ln. Ft.	Friable/Damaged

## C.T. MALE ASSOCIATES

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<u>Location</u>	<u>ACM Located</u>	<u>Quantity</u>	<u>Friable/Condition</u>
<b>1<sup>st</sup> Floor</b>			
Maintenance Shop (77)			
Throughout	Fitting Insulation	8 Ln. Ft.	Friable/Intact
Roll Storage (78)			
Throughout	Fitting Insulation	30 Ln. Ft.	Friable/Intact
	Roof Drain Insulation	2 Sq. Ft.	Friable/Intact
Plate Room/Development Room/Camera (79-80-81)			
Above Ceiling	Fitting Insulation	15 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	8 Sq. Ft.	Friable/Damaged
Throughout	Floor Tile & Mastic	624 Sq. Ft.	Non-Friable/Intact
<b>Mezzanine</b>			
Mechanical Room			
Throughout	Fitting Insulation	90 Ln. Ft.	Friable/Damaged
	Fitting Insulation Debris	10 Sq. Ft.	Friable/Damaged
	Duct Vibration Joint Cloth	24 Sq. Ft.	Friable/Intact
<b>2<sup>nd</sup> Floor</b>			
Mechanical Room			
Throughout	Fitting Insulation	90 Ln. Ft.	Friable/Intact
	Roof Drain Insulation	2 Sq. Ft.	Friable/Intact
	Tank Insulation	50 Sq. Ft.	Friable/Intact
Apartment			
Kitchen/Bath			
In Walls***	Fitting Insulation (no access within walls)	Unknown	Friable/Unknown
Throughout	Floor Tile & Mastic (196 Sq. Ft. under carpet)	750 Sq. Ft.	Non-Friable/Intact
Living Room	Wall Panel Adhesive	448 Sq. Ft.	Non-Friable/Intact

\*Analysis of fire door insulation confirmed asbestos concentration >1.0%. Therefore asbestos containing door insulation is assumed to be present in all fire doors.

\*\*Due to the limited visibility behind the metal radiator covers throughout the building asbestos containing fitting insulation is assumed to be present at these locations.

\*\*\*Plaster, drywall, and/or z-spline ceilings prevented access to areas behind walls and/or above ceilings at multiple locations indicated above and asbestos containing fitting insulation is assumed to be present within these cavities.

**NOTE:** All quantities are approximate. Abatement contractor will need to verify quantities prior to bid production. This survey report is not, in and of itself, an asbestos abatement design document, but can be used as a part of the overall abatement design.

Per the regulatory requirements of the National Emissions Standards for Hazardous Air Pollutants (40 CFR 61), all asbestos containing materials must be removed from a structure prior to its demolition. New York State requires that if a facility is found to have asbestos containing materials, NYS Industrial Code Rule 56 (12 NYCRR Part 56) must be followed when performing any work which might disturb the asbestos containing materials. Any disturbance of asbestos containing materials, including removal, repair, encapsulation, enclosure, etc. must be conducted by trained individuals with valid asbestos certification, and in accordance with federal, state and local regulations.

C.T. Male recommends that the asbestos containing materials be removed prior to renovation or demolition activities by a New York State Licensed Asbestos Abatement Contractor, in accordance with 12 NYCRR Part 56 (Code Rule 56), OSHA 29 CFR 1926.58 and USEPA 40 CFR Part 61, Subpart M (NESHAPS).

Per the requirements of NYSDOL Industrial Code Rule 56 (as amended January 12, 2006), the building owner shall transmit copies of this inspection pre-renovation report to 1) the local agency charged with issuing the building demolition/renovation permit; 2) the local Asbestos Control Bureau Office (Albany District, State Office Campus,



## C.T. MALE ASSOCIATES

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Building 12 Room 157, Albany, New York 12240); and 3) as required, this report is to be kept on site during any abatement activities and/or demolition, renovation, remodeling or repair activities.

If you have any questions regarding this report, please contact this office at (518) 786-7400.

Respectfully submitted,

C.T. MALE ASSOCIATES

A handwritten signature in dark ink, appearing to read "Michael F. Sawyer", with a long horizontal flourish extending to the right.

Michael F. Sawyer

Managing Industrial Hygienist

NYSDOL License #AH-88-06552 (PM, AST, Inspector and Designer)

**APPENDIX A**

**C.T. MALE ASSOCIATES  
CERTIFICATIONS**

**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**

C.T. Male Associates Engineering, Surveying,  
Architecture & Landscape Architecture & Geology,  
D.P.C.

50 Century Hill Drive

Latham, NY 12110

FILE NUMBER: 99-0722

LICENSE NUMBER: 29050

LICENSE CLASS: RESTRICTED

DATE OF ISSUE: 10/17/2019

EXPIRATION DATE: 10/31/2020

Duly Authorized Representative – Daniel Reilly:

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.



Eileen M. Franko, Director  
For the Commissioner of Labor

**C.T. MALE ASSOCIATES**

**CERTIFICATIONS**

**C.T. Male's Asbestos Contractor's License:**

License Number:	29050
Expiration Date:	10-31-2020

**Michael F. Sawyer**

NYSDOL Asbestos	
Certificate Number:	AH88-06552
Inspector:	09-20
Project Designer:	09-20
OSHA 40-HR Certified	

**Stephen Pierson**

NYSDOL Asbestos	
Certificate Number:	AH08-07760
Inspector:	03-21
Project Designer:	03-21

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MICHAEL F SAWYER**

CLASS(EXPIRES)

C ATEC(09/20) D INSP(09/20)

E MGPL(09/20) H PM (09/20)

I PD (09/20)

CERT# 88-06552

DMV# 437658014

MUST BE CARRIED ON ASBESTOS PROJECTS

01/000011/00 01/00 01/00 01/00 01/00 01/00

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**STEPHEN D PIERSON**

CLASS(EXPIRES)

C ATEC(03/21) D INSP(03/21)

H PM (03/21) I PD (03/21)

CERT# 08-07760  
DMV# 251759072

MUST BE CARRIED ON ASBESTOS PROJECTS

REPRODUCTION OF THIS CARD IS PROHIBITED

**APPENDIX B**

**LABORATORY CERTIFICATIONS**

**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2022  
Issued April 01, 2020

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. PAUL J. MUCHA**  
**AMERICA SCIENCE TEAM NEW YORK, INC**  
**117 EAST 30TH ST**  
**NEW YORK, NY 10016**

**NY Lab Id No: 11480**

*is hereby APPROVED as an Environmental Laboratory for the category*  
**ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE**  
*All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual

**Serial No.: 61903**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



**APPENDIX C**

**LABORATORY ANALYSIS REPORTS &  
CHAIN OF CUSTODY**

**AmeriSci New York**

117 EAST 30TH ST.

NEW YORK, NY 10016

TEL: (212) 679-8600 • FAX: (212) 679-3114

## PLM Bulk Asbestos Report

C. T. Male & Associates  
Attn: Michael Sawyer  
50 Century Hill Drive  
P.O. Box 727  
Latham, NY 12110

Date Received 10/02/20 AmeriSci Job # 220101196  
Date Examined 10/03/20 P.O. #  
ELAP # 11480 Page 1 of 14  
RE: 18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP01 1	220101196-01 Location: 1st Fl. / Lobby Closet (3) - Plaster (Scratch Coat)	No	NAD <sup>1</sup> (by NYS ELAP 198.1) by Jared C. Clarke on 10/03/20
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
093020SP02 1	220101196-02 Location: 1st Fl. / Editorial Area (18) - Plaster (Scratch Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
093020SP03 1	220101196-03 Location: 1st Fl. / Editorial Area Storage (23) - Plaster (Scratch Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
093020SP04 1	220101196-04 Location: 1st Fl. / Publisher Closet (33) - Plaster (Scratch Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
093020SP05 1	220101196-05 Location: 1st Fl. / General Manager Closet (36) - Plaster (Scratch Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP06 2	220101196-06 Location: 1st Fl. / Lobby Closet (3) - Plaster (Finish Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP07 2	220101196-07 Location: 1st Fl. / Editorial Area (18) - Plaster (Finish Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP08 2	220101196-08 Location: 1st Fl. / Editorial Area Storage (23) - Plaster (Finish Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP09 2	220101196-09 Location: 1st Fl. / Publisher Closet (33) - Plaster (Finish Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP10 2	220101196-10 Location: 1st Fl. / General Manager Closet (36) - Plaster (Finish Coat)	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP11 3	220101196-11 Location: 1st Fl. / Lunch & Assembly Rm. (7) - Drywall	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> OffWhite, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose Trace, Non-fibrous 100 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP12 3	220101196-12 Location: 1st Fl. / Camera (81) - Drywall	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> OffWhite/Brown, Heterogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 10 %, Non-fibrous 90 %			
093020SP13 4	220101196-13 Location: 1st Fl. / Lunch & Assembly Rm. (7) - Taping Compound	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP14 4	220101196-14 Location: 1st Fl. / Camera (81) - Taping Compound	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP15 5	220101196-15 Location: 1st Fl. / Machine Shop (9) - 1' x 1' Ceiling Tile (Metal Faced)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 60.3 %			
093020SP16 5	220101196-16 Location: 1st Fl. / Men's Locker Rm. (62) - 1' x 1' Ceiling Tile (Metal Faced)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 49.9 %			
093020SP17 6	220101196-17 Location: 1st Fl. / Publisher (32) - 1' x 1' Ceiling Tile (Z-Spline)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 11.3 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP18 6	220101196-18 Location: 1st Fl. / Publisher (32) - 1' x 1' Ceiling Tile (Z-Spline)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 16.4 %			
093020SP19 7	220101196-19 Location: 1st Fl. / Studio (28) - 1' x 2' Ceiling Tile (Z-Spline)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 13 %			
093020SP20 7	220101196-20 Location: 1st Fl. / Advertising Lounge (57) - 1' x 2' Ceiling Tile (Z-Spline)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 14.5 %			
093020SP21 8	220101196-21 Location: 1st Fl. / Waiting Rm. (37) - 2' x 2' Ceiling Tile (Z-Spline)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 17 %			
093020SP22 8	220101196-22 Location: 1st Fl. / General Manager (38) - 2' x 2' Ceiling Tile (Z-Spline)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 11.6 %			
093020SP23 9	220101196-23 Location: 1st Fl. / Lunch & Assembly Rm. (7) - 2' x 4' Ceiling Tile	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 48.4 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP24 9	220101196-24 Location: 1st Fl. / Composing Area / Network Rm. (64) - 2' x 4' Ceiling Tile	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 66.2 %			
093020SP25 10	220101196-25 Location: 1st Fl. / Business Manager (39) - Wall Panel Adhesive	Yes	4 % (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 4.0 % <b>Other Material:</b> Non-fibrous 14 %			
093020SP26 10	220101196-26 Location: 1st Fl. / Business Manager (39) - Wall Panel Adhesive		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP27 11	220101196-27 Location: 1st Fl. / Women's Toilet (12) - Ceramic Floor Set	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP28 11	220101196-28 Location: 1st Fl. / Passage (59) - Ceramic Floor Set	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP29 12	220101196-29 Location: 1st Fl. / Women's Toilet (12) - Ceramic Floor Grout	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP30 12	220101196-30 Location: 1st Fl. / Passage (59) - Ceramic Floor Grout	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP31 13	220101196-31 Location: 1st Fl. / Women's Toilet (12) - Ceramic Wall Adhesive	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 53.8 %			
093020SP32 13	220101196-32 Location: 1st Fl. / Women's Toilet (12) - Ceramic Wall Adhesive	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 54 %			
093020SP33 14	220101196-33 Location: 1st Fl. / Women's Toilet (12) - Ceramic Wall Grout	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP34 14	220101196-34 Location: 1st Fl. / Women's Toilet (12) - Ceramic Wall Grout	No	NAD (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
093020SP35 15	220101196-35 Location: 1st Fl. / Storage (49) - Floor Tile Mastic (Black)	Yes	2.7 % (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 2.7 % <b>Other Material:</b> Non-fibrous 10.6 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP36 15	220101196-36 Location: 1st Fl. / Storage (49) - Floor Tile Mastic (Black)		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP37 16	220101196-37 Location: 1st Fl. / Storage (49) - 9" x 9" Floor Tile	Yes	5.7 % (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Brown, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 5.7 % <b>Other Material:</b> Non-fibrous 17.2 %			
093020SP38 16	220101196-38 Location: 1st Fl. / Storage (49) - 9" x 9" Floor Tile		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP39 17	220101196-39 Location: 1st Fl. / Lunch & Assembly Rm. (7) - Floor Tile Adhesive (Yellow)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Yellow, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 42.6 %			
093020SP40 17	220101196-40 Location: 1st Fl. / Proof Rm. (21) - Floor Tile Adhesive (Yellow)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Yellow, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 20.8 %			
093020SP41 18	220101196-41 Location: 1st Fl. / Lunch & Assembly Rm. (7) - 12" x 12" Floor Tile	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 20.4 %			



Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP42 18	220101196-42 Location: 1st Fl. / Plate Rm. (79) - 12" x 12" Floor Tile	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 0.7 %			
093020SP43 19	220101196-43 Location: 1st Fl. / Roof Rm. (21) - 12" x 12" Floor Tile (Thin)	Yes	4.9 % (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Red, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 4.9 % <b>Other Material:</b> Non-fibrous 13.3 %			
093020SP44 19	220101196-44 Location: 1st Fl. / Roof Rm. (21) - 12" x 12" Floor Tile (Thin)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Red, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 17.9 %			
093020SP45 20	220101196-45 Location: 1st Fl. / Storage Rm. (5) - Self-Adhesive Floor Tile (Gray)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Blue, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 3 %			
093020SP46 20	220101196-46 Location: 1st Fl. / Storage Rm. (5) - Self-Adhesive Floor Tile (Gray)	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Blue, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 3.3 %			
093020SP47 21	220101196-47 Location: 1st Fl. / Storage Rm. (5) - 1' x 2' Self-Adhesive Floor Tile	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 1.9 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP48 21	220101196-48 Location: 1st Fl. / Storage Rm. (5) - 1' x 2' Self-Adhesive Floor Tile	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 1.9 %			
093020SP49 22	220101196-49 Location: 1st Fl. / Publisher (32) - Faux-Wood Flooring	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Brown, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 0.6 %			
093020SP50 22	220101196-50 Location: 1st Fl. / Publisher (32) - Faux-Wood Flooring	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Brown, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 1.1 %			
093020SP51 23	220101196-51 Location: 1st Fl. / Publisher Closet (33) - Carpet Adhesive	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Yellow, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 23.3 %			
093020SP52 23	220101196-52 Location: 1st Fl. / Advertising Passage (56) - Carpet Adhesive	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Brown, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 27.3 %			
093020SP53 24	220101196-53 Location: 1st Fl. / Publisher Closet (33) - Cove Base Adhesive	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Brown, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 38.4 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP54 24	220101196-54 Location: 1st Fl. / Business Manager (39) - Cove Base Adhesive	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Yellow, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 17 %			
093020SP55 25	220101196-55 Location: 1st Fl. / Publisher Closet (33) - 4" Cove Base	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 0.6 %			
093020SP56 25	220101196-56 Location: 1st Fl. / Business Manager (39) - 4" Cove Base	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 0.7 %			
093020SP57 26	220101196-57 Location: 1st Fl. / Press Room (65) / Stored Door - Fire Door Insulation	Yes	6 % (EPA 400 PC) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> White, Homogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 2.3 %, Amosite 3.8 % <b>Other Material:</b> Non-fibrous 94 %			
093020SP58 26	220101196-58 Location: 1st Fl. / Press Room (65) / Stored Door - Fire Door Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP59 27	220101196-59 Location: 1st Fl. / Business Manager (39) / Above Ceiling - Pipe Fitting Insulation	Yes	3 % (EPA 400 PC) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 3.0 % <b>Other Material:</b> Fibrous glass 15 %, Non-fibrous 82 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP60 27	220101196-60 Location: 1st Fl. / Men's Locker Rm. (62) / Above Ceiling - Pipe Fitting Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP61 27	220101196-61 Location: 1st Fl. / Development Room (80) / Above Ceiling - Pipe Fitting Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP62 28	220101196-62 Location: 1st Fl. / Press Room (65) - Duct Insulation	Yes	23.5 % (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 23.5 % <b>Other Material:</b> Non-fibrous 76.5 %			
093020SP63 28	220101196-63 Location: 1st Fl. / Press Room (65) - Duct Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP64 28	220101196-64 Location: 1st Fl. / Press Room (65) - Duct Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP65 29	220101196-65 Location: 1st Fl. / Boiler Room (70) - Boiler Breeching Insulation	Yes	30.8 % (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Heterogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 30.8 % <b>Other Material:</b> Non-fibrous 69.2 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP66 29	220101196-66 Location: 1st Fl. / Boiler Room (70) - Boiler Breeching Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP67 29	220101196-67 Location: 1st Fl. / Boiler Room (70) - Boiler Breeching Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP68 30	220101196-68 Location: 1st Fl. / Boiler Room (70) - Tank Insulation	Yes	3.5 % (EPA 400 PC) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 3.5 % <b>Other Material:</b> Fibrous glass 15 %, Non-fibrous 81.5 %			
093020SP69 30	220101196-69 Location: 1st Fl. / Boiler Room (70) - Tank Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP70 30	220101196-70 Location: 1st Fl. / Boiler Room (70) - Tank Insulation		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP71 31	220101196-71 Location: 1st Fl. / Entry Vestibule (1) - Duct Vibration Cloth	Yes	80 % (by NYS ELAP 198.1) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 80.0 % <b>Other Material:</b> Synthetic fibers 15 %, Non-fibrous 5 %			

Client Name: C. T. Male &amp; Associates

**PLM Bulk Asbestos Report**

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP72 31	220101196-72 Location: 1st Fl. / Entry Vestibule (1) - Duct Vibration Cloth		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
093020SP73 32	220101196-73 Location: 1st Fl. / Lunch & Assembly Rm. (7) / Interior - Window Glazing Compound	Yes	Trace (<0.25 % pc) <sup>2</sup> (EPA 400 PC) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile <0.25 % pc <b>Other Material:</b> Non-fibrous 3.1 %			
093020SP74 32	220101196-74 Location: 1st Fl. / Publisher (32) - Interior - Window Glazing Compound	Yes	Trace (<0.25 % pc) <sup>2</sup> (EPA 400 PC) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile <0.25 % pc <b>Other Material:</b> Non-fibrous 2.4 %			
093020SP75 33	220101196-75 Location: 1st Fl. / Passage (30) - Door Window Glazing Compound	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 4.5 %			
093020SP76 33	220101196-76 Location: 1st Fl. / Machine Room (9) - Door Window Glazing Compound	Yes	Trace (<0.25 % pc) <sup>2</sup> (EPA 400 PC) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile <0.25 % pc <b>Other Material:</b> Non-fibrous 3.4 %			
093020SP77 34	220101196-77 Location: Exterior / Entry Vestibule (1) - Door Caulk	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 8.2 %			

## PLM Bulk Asbestos Report

18.8318; 1 Venner Road; Amsterdam, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
093020SP78 34	220101196-78 Location: Exterior / Entry Vestibule (1) - Door Caulk	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 7.7 %			
093020SP79 35	220101196-79 Location: Exterior / Front Of Building - Window Caulk	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 0.6 %			
093020SP80 35	220101196-80 Location: Exterior / Front Of Building - Window Caulk	No	NAD (by NYS ELAP 198.6) by Jared C. Clarke on 10/04/20
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 0.6 %			

### Reporting Notes:

- (1) This PLM job was analyzed using Motic BA310 Pol Scope S/N 1190000326
- (2) Sample prepared for analysis by ELAP 198.6 method

Analyzed by: Jared C. Clarke

\*NAD/NSD =no asbestos detected; NA=not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by Appd E to Subpt E, 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or ELAP 198.6 for NOB samples or EPA 400 pt ct by EPA 600-M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By:

END OF REPORT

Client Name: C. T. Male &amp; Associates

**Table I**  
**Summary of Bulk Asbestos Analysis Results**

18.8318; 1 Venner Road; Amsterdam, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	093020SP01	1	----	----	----	----	NAD	NA
Location: 1st Fl. / Lobby Closet (3) - Plaster (Scratch Coat)								
02	093020SP02	1	----	----	----	----	NAD	NA
Location: 1st Fl. / Editorial Area (18) - Plaster (Scratch Coat)								
03	093020SP03	1	----	----	----	----	NAD	NA
Location: 1st Fl. / Editorial Area Storage (23) - Plaster (Scratch Coat)								
04	093020SP04	1	----	----	----	----	NAD	NA
Location: 1st Fl. / Publisher Closet (33) - Plaster (Scratch Coat)								
05	093020SP05	1	----	----	----	----	NAD	NA
Location: 1st Fl. / General Manager Closet (36) - Plaster (Scratch Coat)								
06	093020SP06	2	----	----	----	----	NAD	NA
Location: 1st Fl. / Lobby Closet (3) - Plaster (Finish Coat)								
07	093020SP07	2	----	----	----	----	NAD	NA
Location: 1st Fl. / Editorial Area (18) - Plaster (Finish Coat)								
08	093020SP08	2	----	----	----	----	NAD	NA
Location: 1st Fl. / Editorial Area Storage (23) - Plaster (Finish Coat)								
09	093020SP09	2	----	----	----	----	NAD	NA
Location: 1st Fl. / Publisher Closet (33) - Plaster (Finish Coat)								
10	093020SP10	2	----	----	----	----	NAD	NA
Location: 1st Fl. / General Manager Closet (36) - Plaster (Finish Coat)								
11	093020SP11	3	----	----	----	----	NAD	NA
Location: 1st Fl. / Lunch & Assembly Rm. (7) - Drywall								
12	093020SP12	3	----	----	----	----	NAD	NA
Location: 1st Fl. / Camera (81) - Drywall								
13	093020SP13	4	----	----	----	----	NAD	NA
Location: 1st Fl. / Lunch & Assembly Rm. (7) - Taping Compound								
14	093020SP14	4	----	----	----	----	NAD	NA
Location: 1st Fl. / Camera (81) - Taping Compound								
15	093020SP15	5	0.103	35.4	4.4	60.3	NAD	NAD
Location: 1st Fl. / Machine Shop (9) - 1' x 1' Ceiling Tile (Metal Faced)								
16	093020SP16	5	0.100	40.4	9.7	49.9	NAD	NAD
Location: 1st Fl. / Men's Locker Rm. (62) - 1' x 1' Ceiling Tile (Metal Faced)								

See Reporting notes on last page



**Table I**  
**Summary of Bulk Asbestos Analysis Results**  
 18.8318; 1 Venner Road; Amsterdam, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
17	093020SP17	6	0.111	13.1	75.6	11.3	NAD	NAD
Location: 1st Fl. / Publisher (32) - 1' x 1' Ceiling Tile (Z-Spline)								
18	093020SP18	6	0.232	13.0	70.6	16.4	NAD	NAD
Location: 1st Fl. / Publisher (32) - 1' x 1' Ceiling Tile (Z-Spline)								
19	093020SP19	7	0.139	14.3	72.7	13.0	NAD	NAD
Location: 1st Fl. / Studio (28) - 1' x 2' Ceiling Tile (Z-Spline)								
20	093020SP20	7	0.180	12.6	72.9	14.5	NAD	NAD
Location: 1st Fl. / Advertising Lounge (57) - 1' x 2' Ceiling Tile (Z-Spline)								
21	093020SP21	8	0.206	13.1	69.9	17.0	NAD	NAD
Location: 1st Fl. / Waiting Rm. (37) - 2' x 2' Ceiling Tile (Z-Spline)								
22	093020SP22	8	0.126	12.9	75.5	11.6	NAD	NAD
Location: 1st Fl. / General Manager (38) - 2' x 2' Ceiling Tile (Z-Spline)								
23	093020SP23	9	0.137	28.9	22.7	48.4	NAD	NAD
Location: 1st Fl. / Lunch & Assembly Rm. (7) - 2' x 4' Ceiling Tile								
24	093020SP24	9	0.253	15.8	18.1	66.2	NAD	NAD
Location: 1st Fl. / Composing Area / Network Rm. (64) - 2' x 4' Ceiling Tile								
25	093020SP25	10	0.150	69.7	12.4	14.0	Chrysotile 4.0	NA
Location: 1st Fl. / Business Manager (39) - Wall Panel Adhesive								
26	093020SP26	10	0.213	69.2	13.0	17.8	NA/PS	NA
Location: 1st Fl. / Business Manager (39) - Wall Panel Adhesive								
27	093020SP27	11	----	----	----	----	NAD	NA
Location: 1st Fl. / Women's Toilet (12) - Ceramic Floor Set								
28	093020SP28	11	----	----	----	----	NAD	NA
Location: 1st Fl. / Passage (59) - Ceramic Floor Set								
29	093020SP29	12	----	----	----	----	NAD	NA
Location: 1st Fl. / Women's Toilet (12) - Ceramic Floor Grout								
30	093020SP30	12	----	----	----	----	NAD	NA
Location: 1st Fl. / Passage (59) - Ceramic Floor Grout								
31	093020SP31	13	0.230	5.9	40.3	53.8	NAD	NAD
Location: 1st Fl. / Women's Toilet (12) - Ceramic Wall Adhesive								
32	093020SP32	13	0.185	7.1	39.0	54.0	NAD	NAD
Location: 1st Fl. / Women's Toilet (12) - Ceramic Wall Adhesive								

**Table I**  
**Summary of Bulk Asbestos Analysis Results**  
 18.8318; 1 Venner Road; Amsterdam, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
33	093020SP33	14	----	----	----	----	NAD	NA
Location: 1st Fl. / Women's Toilet (12) - Ceramic Wall Grout								
34	093020SP34	14	----	----	----	----	NAD	NA
Location: 1st Fl. / Women's Toilet (12) - Ceramic Wall Grout								
35	093020SP35	15	0.083	65.4	21.3	10.6	Chrysotile 2.7	NA
Location: 1st Fl. / Storage (49) - Floor Tile Mastic (Black)								
36	093020SP36	15	0.078	73.9	14.8	11.3	NA/PS	NA
Location: 1st Fl. / Storage (49) - Floor Tile Mastic (Black)								
37	093020SP37	16	0.104	28.6	48.5	17.2	Chrysotile 5.7	NA
Location: 1st Fl. / Storage (49) - 9" x 9" Floor Tile								
38	093020SP38	16	0.177	27.7	44.5	27.8	NA/PS	NA
Location: 1st Fl. / Storage (49) - 9" x 9" Floor Tile								
39	093020SP39	17	0.110	38.9	18.5	42.6	NAD	NAD
Location: 1st Fl. / Lunch & Assembly Rm. (7) - Floor Tile Adhesive (Yellow)								
40	093020SP40	17	0.119	59.8	19.4	20.8	NAD	NAD
Location: 1st Fl. / Proof Rm. (21) - Floor Tile Adhesive (Yellow)								
41	093020SP41	18	0.225	23.0	56.6	20.4	NAD	NAD
Location: 1st Fl. / Lunch & Assembly Rm. (7) - 12" x 12" Floor Tile								
42	093020SP42	18	0.192	15.5	83.8	0.7	NAD	NAD
Location: 1st Fl. / Plate Rm. (79) - 12" x 12" Floor Tile								
43	093020SP43	19	0.254	23.1	58.7	13.3	Chrysotile 4.9	NA
Location: 1st Fl. / Roof Rm. (21) - 12" x 12" Floor Tile (Thin)								
44	093020SP44	19	0.227	22.5	59.6	17.9	NAD	NA
Location: 1st Fl. / Roof Rm. (21) - 12" x 12" Floor Tile (Thin)								
45	093020SP45	20	0.181	26.9	70.1	3.0	NAD	NAD
Location: 1st Fl. / Storage Rm. (5) - Self-Adhesive Floor Tile (Gray)								
46	093020SP46	20	0.243	26.5	70.2	3.3	NAD	NAD
Location: 1st Fl. / Storage Rm. (5) - Self-Adhesive Floor Tile (Gray)								
47	093020SP47	21	0.123	33.0	65.1	1.9	NAD	NAD
Location: 1st Fl. / Storage Rm. (5) - 1' x 2' Self-Adhesive Floor Tile								
48	093020SP48	21	0.138	34.9	63.2	1.9	NAD	NAD
Location: 1st Fl. / Storage Rm. (5) - 1' x 2' Self-Adhesive Floor Tile								

**Table I**  
**Summary of Bulk Asbestos Analysis Results**  
 18.8318; 1 Venner Road; Amsterdam, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
49	093020SP49	22	0.109	94.7	4.7	0.6	NAD	NAD
Location: 1st Fl. / Publisher (32) - Faux-Wood Flooring								
50	093020SP50	22	0.096	95.3	3.5	1.1	NAD	NAD
Location: 1st Fl. / Publisher (32) - Faux-Wood Flooring								
51	093020SP51	23	0.154	54.3	22.4	23.3	NAD	NAD
Location: 1st Fl. / Publisher Closet (33) - Carpet Adhesive								
52	093020SP52	23	0.397	67.9	4.8	27.3	NAD	NAD
Location: 1st Fl. / Advertising Passage (56) - Carpet Adhesive								
53	093020SP53	24	0.189	56.3	5.3	38.4	NAD	NAD
Location: 1st Fl. / Publisher Closet (33) - Cove Base Adhesive								
54	093020SP54	24	0.606	42.1	40.9	17.0	NAD	NAD
Location: 1st Fl. / Business Manager (39) - Cove Base Adhesive								
55	093020SP55	25	0.200	37.6	61.9	0.6	NAD	NAD
Location: 1st Fl. / Publisher Closet (33) - 4" Cove Base								
56	093020SP56	25	0.196	57.7	41.5	0.7	NAD	NAD
Location: 1st Fl. / Business Manager (39) - 4" Cove Base								
57	093020SP57	26	----	----	----	----	Chrysotile 2.3	NA
Location: 1st Fl. / Press Room (65) / Stored Door - Fire Door Insulation								
58	093020SP58	26	----	----	----	----	Amosite 3.8	NA
Location: 1st Fl. / Press Room (65) / Stored Door - Fire Door Insulation								
59	093020SP59	27	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Business Manager (39) / Above Ceiling - Pipe Fitting Insulation								
60	093020SP60	27	----	----	----	----	Chrysotile 3.0	NA
Location: 1st Fl. / Men's Locker Rm. (62) / Above Ceiling - Pipe Fitting Insulation								
61	093020SP61	27	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Development Room (80) / Above Ceiling - Pipe Fitting Insulation								
62	093020SP62	28	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Press Room (65) - Duct Insulation								
63	093020SP63	28	----	----	----	----	Chrysotile 23.5	NA
Location: 1st Fl. / Press Room (65) - Duct Insulation								
64	093020SP64	28	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Press Room (65) - Duct Insulation								
Location: 1st Fl. / Press Room (65) - Duct Insulation								

Client Name: C. T. Male &amp; Associates

**Table I**  
**Summary of Bulk Asbestos Analysis Results**  
 18.8318; 1 Venner Road; Amsterdam, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
65	093020SP65	29	----	----	----	----	Chrysotile 30.8	NA
Location: 1st Fl. / Boiler Room (70) - Boiler Breeching Insulation								
66	093020SP66	29	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Boiler Room (70) - Boiler Breeching Insulation								
67	093020SP67	29	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Boiler Room (70) - Boiler Breeching Insulation								
68	093020SP68	30	----	----	----	----	Chrysotile 3.5	NA
Location: 1st Fl. / Boiler Room (70) - Tank Insulation								
69	093020SP69	30	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Boiler Room (70) - Tank Insulation								
70	093020SP70	30	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Boiler Room (70) - Tank Insulation								
71	093020SP71	31	----	----	----	----	Chrysotile 80.0	NA
Location: 1st Fl. / Entry Vestibule (1) - Duct Vibration Cloth								
72	093020SP72	31	----	----	----	----	NA/PS	NA
Location: 1st Fl. / Entry Vestibule (1) - Duct Vibration Cloth								
73	093020SP73	32	0.200	7.4	89.6	2.9	Chrysotile <0.25	Chrysotile <1.0
Location: 1st Fl. / Lunch & Assembly Rm. (7) / Interior - Window Glazing Compound								
74	093020SP74	32	0.168	13.1	84.6	2.2	Chrysotile <0.25	Chrysotile <1.0
Location: 1st Fl. / Publisher (32) - Interior - Window Glazing Compound								
75	093020SP75	33	0.172	19.0	76.5	4.5	NAD	NAD
Location: 1st Fl. / Passage (30) - Door Window Glazing Compound								
76	093020SP76	33	0.247	12.5	84.1	3.2	Chrysotile <0.25	Chrysotile <1.0
Location: 1st Fl. / Machine Room (9) - Door Window Glazing Compound								
77	093020SP77	34	0.159	49.0	42.8	8.2	NAD	NAD
Location: Exterior / Entry Vestibule (1) - Door Caulk								
78	093020SP78	34	0.149	48.7	43.6	7.7	NAD	NAD
Location: Exterior / Entry Vestibule (1) - Door Caulk								
79	093020SP79	35	0.201	25.3	74.1	0.6	NAD	NAD
Location: Exterior / Front Of Building - Window Caulk								
80	093020SP80	35	0.357	25.3	74.0	0.6	NAD	NAD
Location: Exterior / Front Of Building - Window Caulk								

See Reporting notes on last page

Client Name: C. T. Male &amp; Associates

**Table I**  
**Summary of Bulk Asbestos Analysis Results**

18.8318; 1 Venner Road; Amsterdam, NY

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
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Analyzed by: Gabriella Morozov



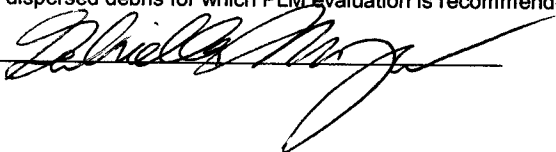
Date Analyzed 10/5/2020

Hitachi #747-Noran

\*\*Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or NYSDOH ELAP 198.1 for New York friable samples or NYSDOH ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or NYSDOH ELAP 198.4; for New York samples); NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By:



Relinquished By: S. Pierson  
 Received By: [Signature]  
 Relinquished By: \_\_\_\_\_  
 Received By: \_\_\_\_\_

Date/Time: 10/1/20  
 Date/Time: 10/2/20 1100  
 Date/Time: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_

AMERISCI

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# BULK SAMPLE SHEET

117 EAST 30<sup>TH</sup> STREET  
 NEW YORK, NY 10016  
 TOLL FREE (800) 705-5227  
 Fax (212) 679-3114

Company: C.T. Male Associates

Project Name: 1 Venner Road

AMERISCI JOB #:

#220101196

Street Address: 50 Century Hill Drive

Project Address: Amsterdam, NY

Client Project #: 18.8318

City: Latham State: New York Zip: 12110

Project Manager: Sawyer

Analysis: ☒ PLM Only ☒ TEM Only ☒ NY ELAP PLM/TEM (198.1/198.6/198.4)  
☐ ASTM Dust (Microvac) ☐ ASTM Dust (Wipe) ☐ Other (describe in comments)

Phone: 518-786-7400

E-Mail: m.sawyer@ctmale.com & s.pierson@ctmale.com

TAT: Rush ☐ 12Hr ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ 5D ☒ Mat'l Type: ☒ Bulk ☐ Air ☐ Water

Results to: Mike Sawyer & Steve Pierson

Sampled By: S. Pierson

Date Sampled: 09/30/20

Special Instructions or Comments:  
 (Check)

Positive Stop?

Field ID #	Sample Location	Sample Description/Material Type (for dust= size of surface area sampled)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Homogenous Area (HA #)
093020SP01	1 <sup>st</sup> Floor Lobby Closet (3)	Plaster (scratch coat)	01
02	Editorial Area (18)		01
03	Editorial Area Storage (23)		01
04	Publisher Closet (33)		01
05	General Manager Closet (36)		01
06	1 <sup>st</sup> Floor Lobby Closet (3)	Plaster (finish coat)	02
07	Editorial Area (18)		02
08	Editorial Area Storage (23)		02
09	Publisher Closet (33)		02
10	General Manager Closet (36)		02
11	1 <sup>st</sup> Floor Lunch + Assembly Rm. (7)	Drywall	03
12	Camera (81)		03
13	1 <sup>st</sup> Floor Lunch + Assembly Rm. (7)	Taping Compound	04
14	Camera (81)		04
15	1 <sup>st</sup> Floor Machine Shop (9)	1'x1' Metal Faced Ceiling Tile	05
16	Men's Locker Rm. (62)		05
17	1 <sup>st</sup> Floor Publisher (32)	1'x1' Z-spline Ceiling Tile	06

Relinquished By: S. Pierson / *[Signature]*  
 Received By: *[Signature]*  
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 Received By:

Date/Time: 10/1/20  
 Date/Time: 10/2/20 1100  
 Date/Time:  
 Date/Time:

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p2 of 5

**BULK SAMPLE SHEET**  
 117 EAST 30<sup>TH</sup> STREET  
 NEW YORK, NY 10016  
 TOLL FREE (800) 705-5227  
 Fax (212) 679-3114

Company: C.T. Male Associates	Project Name: 1 Venner Road	AMERISCI JOB #: <b>#220101196</b>
Street Address: 50 Century Hill Drive	Project Address: Amsterdam, NY	Client Project #: 18.8318
City: Latham State: New York Zip: 12110	Project Manager: Sawyer	
Phone: 518-786-7400	Analysis: <input checked="" type="checkbox"/> PLM Only <input checked="" type="checkbox"/> TEM Only <input checked="" type="checkbox"/> NY ELAP PLM/TEM (198.1/198.6/198.4) <input type="checkbox"/> ASTM Dust (Microvac) <input type="checkbox"/> ASTM Dust (Wipe) <input type="checkbox"/> Other (describe in comments)	
E-Mail: m.sawyer@ctmale.com & s.pierson@ctmale.com	TAT: Rush <input type="checkbox"/> 12Hr <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> 5D <input checked="" type="checkbox"/> Mat'l Type: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Air <input type="checkbox"/> Water	
Results to: Mike Sawyer & Steve Pierson	Sampled By: S. Pierson	Date Sampled: 09/30/20
Special Instructions or Comments: (Check)		Positive Stop?

Field ID #	Sample Location	Sample Description/Material Type (for dust= size of surface area sampled)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Homogenous Area (HA #)
093020SP18	1 <sup>st</sup> Floor Publisher (32)	1'x1' z-spline Ceiling Tile	06
19	1 <sup>st</sup> Floor Studio (28)	1'x2' z-spline Ceiling Tile	07
20	↓ Advertising Storage (57)	↓	07
21	1 <sup>st</sup> Floor Waiting Rm. (37)	2'x2' z-spline Ceiling Tile	08
22	↓ General Manager (38)	↓	08
23	1 <sup>st</sup> Floor Lunch + Assembly Rm. (7)	2'x4' Ceiling Tile	09
24	↓ Composing Area - Network Rm. (64)	↓	09
25	1 <sup>st</sup> Floor Business Manager (39)	Wall Panel Adhesive	10
26	↓ Business Manager (39)	↓	10
27	1 <sup>st</sup> Floor Women's Toilet (12)	Ceramic Floor Set	11
28	↓ Passage (59)	↓	11
29	1 <sup>st</sup> Floor Women's Toilet (12)	Ceramic Floor Grout	12
30	↓ Passage (59)	↓	12
31	1 <sup>st</sup> Floor Women's Toilet (12)	Ceramic Wall Adhesive	13
32	↓	↓	13
33	↓	Ceramic Wall Grout	14
34	↓	↓	14

Relinquished By: S. Pierson / [Signature]  
 Received By: [Signature]  
 Relinquished By: \_\_\_\_\_  
 Received By: \_\_\_\_\_

Date/Time: 10/1/20  
 Date/Time: 10/2/20 1100  
 Date/Time: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_

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p3 of 5

**BULK SAMPLE SHEET**  
 117 EAST 30<sup>TH</sup> STREET  
 NEW YORK, NY 10016  
 TOLL FREE (800) 705-5227  
 Fax (212) 679-3114

Company: <b>C.T. Male Associates</b>	Project Name: <b>1 Venner Road</b>	AMERISCI JOB #: <b>#220101196</b>
Street Address: <b>50 Century Hill Drive</b>	Project Address: <b>Amsterdam, NY</b>	Client Project #: <b>18.8318</b>
City: <b>Latham</b> State: <b>New York</b> Zip: <b>12110</b>	Project Manager: <b>Sawyer</b>	
Phone: <b>518-786-7400</b>	Analysis: <input checked="" type="checkbox"/> PLM Only <input checked="" type="checkbox"/> TEM Only <input checked="" type="checkbox"/> NY ELAP PLM/TEM (198.1/198.6/198.4) <input type="checkbox"/> ASTM Dust (Microvac) <input type="checkbox"/> ASTM Dust (Wipe) <input type="checkbox"/> Other (describe in comments)	
E-Mail: <u>m.sawyer@ctmale.com</u> & <u>s.pierson@ctmale.com</u>	TAT: Rush <input type="checkbox"/> , 12Hr <input type="checkbox"/> , 24 Hr <input type="checkbox"/> , 48 Hr <input type="checkbox"/> , 72 Hr <input type="checkbox"/> , <u>5D</u> <input checked="" type="checkbox"/> Mat'l Type: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Air <input type="checkbox"/> Water	
Results to: <b>Mike Sawyer &amp; Steve Pierson</b>	Sampled By: <b>S. Pierson</b>	Date Sampled: <b>09/30/20</b>
Special Instructions or Comments: (Check)	Positive Stop?	

Field ID #	Sample Location	Sample Description/Material Type (for dust= size of surface area sampled)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Homogenous Area (HA #)
093020SP35	1 <sup>st</sup> Floor Storage (49)	Floor Tile Mastic (black)	15
36	↓	↓	15
37	1 <sup>st</sup> Floor Storage (49)	9"x9" Floor Tile	16
38	↓	↓	16
39	1 <sup>st</sup> Floor Lunch + Assembly Rm. (7)	Floor Tile Adhesive (yellow)	17
40	↓	↓	17
41	1 <sup>st</sup> Floor Lunch + Assembly Rm. (7)	12"x12" Floor Tile	18
42	↓	↓	18
43	1 <sup>st</sup> Floor Plate Rm. (79)	12"x12" Floor Tile (thin)	19
44	↓	↓	19
45	1 <sup>st</sup> Floor Storage Rm. (5)	Self-Adhesive Floor Tile (gray)	20
46	↓	↓	20
47	↓	1'x2' Self-Adhesive Floor Tile	21
48	↓	↓	21
49	1 <sup>st</sup> Floor Publisher (32)	Faux-Wood Flooring	22
50	↓	↓	22
51	1 <sup>st</sup> Floor Publisher (32) Closet (33)	Carpet Adhesive	23



Relinquished By: S. Pierson / *[Signature]*  
 Received By: *[Signature]*  
 Relinquished By: *[Signature]*  
 Received By: *[Signature]*

Date/Time: 10/1/20  
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 Date/Time: *[Blank]*  
 Date/Time: *[Blank]*

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**BULK SAMPLE SHEET**  
 117 EAST 30<sup>TH</sup> STREET  
 NEW YORK, NY 10016  
 TOLL FREE (800) 705-5227  
 Fax (212) 679-3114

Company: C.T. Male Associates	Project Name: 1 Venner Road	AMERISCI JOB #: <b>#220101196</b>
Street Address: 50 Century Hill Drive	Project Address: Amsterdam, NY	Client Project #: 18.8318
City: Latham State: New York Zip: 12110	Project Manager: Sawyer	
Phone: 518-786-7400	Analysis: <input checked="" type="checkbox"/> PLM Only <input checked="" type="checkbox"/> TEM Only <input checked="" type="checkbox"/> NY ELAP PLM/TEM (198.1/198.6/198.4) <input type="checkbox"/> ASTM Dust (Microvac) <input type="checkbox"/> ASTM Dust (Wipe) <input type="checkbox"/> Other (describe in comments)	
E-Mail: m.sawyer@ctmale.com & s.pierson@ctmale.com	TAT: Rush <input type="checkbox"/> 12Hr <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> 5D <input checked="" type="checkbox"/> Mat'l Type: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Air <input type="checkbox"/> Water	
Results to: Mike Sawyer & Steve Pierson	Sampled By: S. Pierson	Date Sampled: 09/30/20
Special Instructions or Comments: (Check)		Positive Stop?

Field ID #	Sample Location	Sample Description/Material Type (for dust= size of surface area sampled)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Homogenous Area (HA #)
093020SP52	1 <sup>st</sup> Floor Advertising Passage (56)	Carpet Adhesive	23
53	1 <sup>st</sup> Floor Publisher Closet (33)	Cove Base Adhesive	24
54	↓ Business Manager (39)	Cove Base Adhesive	24
55	1 <sup>st</sup> Floor Publisher Closet (33)	4" Cove Base	25
56	↓ Business Manager (39)	↓	25
57	1 <sup>st</sup> Floor Press Room (65) (stored door)	Fire Door Insulation	26
58	↓	↓	26
59	1 <sup>st</sup> Floor Business Manager (39) (above ceiling)	Pipe Fitting Insulation	27
60	↓ Men's Locker Room (62) (above ceiling)	↓	27
61	↓ Development Room (80) (above ceiling)	↓	27
62	1 <sup>st</sup> Floor Press Room (65)	Duct Insulation	28
63	↓	↓	28
64	↓	↓	28
65	1 <sup>st</sup> Floor Boiler Room (70)	Boiler Breaching Insulation	29
66	↓	↓	29
67	↓	↓	29
68	1 <sup>st</sup> Floor Boiler Room (70)	Tank Insulation	30

Relinquished By: S. Pierson  
 Received By: Home  
 Relinquished By: \_\_\_\_\_  
 Received By: \_\_\_\_\_

Date/Time: 10/1/20  
 Date/Time: 10/2/20 1100  
 Date/Time: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_

**AMERI SCI**  
p5 of 5

**BULK SAMPLE SHEET**  
 117 EAST 30<sup>TH</sup> STREET  
 NEW YORK, NY 10016  
 TOLL FREE (800) 705-5227  
 Fax (212) 679-3114

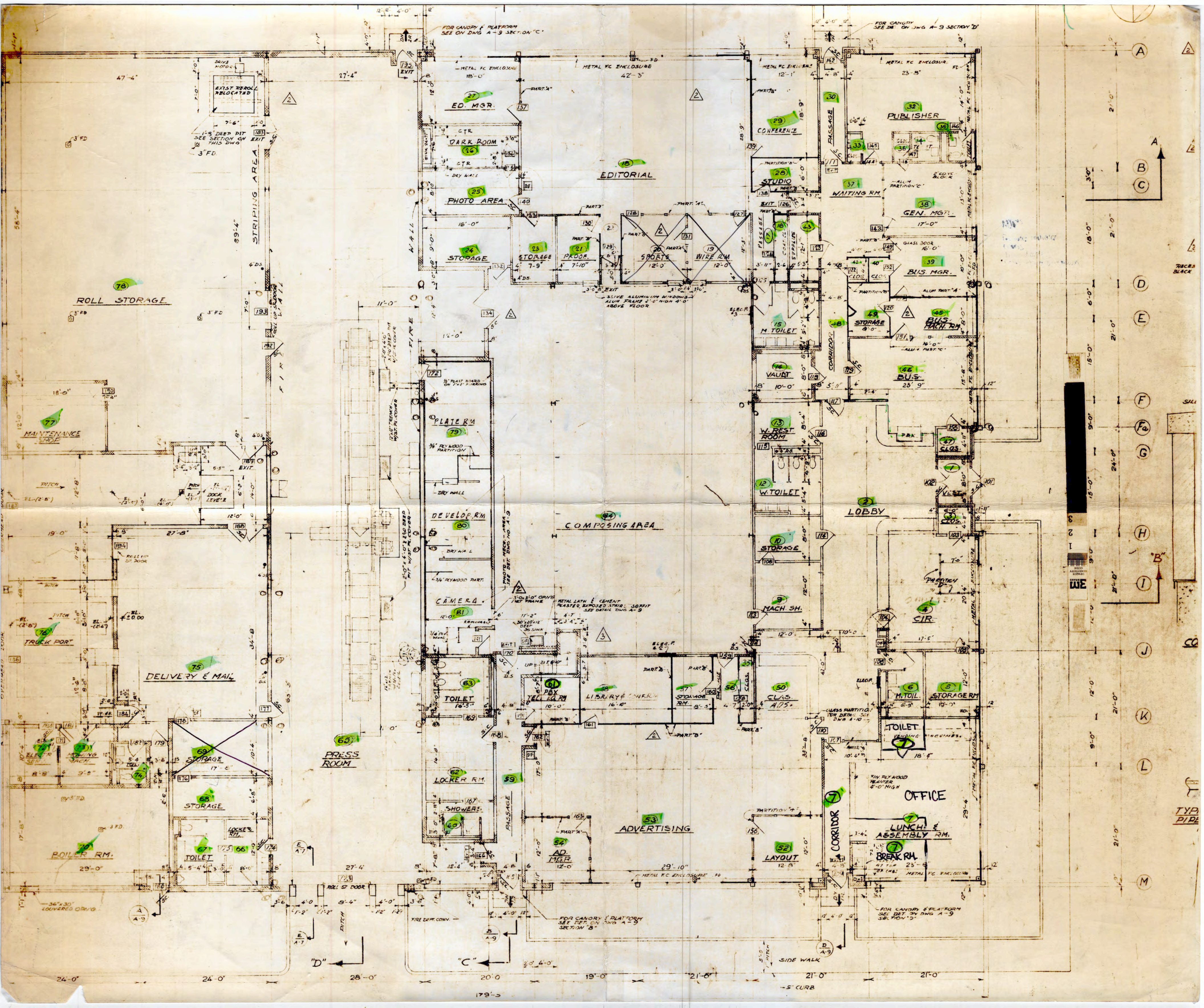
Company: C.T. Male Associates		Project Name: 1 Venner Road	AMERISCI JOB #: <b>#220101196</b>
Street Address: 50 Century Hill Drive		Project Address: Amsterdam, NY	Client Project #: <b>18.8318</b>
City: Latham	State: New York	Zip: 12110	Project Manager: Sawyer
Phone: 518-786-7400		Analysis: <input checked="" type="checkbox"/> PLM Only <input checked="" type="checkbox"/> TEM Only <input checked="" type="checkbox"/> NY ELAP PLM/TEM (198.1/198.6/198.4) <input type="checkbox"/> ASTM Dust (Microvac) <input type="checkbox"/> ASTM Dust (Wipe) <input type="checkbox"/> Other (describe in comments)	
E-Mail: <u>m.sawyer@ctmale.com</u> & <u>s.pierson@ctmale.com</u>		TAT: Rush <input type="checkbox"/> 12Hr <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> 5D <input checked="" type="checkbox"/> Mat'l Type: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Air <input type="checkbox"/> Water	
Results to: Mike Sawyer & Steve Pierson		Sampled By: S. Pierson	
Special Instructions or Comments: (Check)		Date Sampled: 09/30/20 Positive Stop?	

Field ID #	Sample Location	Sample Description/Material Type (for dust= size of surface area sampled)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Homogenous Area (HA #)
093020SP69	1 <sup>st</sup> Floor Boiler Room (70)	Tank Insulation	30
70	↓	↓	30
71	1 <sup>st</sup> Floor Entry Vestibule (1)	Duct Vibration cloth	31
72	↓	↓	31
73	1 <sup>st</sup> Floor Lunch & Assembly Rm (7) (Interior)	Window Glazing Compound	32
74	↓ Publisher (32) (Interior)	↓	32
75	1 <sup>st</sup> Floor Passage (30)	Door Window Glazing Compound	33
76	↓ Machine Room (9)	↓	33
77	Exterior Entry Vestibule (1)	Door Caulk	34
78	↓	↓	34
79	Exterior Front of Building	Window Caulk	35
80	↓	↓	35

**APPENDIX D**

**BUILDING PLAN**







**APPENDIX E**

**ACM SURVEY  
ABATEMENT COST ESTIMATES**

**Proj. No.:** 20.0649      **Date:** 10/9/2020  
**Project:** 1 Venner Road, Amsterdam, NY

LOCATION \ MATERIAL	UNIT	QTY	UNIT PRICE	COST	TOTAL COST
<b>Throughout</b>					
Fire Doors					
Fire Door Insulation	Ea.	30	\$125.00	\$3,750.00	<b>\$3,750.00</b>
Behind Metal Radiator Covers					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>
<b>1st Floor</b>					
Vestibule (1)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	15	\$75.00	\$1,125.00	<b>\$1,125.00</b>
Duct Vibration Joint Cloth	Sq. Ft.	10	\$50.00	\$500.00	<b>\$500.00</b>
Lobby (2)					
Throughout					
Wall Panel Adhesive	Sq. Ft.	320	\$6.00	\$1,920.00	<b>\$1,920.00</b>
Circulation (4)					
Throughout					
Wall Panel Adhesive	Sq. Ft.	80	\$12.00	\$960.00	<b>\$960.00</b>
Storage Room (5)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>
Throughout					
Floor Tile & Mastic	Sq. Ft.	120	\$9.00	\$1,080.00	<b>\$1,080.00</b>
(under 2 layers non-ACM tile)					
Men's Toilet (6)					
Above Ceiling/In Walls					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>
Lunch & Assembly Area (7)					
Office Area					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	8	\$125.00	\$1,000.00	<b>\$1,000.00</b>
Lunch & Assembly Area (7)					
Break Area					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>
Lunch & Assembly Area (7)					
Corridor					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>

**Proj. No.:** 20.0649      **Date:** 10/9/2020  
**Project:** 1 Venner Road, Amsterdam, NY

LOCATION \ MATERIAL	UNIT	QTY	UNIT PRICE	COST	TOTAL COST
<b>1st Floor - Continued</b>					
Mach. Sh. (9)					
Throughout					
Floor Tile & Mastic	Sq. Ft.	144	\$8.00	\$1,152.00	<b>\$1,152.00</b>
Storage (10)					
Throughout					
Floor Tile & Mastic	Sq. Ft.	96	\$8.00	\$768.00	<b>\$768.00</b>
Women's Toilet (12)					
Above Ceiling/In Walls					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>
Women's Restroom (13)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>
Vault (14)					
Throughout					
Floor Tile & Mastic	Sq. Ft.	80	\$12.00	\$960.00	<b>\$960.00</b>
Men's Toilet (15)					
Above Ceiling/In Walls					
Pipe Fitting Insulation	Ln. Ft.	16	\$100.00	\$1,600.00	<b>\$1,600.00</b>
Editorial (18)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	25	\$100.00	\$2,500.00	<b>\$2,500.00</b>
Proofreading (21)					
Throughout					
Floor Tile - Not Mastic	Sq. Ft.	96	\$10.00	\$960.00	<b>\$960.00</b>
(under carpet)					
Storage (23)					
Throughout					
Floor Tile & Mastic	Sq. Ft.	96	\$11.00	\$1,056.00	<b>\$1,056.00</b>
Storage (24)					
Throughout					
Floor Tile & Mastic	Sq. Ft.	144	\$8.00	\$1,152.00	<b>\$1,152.00</b>

**Proj. No.:** 20.0649      **Date:** 10/9/2020  
**Project:** 1 Venner Road, Amsterdam, NY

LOCATION \ MATERIAL	UNIT	QTY	UNIT PRICE	COST	TOTAL COST
<b>1st Floor - Continued</b>					
Photo Area/Dark Room (25-26)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	5	\$200.00	\$1,000.00	<b>\$1,000.00</b>
Throughout					
Floor Tile Mastic	Sq. Ft.	306	\$6.00	\$1,836.00	<b>\$1,836.00</b>
(no tile, under carpet)					
Editorial Manager (27)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	7	\$150.00	\$1,050.00	<b>\$1,050.00</b>
Conference (29)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	8	\$150.00	\$1,200.00	<b>\$1,200.00</b>
Publisher (32)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>
Throughout					
Wall Panel Adhesive	Sq. Ft.	608	\$4.00	\$2,432.00	<b>\$2,432.00</b>
General Manager Toilet (34)					
Above Ceiling/In Walls					
Pipe Fitting Insulation	Ln. Ft.	4	\$250.00	\$1,000.00	<b>\$1,000.00</b>
Publisher Toilet (35)					
Above Ceiling/In Walls					
Pipe Fitting Insulation	Ln. Ft.	4	\$250.00	\$1,000.00	<b>\$1,000.00</b>
General Manager (38)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	5	\$200.00	\$1,000.00	<b>\$1,000.00</b>
Throughout					
Wall Panel Adhesive	Sq. Ft.	136	\$8.00	\$1,088.00	<b>\$1,088.00</b>
Business Manager (39)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	12	\$80.00	\$960.00	<b>\$960.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	8	\$100.00	\$800.00	<b>\$800.00</b>
Throughout					
Wall Panel Adhesive	Sq. Ft.	136	\$8.00	\$1,088.00	<b>\$1,088.00</b>



**Proj. No.:** 20.0649      **Date:** 10/9/2020  
**Project:** 1 Venner Road, Amsterdam, NY

LOCATION \ MATERIAL	UNIT	QTY	UNIT PRICE	COST	TOTAL COST
<b>1st Floor - Continued</b>					
Supplies (43)					
Throughout					
Floor Tile & Mastic	Sq. Ft.	72	\$14.00	\$1,008.00	<b>\$1,008.00</b>
Business/Business Machine Room (45-46)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	4	\$250.00	\$1,000.00	<b>\$1,000.00</b>
Throughout					
Wall Panel Adhesive	Sq. Ft.	216	\$6.00	\$1,296.00	<b>\$1,296.00</b>
Storage (49)					
Throughout					
Floor Tile & Mastic	Sq. Ft.	72	\$14.00	\$1,008.00	<b>\$1,008.00</b>
Classified Advertising (50)					
Throughout					
Wall Panel Adhesive	Sq. Ft.	224	\$6.00	\$1,344.00	<b>\$1,344.00</b>
Layout (52)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	2	\$500.00	\$1,000.00	<b>\$1,000.00</b>
Advertising (53)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	14	\$100.00	\$1,400.00	<b>\$1,400.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	12	\$100.00	\$1,200.00	<b>\$1,200.00</b>
Throughout					
Wall Panel Adhesive	Sq. Ft.	304	\$6.00	\$1,824.00	<b>\$1,824.00</b>
Advertising Manager (54)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	4	\$250.00	\$1,000.00	<b>\$1,000.00</b>
Closet/Passage (55-56)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	3	\$300.00	\$900.00	<b>\$900.00</b>

**Proj. No.:** 20.0649      **Date:** 10/9/2020  
**Project:** 1 Venner Road, Amsterdam, NY

LOCATION \ MATERIAL	UNIT	QTY	UNIT PRICE	COST	TOTAL COST
<b>1st Floor - Continued</b>					
Storage Room (57)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	10	\$100.00	\$1,000.00	<b>\$1,000.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	2	\$250.00	\$500.00	<b>\$500.00</b>
Below Ceiling					
Pipe Fitting Insulation	Ln. Ft.	1	\$100.00	\$100.00	<b>\$100.00</b>
Throughout					
Floor Tile & Mastic	Sq. Ft.	108	\$8.00	\$864.00	<b>\$864.00</b>
Passage (59)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	1	\$500.00	\$500.00	<b>\$500.00</b>
Roof Drain Insulation	Sq. Ft.	2	\$250.00	\$500.00	<b>\$500.00</b>
Showers (60)					
Above Ceiling/In Walls					
Pipe Fitting Insulation	Ln. Ft.	8	\$100.00	\$800.00	<b>\$800.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	12	\$50.00	\$600.00	<b>\$600.00</b>
PBX - Telephone Equipment Room (61)					
Throughout					
Floor Tile & Mastic	Sq. Ft.	90	\$12.00	\$1,080.00	<b>\$1,080.00</b>
Locker Room (62)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	10	\$100.00	\$1,000.00	<b>\$1,000.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	12	\$50.00	\$600.00	<b>\$600.00</b>
Toilet (63)					
Above Ceiling/In Walls					
Pipe Fitting Insulation	Ln. Ft.	16	\$75.00	\$1,200.00	<b>\$1,200.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	12	\$50.00	\$600.00	<b>\$600.00</b>
Composing Area (64)					
9 Rooms & 2 Closets					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	40	\$100.00	\$4,000.00	<b>\$4,000.00</b>
Throughout					
Floor Tile & Mastic	Sq. Ft.	2,925	\$8.00	\$23,400.00	<b>\$23,400.00</b>
(1,460 Sq. Ft. under carpet, 300 Sq. Ft. under raised floor)					

**Proj. No.:** 20.0649      **Date:** 10/9/2020  
**Project:** 1 Venner Road, Amsterdam, NY

LOCATION \ MATERIAL	UNIT	QTY	UNIT PRICE	COST	TOTAL COST
<b>1st Floor - Continued</b>					
Press Room (65)					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	20	\$200.00	\$4,000.00	<b>\$4,000.00</b>
Duct Insulation	Ln. Ft.	65	\$25.00	\$1,625.00	<b>\$1,625.00</b>
Toilet (67)					
Above Ceiling/ In Walls					
Pipe Fitting Insulation	Ln. Ft.	12	\$100.00	\$1,200.00	<b>\$1,200.00</b>
Storage (68)					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	11	\$100.00	\$1,100.00	<b>\$1,100.00</b>
Boiler Room (70)					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	75	\$30.00	\$2,250.00	<b>\$2,250.00</b>
Breeching Insulation	Sq. Ft.	80	\$25.00	\$2,000.00	<b>\$2,000.00</b>
Tank Insulation	Sq. Ft.	100	\$25.00	\$2,500.00	<b>\$2,500.00</b>
Tank Insulation Debris	Sq. Ft.	4	\$150.00	\$600.00	<b>\$600.00</b>
Toilet (74)					
Above Ceiling/ In Walls					
Pipe Fitting Insulation	Ln. Ft.	10	\$100.00	\$1,000.00	<b>\$1,000.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	12	\$50.00	\$600.00	<b>\$600.00</b>
Delivery & Mail (75)					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	4	\$250.00	\$1,000.00	<b>\$1,000.00</b>
Truck Port (76)					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	20	\$100.00	\$2,000.00	<b>\$2,000.00</b>
Maintenance Shop (77)					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	8	\$125.00	\$1,000.00	<b>\$1,000.00</b>
Roll Storage (78)					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	30	\$75.00	\$2,250.00	<b>\$2,250.00</b>
Roof Drain Insulation	Sq. Ft.	2	\$250.00	\$500.00	<b>\$500.00</b>

Proj. No.: 20.0649      Date: 10/9/2020  
Project: 1 Venner Road, Amsterdam, NY

LOCATION \ MATERIAL	UNIT	QTY	UNIT PRICE	COST	TOTAL COST
<b>1st Floor - Continued</b>					
Plate Room/Development Room/Camera (79-80-81)					
Above Ceiling					
Pipe Fitting Insulation	Ln. Ft.	15	\$100.00	\$1,500.00	<b>\$1,500.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	8	\$50.00	\$400.00	<b>\$400.00</b>
Throughout					
Floor Tile & Mastic	Sq. Ft.	624	\$8.00	\$4,992.00	<b>\$4,992.00</b>
<b>Mezzanine</b>					
Mechanical Room					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	90	\$50.00	\$4,500.00	<b>\$4,500.00</b>
Pipe Fitting Insulation Debris	Sq. Ft.	10	\$100.00	\$1,000.00	<b>\$1,000.00</b>
Duct Vibration Joint Cloth	Sq. Ft.	24	\$50.00	\$1,200.00	<b>\$1,200.00</b>
<b>2nd Floor</b>					
Mechanical Room					
Throughout					
Pipe Fitting Insulation	Ln. Ft.	90	\$50.00	\$4,500.00	<b>\$4,500.00</b>
Roof Drain Insulation	Sq. Ft.	2	\$100.00	\$200.00	<b>\$200.00</b>
Tank Insulation	Sq. Ft.	50	\$25.00	\$1,250.00	<b>\$1,250.00</b>
Apartment					
Kitchen/Bath					
In Walls					
Pipe Fitting Insulation	Ln. Ft.	Unknown	TBD	TBD	<b>TBD</b>
Throughout					
Floor Tile & Mastic	Sq. Ft.	750	\$8.00	\$6,000.00	<b>\$6,000.00</b>
(196 Sq. Ft. under carpet)					
Living Room					
Wall Panel Adhesive	Sq. Ft.	448	\$6.00	\$2,688.00	<b>\$2,688.00</b>
<b>SUB-TOTAL</b>					<b>\$136,516.00</b>
<b>ASSOCIATED ASBESTOS ABATEMENT COSTS (Estimated)</b>					
Project/Air Monitoring			\$ 14,500.00		<b>\$ 14,500.00</b>
NYSDOL Site-Specific Variance			\$ 2,500.00		<b>\$ 2,500.00</b>
<b>ESTIMATED ASSOCIATED COSTS</b>			<b>SUB-TOTAL</b>		<b>\$ 17,000.00</b>

**ESTIMATED PROJECT TOTAL**

**\$153,516.00**

## SECTION 003143 - PERMIT APPLICATION

## PART 1 - GENERAL

## 1.1 PERMIT APPLICATION INFORMATION

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of the Bidders' own investigations. This Document and its attachments are not part of the Contract Documents.
- B. Permit Application: The building permit for Project has been applied for by the **Owner**. Complete building permit application and file with authorities having jurisdiction within **five** days of **the date of execution of the Contract**.
  - 1. Copies of the building permit application forms may be obtained from **Montgomery County**, which is also the Authority having Jurisdiction.
  - 2. Prior to issuance of the Building Permit each prime contractor is required to submit certificates of insurance, including Workers' Compensation and Disability benefits if wages are to be paid to anyone working on the project.
  - 3. The authority having jurisdiction must be notified of any changes to information contained in the application during the period for which a permit is in effect.
- C. The Contractor shall conform to all of the requirements of these permits when performing the Work and the conditions of these permits shall be considered a part of this Contract.
  - 1. The Contractor shall also assume all of the responsibilities and liabilities of the OWNER as permittee for these permits for the duration of the Contract.
- D. All other permits required shall be obtained by the Contractor responsible for the applicable portion of the Work.

END OF SECTION 003143

DOCUMENT 004100 - NOTICE TO BIDDERS - BID FORMS

The complete Bid Forms follow this page. These Bid Forms are to be completely filled in and submitted as the Formal Bid, along with the balance of the Procurement Forms and Supplements in accordance with the Instructions to Bidders. The Project Manual should not be submitted with the Bid Forms.

The Owner may elect to disqualify a bid due to failure to submit a bid in the form requested, failure to bid requested alternates or unit prices, failure to complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.

This Bid Form is intended for use by Multiple Prime Contracts with AIA Document A101-2017 "Standard Form of Agreement between Owner and Contractor." After Bid Opening and Contract Award, a copy of the successful Bidder's complete Bid Forms will be bound with the Agreement.

END OF DOCUMENT 004100

SECTION 004116 - BID FORM

1.1 BID INFORMATION

- A. Bidder: \_\_\_\_\_.
- B. Bidder Address: \_\_\_\_\_.
- C. Date Bid Submitted: \_\_\_\_\_.  
(Month/Day/Year)
- D. Project Name: **MONTGOMERY COUNTY PHASE 1 GENERATOR**
- E. Project Location: **1 Venner Road, Amsterdam, NY 12010**
- F. Owner: **Montgomery County**
- G. Owner's Bid No: **15-22**
- H. Architect: **C.T. Male Associates**  
Engineering, Surveying, Architecture, Landscape Architecture & Geology, DPC
- I. Architect Project No: **20.0651**

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Single-Prime (All Trades): The undersigned BIDDER, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by **C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.** and Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:
1. \_\_\_\_\_ Dollars (\$\_\_\_\_\_).
2. The above amount may be modified by amounts indicated by the BIDDER on the attached Document 004322 "Unit Prices Form" and Document 004323 "Alternates Form."

1.3 BID GUARANTEE

- A. The undersigned BIDDER agrees to execute a contract for this Work in the above amount and to furnish surety as specified within **[10] ten** days after a written Notice of Award, if offered within **[45] forty-five** days after receipt of bids, and on failure to do so agrees to forfeit to OWNER the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:
1. \_\_\_\_\_ Dollars (\$\_\_\_\_\_).

- B. In the event OWNER does not offer Notice of Award within the time limits stated above, OWNER will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.
- C. BIDDER further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any individual or entity to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
  - 1. Non-Collusive Bidding Certification - As required by Section 103-d of New York State General Municipal Law, the Bidder must complete and submit with the Bid the certification on page 004519-1.

#### 1.4 TIMEFRAME FOR OFFERS

- A. The OWNER reserves the right to make awards within forty-five (45) days after the date of the Bid opening, or for such longer period of time that BIDDER may agree to in writing upon request of OWNER, during which period, Bids must remain firm and cannot be withdrawn. Pursuant to Section 163(9)(e) of the State Finance Law and Section 2-205 of the Uniform Commercial Code when applicable, where an award is not made within the sixty (60) day period or other time specified as set forth in the Bid Documents, the Bids shall remain firm until such later time as either a Contract is awarded or the Bidder delivers to the OWNER written notice of the withdrawal of its Bid. Any Bid which expressly states therein that acceptance must be made within a shorter specified time, may at the sole discretion of the OWNER, be accepted or rejected.

#### 1.5 EXECUTION OF THE CONTRACT

- A. Subsequent to the Notice of Intent to Award, and within ten (10) days after the prescribed Form of Agreement is presented to the BIDDER for signature, the BIDDER shall execute and deliver the Agreement to OWNER through the Architect, in such number of counterparts as OWNER may require.
- B. OWNER may deem as a default the failure of the BIDDER to execute the Contract and to supply the required bonds when the Agreement is presented for signature within the period of time allowed.
- C. Unless otherwise indicated in the Procurement and Contracting Documents or the executed Agreement, the date of commencement of the Work shall be the date of the executed Agreement or a date set forth in a notice to proceed issued by the OWNER, subject to period of time necessary to secure the required approvals from Authorities having jurisdiction.
- D. In the event of a default, OWNER may declare the amount of the Bid security forfeited and elect to either award the Contract to the next responsible BIDDER or re-advertise for bids.

#### 1.6 TIME OF COMPLETION

- A. The undersigned BIDDER proposes and agrees hereby to commence the Work of the Contract Documents within **7** days on a date specified in a written Notice to Proceed to be issued by Architect, and shall be substantially complete, for occupancy and use by the Owner, within **335** calendar days, in accordance with the Milestone Project Schedule included in the Bid Documents, and completed and ready for final payment within **365** days after the date when the contract time commences to run.
- B. BIDDER agrees that the Work will be substantially complete, for occupancy and use by the OWNER, in accordance with paragraph 9.8 of the General Conditions of the Contract for Construction (AIA Document A201-2017) and completed and ready for final payment in accordance with paragraph 9.10 on or before the dates or within the number of calendar days indicated in the Agreement.



- C. BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above.

1.7 ACKNOWLEDGEMENT OF ADDENDA

- A. The undersigned BIDDER acknowledges receipt of and use of the following Addenda in the preparation of this Bid:
1. Addendum No. 1, dated \_\_\_\_\_.
  2. Addendum No. 2, dated \_\_\_\_\_.
  3. Addendum No. 3, dated \_\_\_\_\_.
  4. Addendum No. 4, dated \_\_\_\_\_.

1.8 BID SUPPLEMENTS

- A. The following supplements are a part of this Bid Form and are attached hereto.
1. Bid Form Supplement - Allowances.
  2. Bid Form Supplement - Bid Bond Form (AIA Document A310-2010).
  3. Bid Form Supplement - Performance Bond Information Form.
  4. Bid Form Supplement - Non-Collusion Affidavit.
- B. BIDDER agrees upon Bid Opening, if apparent lowest BIDDER, to submit in accordance with the "Instructions to Bidders" within **3** working days the following:
1. Proposed Subcontractors and Suppliers Form (AIA Document G705-2001).
  2. Proposed Schedule of Values Form (AIA Document G703-1992 Continuation Sheet).
  3. Bidder's Qualification Statement, with supporting data, including a designation of the Work to be performed with the Bidder's own forces and the name and qualifications of the person proposed as the Project superintendent for the Bidder's Work (AIA Document A305-1986).

1.9 CONTRACTOR'S LICENSE AND FEDERAL ID NUMBER

- A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the State of New York and **County of Montgomery**, if applicable, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

EMPLOYER's Tax ID No. \_\_\_\_\_.

1.10 SUBMISSION OF BID

- A. The terms used in this Bid with initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.
- B. Communication covering this Bid shall be addressed to the Bidder as indicated on the following signature page.

**If BIDDER is an INDIVIDUAL**

By: \_\_\_\_\_  
(signature)

\_\_\_\_\_  
(print or type individual's name, & title if applicable)

Doing Business As: \_\_\_\_\_

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

\_\_\_\_\_

Phone No.: \_\_\_\_\_

-----

**If BIDDER is a PARTNERSHIP**

\_\_\_\_\_  
(print or type firm name)

By: \_\_\_\_\_  
(signature of general partner)

\_\_\_\_\_  
(print or type partner's name & title)

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

\_\_\_\_\_

Phone No.: \_\_\_\_\_

**If BIDDER is a CORPORATION**

\_\_\_\_\_  
(print or type corporate name)

\_\_\_\_\_  
(state of incorporation)

By: \_\_\_\_\_  
(signature of president or vice-president, see Instructions to Bidders)

\_\_\_\_\_  
(print or type name & title) (Corporate Seal)

Attest (by corporate secretary or assistant secretary):

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(name and title)

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

Phone No.: \_\_\_\_\_

-----  
**If BIDDER is a JOINT VENTURE**

\_\_\_\_\_  
(print or type name of joint venture)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(name & title)

\_\_\_\_\_  
(address & phone no.)

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(name & title)

\_\_\_\_\_  
(address & phone no.)

(Each joint venture must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

END OF SECTION 004116

DOCUMENT 004313 - BID SECURITY FORMS

1.1 BID FORM SUPPLEMENT

- A. A completed bid bond form is required to be attached to the Bid Form.

1.2 BID BOND FORM

- A. AIA Document A310-2010, "Bid Bond," is the recommended form for a bid bond. A bid bond acceptable to Owner, or other bid security as described in the Instructions to Bidders, is required to be attached to the Bid Form as a supplement.
- B. Copies of AIA standard forms may be obtained from The American Institute of Architects; <https://www.aiacontracts.org/>; email: [docspurchases@aia.org](mailto:docspurchases@aia.org); (800) 942-7732.

END OF DOCUMENT 004313

DOCUMENT 004314 - PERFORMANCE BOND INFORMATION FORM

1.1 PERFORMANCE BOND INFORMATION

- A. The following information is required to be submitted with the Bid Forms.

Project: **Montgomery County Phase 1 Generator**

Construction Contract Number \_\_\_\_\_

Name of Contract \_\_\_\_\_

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

Address \_\_\_\_\_

\_\_\_\_\_

Bonding Company or Person Issuing Security Bond \_\_\_\_\_

\_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Bonding Company Agent \_\_\_\_\_

\_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Amount of Bond\* \$ (Contract Price As Awarded) \_\_\_\_\_

Duration of Bond\* (One Year After Date of Final Payment) \_\_\_\_\_

Identification Number of Bond Assigned When Bond is Furnished

- \* Amount and duration of bond are in accordance with the General Conditions and any applicable Supplementary Conditions.

END OF DOCUMENT 004314

DOCUMENT 004321 - ALLOWANCE FORM

1.1 BID INFORMATION

- A. Bidder: \_\_\_\_\_  
(Name of Bidder)
- B. Contract: \_\_\_\_\_  
(Name of Contract)
- C. Project Name: **MONTGOMERY COUNTY PHASE 1 GENERATOR**
- D. Project Location: **1 Venner Road, Amsterdam, NY 12010**
- E. Owner: **Montgomery County**
- F. Owner's Bid No: **15-22**
- G. Architect: **C.T. Male Associates**  
Engineering, Surveying, Architecture, Landscape Architecture & Geology, DPC
- H. Architect Project No: **20.0651**

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.
- B. The undersigned Bidder certifies that Base Bid submission to which this Bid Supplement is attached includes those allowances described in the Contract Documents and scheduled in Section 012100 "Allowances."

1.3 SUBMISSION OF BID SUPPLEMENT

- A. Respectfully submitted this \_\_\_\_\_ day of \_\_\_\_\_, **2022**.
- B. Submitted By: \_\_\_\_\_ (Insert name of bidding firm or corporation).
- C. Authorized Signature: \_\_\_\_\_ (Handwritten signature).
- D. Signed By: \_\_\_\_\_ (Type or print name).
- E. Title: \_\_\_\_\_ (Owner/Partner/President/Vice President).

END OF DOCUMENT 004321

DOCUMENT 004393 - BID SUBMITTAL CHECKLIST

1.1 BID INFORMATION

- A. Bidder: \_\_\_\_\_.
- B. Prime Contract: \_\_\_\_\_.
- C. Project Name: **MONTGOMERY COUNTY PHASE 1 GENERATOR**
- D. Project Location: **1 Venner Road, Amsterdam, NY 12010**
- E. Owner: **Montgomery County**
- F. Owner Bid No: **15-22**
- G. Architect: **C.T. MALE ASSOCIATES**  
Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.
- H. Architect Project No: **20.0651**

1.2 BIDDER'S CHECKLIST

- A. In an effort to assist the Bidder in properly completing all documentation required, the following checklist is provided for the Bidder's convenience. The Bidder is solely responsible for verifying compliance with bid submittal requirements.
- B. Attach this completed checklist to the outside of the Submittal envelope.
1. Used the Bid Form provided in the Project Manual.
  2. Prepared the Bid Form as required by the Instructions to Bidders.
  3. Indicated on the Bid Form the Addenda received.
  4. Attached to the Bid Form: Bid Supplement Form - Allowances.
  5. Attached to the Bid Form: Bid Bond OR a certified check for the amount required.
  6. Attached to the Bid Form: Non-Collusion Affidavit.
  7. Bid envelope shows name and address of the Bidder.
  8. Bid envelope shows name of Project being bid.
  9. Bid envelope shows name of Prime Contract being bid, if applicable.
  10. Bid envelope shows time and day of Bid Opening.
  11. Verified that the Bidder can provide executed Performance Bond and Labor and Material Bond.
  12. Verified that the Bidder can provide Certificates of Insurance in the amounts indicated.

END OF DOCUMENT 004393

DOCUMENT 004436 – PROPOSED SUBCONTRACTORS AND SUPPLIERS FORM

1.1 IDENTIFICATION OF SUBCONTRACTORS AND SUPPLIERS

- A. Should Bidder plan to subcontract any part or portion of the Work, list the name and address of all Subcontractors and Suppliers that you propose to use on this Contract and the Work assigned to each. This identification of subcontractors is required of all Bidders as part of their Bid and is in partial fulfillment of requirements in the Instructions to Bidders. Additional data on proposed Subcontractors may be requested from selected Bidders after the Bid Opening in accordance with the Instructions to Bidders.
- B. List of Subcontractors using AIA Document G705-2001.
  - 1. Copies of AIA standard forms may be obtained from the American Institute of Architects; [https://www.aiacontracts.org/ library](https://www.aiacontracts.org/library); (800) 942-7732.

END OF DOCUMENT 004436



SECTION 004473 - PROPOSED SCHEDULE OF VALUES FORM

1.1 BID FORM SUPPLEMENT

- A. Submit Proposed Schedule of Values form no later than **three** business days following Architect's request in accordance with Instructions to Bidders.

1.2 PROPOSED SCHEDULE OF VALUES FORM

- A. Proposed Schedule of Values Form: Provide a breakdown of the bid amount, including alternates, in enough detail to facilitate continued evaluation of bid. Coordinate with the Project Manual table of contents.
  - 1. Provide multiple line items for principal material and subcontract amounts in excess of **five** percent of the Contract Sum.
- B. Arrange schedule of values consistent with format of **AIA Document G703-1992**.
  - 1. Copies of AIA standard forms may be obtained from the American Institute of Architects; <https://www.aiacontracts.org/library>; (800) 942-7732.

END OF SECTION 004473

DOCUMENT 004513 - CONTRACTOR'S QUALIFICATION STATEMENT

1.1 CONTRACTOR'S QUALIFICATION STATEMENT

- A. Submit Contractor's Qualification Statement no later than **three** business days following Architect's request in accordance with Instructions to Bidders.

1.2 PROPOSED QUALIFICATION STATEMENT FORM

- A. Proposed Qualification Statement Form: Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a Contractor's Qualification Statement. 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.
- B. Arrange information consistent with format of **AIA Document A305-2000**.
  - 1. Copies of AIA standard forms may be obtained from the American Institute of Architects; [https://www.aiacontracts.org/ library](https://www.aiacontracts.org/library); (800) 942-7732.

END OF DOCUMENT 004513

DOCUMENT 004519 - NON-COLLUSION AFFIDAVIT  
(Required by Section 103-d of the New York State General Municipal Law.)

- A. By submission of this Bid, each bidder and each person signing on behalf of any 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:
- 1) 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;
  - 2) 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 the opening, directly or indirectly, to any other bidder or to any competitor; and
  - 3) 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.
- B. A bid shall not be considered for award nor shall any award be made where (A) (1) (2) and (3) above have not been complied with; provided, however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore, Where (A) (1) (2) and (3) above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of paragraph 1.

\_\_\_\_\_  
(print or type name of Bidder)

By:

\_\_\_\_\_  
(signature)

\_\_\_\_\_  
(individual's name & title)

\_\_\_\_\_  
Subscribed and sworn to before me

this \_\_\_\_\_ day of \_\_\_\_\_, 2022

\_\_\_\_\_  
(signature of Notary Public)

(Notary Stamp)

END OF DOCUMENT 004519

DOCUMENT 005100 - NOTICE OF AWARD

1.1 BID INFORMATION

- A. Bidder: <Insert successful bidder name>.
- B. Bidder's Address: <Insert street address, city, state, zip, and telephone>.
- C. Prime Contract: <Insert prime contract name>.
- D. Project Name: Montgomery County  
Phase 1 Generator
- E. Project Location: 1 Venner Road  
Amsterdam, NY 12010
- F. Owner: Montgomery County  
County Annex Building  
P.O. Box 1500 – 20 Park Street  
Fonda, New York 12068-1500
- G. Owner Bid Number: **15-22**
- H. Owner's Representative: Eric M. Mead, Commissioner of Public Works  
Montgomery County Department of Public Works  
6 Park Street - P.O. Box 1500  
Fonda, NY 12068-1500
- I. Architect: C.T. Male Associates  
Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.  
50 Century Hill Drive  
Latham, New York 12110
- J. Architect Project No.: 20.0651

1.2 NOTICE OF AWARD OF CONTRACT

- A. Notice: The above Bidder is hereby notified that their bid, dated <Insert date>, for the above Contract has been considered and the Bidder is hereby awarded a contract for <Insert name of Prime Contract awarded>.
- B. Alternates Accepted: The following alternates have been accepted by Owner and have been incorporated in the Contract Sum:
1. Alternate No. 1: <Insert alternate title>.
  2. Alternate No. 2: <Insert alternate title>.
  3. Alternate No. 3: <Insert alternate title>.
  4. Alternate No. 4: <Insert alternate title>.
  5. Alternate No. 5: <Insert alternate title>.
- C. Contract Sum: The Contract Sum is <Insert written amount> dollars (\$<Insert numeric amount>).

1.3 EXECUTION OF CONTRACT

- A. Contract Documents: Copies of the Contract Documents will be made available to the Bidder immediately. The Bidder must comply with the following conditions precedent within **10** days of the above date of issuance of the Notice:
1. Deliver to Owner **three** sets of fully executed copies of the Contract Documents.
  2. Deliver with the executed Contract Documents Bonds and Certificates of Insurance required by the Contract Documents.
- B. Compliance: Failure to comply with conditions of this Notice within the time specified will entitle Owner to consider the Bidder in default, annul this Notice, and declare the Bidder's Bid security forfeited.
1. Within **10** days after the Bidder complies with the conditions of this Notice, Owner will return to the Bidder one fully executed copy of the Contract Documents.

1.4 NOTIFICATION

- A. This Notice is issued by:
1. Owner: **Montgomery County.**
  2. Authorized Signature: \_\_\_\_\_ (Handwritten signature).
  3. Signed By: \_\_\_\_\_ (Type or print name).
  4. Title: \_\_\_\_\_ (Type of print title).

END OF DOCUMENT 005100

DOCUMENT 005200 - AGREEMENT

1.1 FORM OF AGREEMENT

A. The following form of Owner/Contractor Agreement shall be used for Project:

1. AIA Document A101-2017 "Standard Form of Agreement between Owner and Contractor Where the Basis of Payment is a Stipulated Sum."
  - a. Exhibit A includes Insurance and Bond requirements for Project.

END OF DOCUMENT 005200

# 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 «2022.»  
(In words, indicate day, month and year.)

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

**Montgomery County**  
County Annex Building  
PO Box 1500 - 20 Park Street  
Fonda, NY 12068-1500

Tel. (518) 853-3351  
<https://www.co.montgomery.ny.us/>

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

«                    »  
«          »  
«          »  
«          »

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

**Montgomery County Phase 1 Generator**  
1 Venner Road  
Amsterdam, New York 12010

**Architect's Project No.** 20.0651  
**Owner Project No.** 15-22

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

**C.T. Male Associates**  
Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.  
50 Century Hill Drive  
Latham, New York 12110

Tel.: (518) 786-7400  
[www.ctmale.com](http://www.ctmale.com)

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 A101™-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™-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.

**ELECTRONIC COPYING** of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

## TABLE OF ARTICLES

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

### ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

*(Check one of the following boxes.)*

☐ The date of this Agreement.

☒ A date set forth in a notice to proceed issued by the Owner.

☐ Established as follows:

*(Insert a date or a means to determine the date of commencement of the Work.)*

☐

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

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

#### § 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:



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

[ ☒ ] Not later than «three-hundred thirty-five» ( «335» ) calendar days from the date of commencement of the Work.

[ ☐ ] By the following date: « »

**§ 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.

**§ 3.3.4** The Work shall thereafter be completed and ready for final payment, in accordance with the General Conditions of the Contract for Construction, within 30 days following the Substantial Completion Date.

#### 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:

**Item**

**Price**

« »

**§ 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.)

**Item**

**Price**

**Conditions for Acceptance**

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

**Item**

**Price**

«Refer to Section 012100»

**§ 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.)

**Item**

**Units and Limitations**

**Price per Unit (\$0.00)**

**§ 4.5** Liquidated damages, if any:

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

Owner and Contractor recognize that time is of the essence of this Agreement and the Owner will suffer financial loss if the Work is not substantially complete within the time specified above, plus any extensions thereof allowed in accordance with the General Conditions of the Contract for Construction. They also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding, the actual loss suffered by the Owner if the

Work is not substantially complete on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay the Owner **five hundred dollars (\$500.00)** for each day that expires after the time specified in Paragraph 3.3 for Substantial Completion until the Work is substantially complete.

**§ 4.6 Other:**

*(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)*

After Substantial Completion if Contractor shall neglect, refuse or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner **five hundred dollars (\$500.00)** for each day that expires thirty days following the date of Substantial Completion or after the time specified in the amended Construction Schedule issued by the Architect for completion and readiness for final payment.»

**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 «fifteenth» day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the «fifteenth» day of the «following» 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 A201™-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.)*

Five percent (5.00%)

§ 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.)*

For operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training for required principal subcontracts retainage shall be in the amount of five-percent (5.00%) of the Contract Sum allocated to that portion of the Work in the Schedule of Values.

§ 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.)*

None

§ 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.)*

When the work or other major portions thereof contemplated by the terms of the Contract are substantially completed, the Contractor shall submit to the Architect a requisition for payment of the remaining amount of the Contract balance, with a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete. Upon receipt of such requisition the Owner shall approve and promptly pay the Contract balance less **two times (2 x)** the value of any remaining items to be completed and an amount necessary to satisfy any claims, lines or judgments against the contractor which have not been suitably discharged. Any claims, liens or judgments referred to in this clause shall pertain to the Project and shall be filed in accordance with the terms of the Contract, and applicable laws.

§ 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.

- .1 Proof of insurance for items stored off site and copies of invoices are to be provided with Application for Payment requesting payment for stored materials

### § 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.)

Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

## **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.)

« »

### **§ 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

[ ☒ ] Litigation in a court of competent jurisdiction

[ ☒ ] Other (Specify)

«The parties agree that claims brought in New York State Court shall be brought in Montgomery County.»

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

## **ARTICLE 7 TERMINATION OR SUSPENSION**

**§ 7.1** 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.)

None

**§ 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.

**§ 8.1.1** The parties further agree that the provisions of "Appendix A – Standard Clauses for New York State Contracts" promulgated by the New York State Office of General Services Procurement Services Group, current as

the date of this Agreement, are a part of this Agreement with the understanding that the term “State” in that document shall be read as “County.”

§ 8.1.2 The following provisions are not applicable to this Agreement: Paragraphs 3, 11, and 21.

§ 8.2 The Owner’s representative:

(Name, address, email address, and other information)

Eric M. Mead, Commissioner of Public Works  
**Montgomery County, Department of Public Works**  
6 Park Street - P.O. Box 1500  
Fonda, NY 12068-1500

Tel.: (518) 853-3814

Email: [emead@co.montgomery.ny.us](mailto:emead@co.montgomery.ny.us)

§ 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 A101™–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 A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.5.2.1 The Contractor hereby agrees to deliver to the Owner, within seven (7) days of the date of the Owner-Contractor Agreement and prior to bringing any equipment or personnel onto the site of the Work or the Project site, certified copies of all insurance policies procured by the Contractor under or pursuant to Article 10 or, with consent of the Owner, Certificates of Insurance in form and substance satisfactory to the Owner evidencing the required coverages with limits not less than those specified in A101–2017 Exhibit A. The coverage afforded under any Insurance policy obtained under or pursuant to this Subparagraph 8.5.2.1 shall be primary to any valid and collectible insurance carried separately by any of the Indemnities. Furthermore, all policies and Certificates of Insurance shall expressly provide that no less than thirty (30) days’ prior written notice shall be given the Owner in the event of material alteration, cancellation, nonrenewal, or expiration of the coverage.

§ 8.5.2.2 The Contractor shall furnish a Performance Bond and Labor and Material Payment Bond meeting all statutory requirements of the State of New York, in form and substance satisfactory to the Owner and, without limitation, complying with the following specific requirements:

- .1 Except as otherwise required by statute, the form and substance of such bonds shall be satisfactory to the Owner in the Owner’s sole judgment.
- .2 Bonds shall be executed by a responsible surety licensed in New York, with a Best’s rating of no less than A/XII, and shall remain in effect for a period not less than two (2) years following the date of Substantial Completion or the time required to resolve any items of incomplete Work and the payment of any disputed amounts, whichever time period is longer.
- .3 The Performance Bond and the Labor and Material Payment Bond shall each be in an amount equal to the Contract Sum and all subsequent increases.

- .4 The Contractor shall require the attorney in fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power of attorney indicating the monetary limit of such power.
- .5 Every Bond under this Subparagraph 8.5.2.2 must display the Surety's Bond Number. A rider including the following provisions shall be attached to each Bond.
  - (i) The Surety hereby agrees that it consents to and waives notice of any addition, alteration, omission, change, or other modification of the Contract Documents. Any addition, alteration, change, extension of time, or other modification of the Contract Documents, or a forbearance on the part of either the Owner or the Contractor to the other, shall not release the Surety of its obligations hereunder, and notice to the Surety of such matters is hereby waived.
  - (ii) The Surety agrees that it is obligate under the bonds to any successor, grantee, or assignee of the Owner.

**§ 8.5.2.3** The Contractor shall keep the surety informed of the progress of the Work, and, where necessary, obtain the surety's consent to, or waiver of, (i) notice of changes in the Work; (ii) request for reduction or release of retention; (iii) request for final payment, and (iv) any other item required by the Surety. The Owner shall be notified by the Contractor, in writing, of all communications with the Surety. The Owner may, in the Owner's sole discretion, inform the Surety of the progress of the Work and obtain consents as necessary to protect the Owner's rights, interest, privileges, and benefits under and pursuant to any bond issued in connection with the Work.

**§ 8.6** Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–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.)*

**§ 8.6.1** Signatures may be made by electronic methods to the fullest extent permitted by applicable law.

**§ 8.6.2** The transmission of Digital Data constitutes a warranty by the Party transmitting Digital Data to the Party receiving Digital Data that the transmitting Party is the copyright owner of the Digital Data, or otherwise has permission to transmit the Digital Data for its use on the Project in accordance with the Authorized Uses of Digital Data established pursuant to the terms of this Agreement.

**§ 8.6.3** If a Party transmits Confidential Digital Data, the transmission of such Confidential Digital Data constitutes a warranty to the Party receiving such Confidential Digital Data that the transmitting Party is authorized to transmit the Confidential Digital Data. If a Party receives Confidential Digital Data, the receiving Party shall keep the Confidential Digital Data strictly confidential and shall not disclose it to any other person or entity except as set forth below:

- .1 The receiving Party may disclose Confidential Digital Data as required by law or court order, including a subpoena or other form of compulsory legal process issued by a court or governmental entity. The receiving Party may also disclose the Confidential Digital Data to its employees, consultants or contractors in order to perform services or work solely and exclusively for the Project, provided those employees, consultants and contractors are subject to the restrictions on the disclosure and use of Confidential Digital Data as set forth in this Agreement.

**§ 8.6.4** By transmitting Digital Data, the transmitting Party does not convey any ownership right in the Digital Data or in the software used to generate the Digital Data. Unless otherwise granted in a separate license, the receiving Party's right to use, modify, or further transmit Digital Data is specifically limited to designing, constructing, using, maintaining, altering and adding to the Project consistent with the terms of this Exhibit, and nothing contained in this Exhibit conveys any other right to use the Digital Data.

**§ 8.7** Other provisions:

**§ 8.7.1** The Owner is exempt from payment of sales and compensating use taxes of the State of New York, and of cities, counties, and other subdivisions of the State, hereinafter referred to as subdivisions of the State, pursuant to the provisions of this Contract. These taxes are not to be included in the Bids. This exemption shall apply to:

- .1 materials permanently incorporated in the Project;
- .2 supplies which are permanently incorporated in the Project; and



- .3 materials and furnishings for the Project which are incorporated therein, such as chairs, desks, drapes, and moveable personal property.

This exemption does not, however, apply to tools, machinery, equipment, or other property purchased by, leased by or to the Contractor or Subcontractor, or to supplies or materials not incorporated into the completed Project. The Contractor and his Subcontractors shall be responsible for and shall pay any and all applicable taxes, including sales and compensating use taxes, on such tools, machinery, equipment, or other property, or such unincorporated supplies and materials.

§ 8.7.2 The Contractor represents and warrants the following to the Owner (in addition to any other representations and warranties contained in the Contract Documents), as an inducement to the Owner to execute this Agreement, which representations and warranties shall survive the execution and delivery of this Agreement, any termination of this Agreement, and the final completion of the Work:

- .1 that it and its Subcontractors are financially solvent, able to pay all debts as they mature, and possessed of sufficient working capital to complete the Work and perform all obligations hereunder;
- .2 that it is able to furnish the plant, tools, materials, supplies, equipment, and labor required to complete the Work and perform its obligations hereunder;
- .3 that it is authorized to do business in the State of New York and properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over it and over the Work and the Project;
- .4 that its execution of this Agreement and its performance thereof is within its duly authorized powers;
- .5 that its duly authorized representative has visited the site of the Project, familiarized himself with the local and special conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents; and
- .6 that it possess a high level of experience and expertise in the business administration, construction, construction management, and superintendence of projects of the size, complexity, and nature of this particular Project, and it will perform the Work with the care, skill, and diligence of such a Contractor.

The foregoing warranties are in addition to, and not in lieu of, any and all other liability imposed upon the Contractor by law with respect to the Contractor's duties, obligations, and performance hereunder. The Contractor acknowledges that the Owner is relying upon the Contractor's skill and experience in connection with the Work called for hereunder.

§ 8.7.3 If any provision of this Contract is determined to be invalid, it shall not affect the validity of any other provision hereof.

## ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™-2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™-2017, General Conditions of the Contract for Construction
- .4 AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:  
(Insert the document incorporated into this Agreement.)

AIA Document C106-2007, Digital Data Licensing Agreement.

- .5 Drawings

Number	Title	Date
As enumerated in Section 000115	List of Drawing Sheets	November, 2022

- .6 Specifications

Section	Title	Date	Pages
As enumerated in Section 000110	Table of Contents	November, 2022	Inclusive of all Sections Noted

.7 Addenda, if any:

Number	Date	Pages
<< >>		

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

.8 Other Exhibits:

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

[ ☒ ] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
Document 006113	Performance and Payment Bonds	November, 2022	
Document 006114	Surety Company Data	November, 2022	
Document 006216	Certificate of Insurance Form	November, 2022	
Document 007300	Supplementary Conditions Modifications to General Conditions	November, 2022	
Document 007301	Supplementary Conditions Additional Articles	November, 2022	
Document 007343	Wage Rate Requirements	November, 2022	
Document 008010	NY State Contract Provisions	November, 2022	

.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.)



Document	Title	Date	Pages
Document 001116	Invitation to Bid	November, 2022	
Document 002113	Instructions to Bidders	November, 2022	
Document 002513	Pre-Bid Meetings	November, 2022	
Document 002600	Substitution Procedures	November, 2022	
Document 003119	Existing Condition Information	November, 2022	
Document 003126	Hazardous Materials Information	November, 2022	
Document 003143	Permit Application	November, 2022	
Document 004116	Bid Form	November, 2022	
Document 004313	Bid Security Forms	November, 2022	
Document 004314	Performance Bond Information	November, 2022	
Document 004321	Allowance Form	November, 2022	
Document 004336	Subs and Suppliers Form	November, 2022	
Document 004373	Schedule of Value Form	November, 2022	
Document 004513	Qualification Statement	November, 2022	
Document 004519	Non-Collusion Affidavit	November, 2022	
Document 005100	Notice of Award	November, 2022	
Document 006290	Certificate of Owner's Attorney	November, 2022	

It is agreed that the officials signing this agreement on behalf of the respective parties have authority to enter into a binding contract, and the Owner certifies that it has taken all proceedings to have available when necessary, monies sufficient to satisfy the terms of this Contract.

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

« »

**OWNER** (Signature)

Matthew L. Ossenfort  
County Executive

(Printed name and title)

« »

**CONTRACTOR** (Signature)

« »  
« »

(Printed name and title)

# DRAFT AIA® Document A101® – 2017

## Exhibit A

### Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the « » day of « » in the year «2022»  
(In words, indicate day, month and year.)

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

**Montgomery County Phase 1 Generator**  
1 Venner Road  
Amsterdam, New York 12010

**Architect's Project No.** 20.0651  
**Owner Project No.** 15-22

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

**Montgomery County**  
County Annex Building  
PO Box 1500 - 20 Park Street  
Fonda, NY 12068-1500

**THE CONTRACTOR:**  
(Name, legal status and address)

« »  
« »  
« »  
« »

### TABLE OF ARTICLES

- A.1 GENERAL
- A.2 OWNER'S INSURANCE
- A.3 CONTRACTOR'S INSURANCE AND BONDS
- A.4 SPECIAL TERMS AND CONDITIONS

#### ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™-2017, General Conditions of the Contract for Construction.

#### ARTICLE A.2 OWNER'S INSURANCE

##### § A.2.1 General

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User Notes:

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

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

This document is intended to be used in conjunction with AIA Document A201®-2017, General Conditions of the Contract for Construction. Article 11 of A201®-2017 contains additional insurance provisions.



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Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

## **§ A.2.2 Liability Insurance**

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

## **§ A.2.3 Required Property Insurance**

**§ A.2.3.1** Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

**§ A.2.3.1.1 Causes of Loss.** The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

*(Indicate below the cause of loss and any applicable sub-limit.)*

Causes of Loss	Sub-Limit

**§ A.2.3.1.2 Specific Required Coverages.** The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

*(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)*

Coverage	Sub-Limit

**§ A.2.3.1.3** Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

**§ A.2.3.1.4 Deductibles and Self-Insured Retentions.** If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

**§ A.2.3.2 Occupancy or Use Prior to Substantial Completion.** The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

### § A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, “all-risks” property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

### § A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.

*(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)*

- [ ☐ ] **§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner’s property, or the inability to conduct normal operations due to a covered cause of loss.

<< >>

- [ ☐ ] **§ A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

<< >>

- [ ☐ ] **§ A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

<< >>

- [ ☐ ] **§ A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.

<< >>

- [ ☐ ] **§ A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.

<< >>

- [ ☐ ] **§ A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured’s business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

<< >>

- [ ☐ ] **§ A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional

interest on loans, realty taxes, and insurance premiums over and above normal expenses.

<< >>

#### § A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

*(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)*

- [ ☐ ] **§ A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information.  
*(Indicate applicable limits of coverage or other conditions in the fill point below.)*

<< >>

- [ ☐ ] **§ A.2.5.2 Other Insurance**  
*(List below any other insurance coverage to be provided by the Owner and any applicable limits.)*

Coverage

Limits

### ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

#### § A.3.1 General

**§ A.3.1.1 Certificates of Insurance.** The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

**§ A.3.1.2 Deductibles and Self-Insured Retentions.** The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

**§ A.3.1.3 Additional Insured Obligations.** To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

#### § A.3.2 Contractor's Required Insurance Coverage

**§ A.3.2.1** The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:  
*(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)*

<< >>

### § A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than **one million dollars (\$ 1,000,000 )** each occurrence, **five million dollars (\$ 5,000,000 )** general aggregate, and **five million dollars (\$ 5,000,000 )** aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.
- .12 Claims related to communicable disease.

§ A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than **one million dollars (\$ 1,000,000 )** per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers. **If excess or umbrella liability insurance is purchased, Montgomery County shall be included as additional insured(s) on a primary, non-contributory basis.**

§ A.3.2.5 Workers' Compensation at statutory limits. **Coverage must be written to apply within the State of NY and must be written to include coverage for Sole proprietors, Partners, LLC Members or Corporate officers (if such proprietors, partners, members or officers will work on the job site). Please note Acord form is NOT acceptable proof of insurance for Workers' Compensation, Employers Liability and Disability insurance. Private entities exempt from coverage on account of the number of employees or occupation must maintain voluntary compensation coverage at the same limits specified in A.3.2.6.**



§ A.3.2.6 Employers' Liability with policy limits not less than **five hundred thousand dollars (\$ 500,000 )** each accident, **five hundred thousand dollars (\$ 500,000 )** each employee, and **five hundred thousand dollars (\$500,000 )** policy limit.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ A.3.2.8 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than **one million dollars (\$ 1,000,000 )** per claim and **one million dollars (\$ 1,000,000 )** in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants (**including roofing materials**), the Contractor shall procure Pollution Liability insurance, with policy limits of not less than **one million dollars (\$ 1,000,000 )** per claim and **one million dollars (\$ 1,000,000 )** in the aggregate. **Higher limits may be considered in the event of unforeseen hazardous remediation operations.**

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than **two million dollars (\$ 2,000,000 )** per claim and **two million dollars (\$ 2,000,000 )** in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than **<> (\$ <> )** per claim and **<> (\$ <> )** in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than **one million dollars (\$ 1,000,000 )** per claim and **one million dollars (\$ 1,000,000 )** in the aggregate.

### § A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

*(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)*

<>

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

*(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)*

[ **«X»** ] § A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:

*(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as*

the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

« »

[ « » ] § A.3.3.2.2 **Railroad Protective Liability Insurance**, with policy limits of not less than « » (\$ « » ) per claim and « » (\$ « » ) in the aggregate, for Work within fifty (50) feet of railroad property.

[ «X» ] § A.3.3.2.3 **Asbestos Abatement Liability Insurance**, with policy limits of not less than « » (\$ « » ) per claim and « » (\$ « » ) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

[ «X» ] § A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.

[ «X» ] § A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

[ «X» ] § A.3.3.2.6 **Other Insurance**

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

**Coverage**

**Limits**

**Project Management Protective Liability**

**\$1,000,000 per occurrence/\$2,000,000 aggregate**

**§ A.3.4 Performance Bond and Payment Bond**

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:

(Specify type and penal sum of bonds.)

**Type**

**Penal Sum**

Payment Bond

**100 percent of the contract sum**

Performance Bond

**100 percent of the contract sum**

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

**ARTICLE A.4 SPECIAL TERMS AND CONDITIONS**

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

**A.4.1** Waiver of Subrogation – Contractor and all their subcontractors waive all rights of recovery of damages to the extent of these damages are covered by general liability, umbrella, business auto, workers compensation and employer's liability.

**A.4.2** All policies will contain provisions whereby Montgomery County will be notified by insurance carrier within 30 days of insurance policy cancellation for reasons other than non-payment of premium. Village of Cambridge will be notified by contractor within 10 days of insurance policy cancellation for non-payment of premium.

**A.4.3** All policies are to be written by carriers acceptable to Montgomery County and with an A.M. Best Rating of no less than A-, VII.

**A.4.4** If the Work involves hoisting any real property, contractor is required to maintain Riggers Liability Coverage to insure against physical loss or damage to property being lifted, for an amount not less than \$250,000 (higher limits should be provided if the value of the property being hoisted is greater than \$250,000).



**A.4.5** All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall specifically name as the additional insured, on a primary non-contributory basis, the following parties:

1. The OWNER, specifically, Montgomery County.
2. The ARCHITECT/ENGINEER, specifically C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.

DOCUMENT 006000 – FORMS

1.1 FORM OF AGREEMENT AND GENERAL CONDITIONS

- A. The following form of Owner/Contractor Agreement and form of the General Conditions shall be used for Project:
  - 1. AIA Document A101-2017, "Standard Form of Agreement between Owner and Contractor, Construction Manager as Adviser Edition."
    - a. The General Conditions for Project are AIA Document A201-2017, "General Conditions of the Contract for Construction, Construction Manager as Adviser Edition."
  - 2. The General Conditions are included in the Project Manual.
  - 3. The Supplementary Conditions and Additional Conditions for Project are separately prepared and included in the Project Manual.

1.2 ADMINISTRATIVE FORMS

- A. Administrative Forms: Additional administrative forms are specified in Division 01 General Requirements sections.
- B. Copies of AIA standard forms may be obtained from the American Institute of Architects; <https://www.aiacontractdocs.org>; docspurchases@aia.org; (800) 942-7732.
- C. Preconstruction Forms:
  - 1. Form of Performance Bond and Labor and Material Bond: AIA Document A312-2010, "Performance Bond and Payment Bond."
  - 2. Form of Certificate of Insurance: AIA Document G715-1991, "Supplemental Attachment for ACORD Certificate of Insurance 25-S."
- D. Information and Modification Forms:
  - 1. Form for Requests for Information (RFIs): AIA Document G716-2004, "Request for Information (RFI)."
  - 2. Form of Request for Proposal: AIA Document G709-2001, "Work Changes Proposal Request."
  - 3. Change Order Form: AIA Document G701-2001, "Change Order."
  - 4. Form of Architect's Memorandum for Minor Changes in the Work: AIA Document G710-1992, "Architect's Supplemental Instructions."
  - 5. Form of Change Directive: AIA Document G714-2007, "Construction Change Directive."
- E. Payment Forms:
  - 1. Schedule of Values Form: AIA Document G703-1992, "Continuation Sheet."
  - 2. Payment Application: AIA Document G702-1992/703-1992, "Application and Certificate for Payment and Continuation Sheet."
  - 3. Form of Contractor's Affidavit: AIA Document G706-1994, "Contractor's Affidavit of Payment of Debts and Claims."
  - 4. Form of Affidavit of Release of Liens: AIA Document G706A-1994, "Contractor's Affidavit of Payment of Release of Liens."
  - 5. Form of Consent of Surety: AIA Document G707-1994, "Consent of Surety to Final Payment."

END OF DOCUMENT 006000

DOCUMENT 006113 - PERFORMANCE AND PAYMENT BOND

1.1 PERFORMANCE AND PAYMENT BOND

- A. The successful Bidder will be required to furnish a performance bond and a payment bond, each in an amount equal to **100%** of the contract price.

1.2 PERFORMANCE AND PAYMENT FORM

- A. Form of Performance Bond and Labor and Material Bond: AIA Document A312-2010 "Performance Bond and Payment Bond."
- B. Copies of AIA standard forms may be obtained from The American Institute of Architects; <https://www.aiacontracts.org/>; email: [docspurchases@aia.org](mailto:docspurchases@aia.org); (800) 942-7732.

END OF DOCUMENT 006113

DOCUMENT 006114 - SURETY COMPANY DATA

Attach here the following:

1. POWER OF ATTORNEY - duly certified copy of power of attorney or other certificate of authority when bond is executed by agent, officer, or other representative of Surety.
2. POWER OF ATTORNEY AUTHORIZATION - duly certified extract from by-laws or resolutions of Surety under which power of attorney or other certificate of authority of its agent, officer, or other representative was issued.
3. FINANCIAL STATEMENT - certified copy of latest published financial statement of assets and liabilities of Surety.

END OF DOCUMENT 006114

DOCUMENT 006216 - CERTIFICATE OF INSURANCE FORM ATTACHMENT PAGE

Attach insurance certificates here.

END OF DOCUMENT 006216

DOCUMENT 006290 - CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, **Meghan M. Manion**,

the duly authorized and acting County Attorney for **Montgomery County**, do hereby certify that I have examined the attached contract and the Surety Bond(s) attached thereto and the manner of execution thereof; and that I am of the opinion that each of the aforesaid agreements has been executed in accordance with the terms, conditions, and provisions thereof.

Signed: \_\_\_\_\_

Name: **Meghan M. Manion**

Title: **County Attorney**

Address: **20 Park Sreet**  
**Fonda, NY 12068**

Contact Information: **Phone: 518-853-4304**

**Fax: 518-853-8220**

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

END OF DOCUMENT 006290

DOCUMENT 007200 - GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

1. AIA Document A201-2017 attached (39 pages).

END OF DOCUMENT 007200

# DRAFT AIA® Document A201® – 2017

## General Conditions of the Contract for Construction

### for the following PROJECT:

(Name and location or address)

«Montgomery County Phase 1 Generator»« »  
«1 Venner Road, Amsterdam, New York 12010  
Architect's Project No. 20.0651  
Owner Project No. 15-22»

### THE OWNER:

(Name, legal status and address)

«Montgomery County»« »  
County Annex Building  
P.O. Box 1500 – 20 Park Street, Fonda, New York 12068-1500»

### THE ARCHITECT:

(Name, legal status and address)

«C.T. Male Associates»« »  
Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.»  
50 Century Hill Drive, Latham, New York 12110»

### TABLE OF ARTICLES

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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, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

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

### § 1.6 Notice

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

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

### § 1.7 Digital Data Use and Transmission

The parties shall agree upon 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 E203™-2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

### § 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 E203™-2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

G202™–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, 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.

#### **§ 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.

**§ 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.

**§ 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 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.

**§ 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.

### **§ 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

§ 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

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 submittals 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, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### **§ 5.4 Contingent Assignment of Subcontracts**

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

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

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

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

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

## **ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

### **§ 6.1 Owner's Right to Perform Construction 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**

§ 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:

- .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 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.

#### § 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.

§ 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 start-up, plus interest as provided for in the Contract Documents.

## **§ 9.8 Substantial Completion**

**§ 9.8.1** Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so 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.

## **§ 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.

§ 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.

#### § 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 the task of removal or safe containment of the material or substance. 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 Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, 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.

## **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.

## **§ 11.3 Waivers of Subrogation**

**§ 11.3.1** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the 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 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 an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

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

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

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

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner 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.

### § 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.

## 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
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner 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.

§ 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

§ 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.

DOCUMENT 007300 - SUPPLEMENTARY CONDITIONS MODIFICATIONS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the General Conditions of the Contract for Construction (AIA Document A201 - 2017) and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

Articles and paragraphs herein bear numbers corresponding to those parts of the General Conditions that are being modified. Each modification to the General Conditions of the Contract for Construction made herein corresponds to the part of the General Conditions being modified by these Supplementary Conditions Modifications. The Contractor is responsible to cross-reference each document accordingly.

**ARTICLE 1 – GENERAL PROVISIONS**

**1.1 Basic Definitions**

The terms used in these Supplementary Conditions, which are defined in the General Conditions of the Contract for Construction (AIA Document A201 - 2017), have the meanings assigned to them in the General Conditions.

Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

- 1.1.9 ARCHITECT/ENGINEER - The person, firm, or corporation named as the ARCHITECT in the Agreement, or the duly appointed employees and representatives of the named ARCHITECT.
- 1.1.10 DIRECTED, REQUIRED, APPROVED, ACCEPTABLE - Whenever these terms or words of like import are used to refer to the Work or its performance, they shall mean direction by, or approval by, or equivalent action of or by the ARCHITECT/ENGINEER. Such direction or approval is subject to the limitations described in Section 4.2 of the General Conditions.
- 1.1.11 FURNISH: To supply necessary materials and equipment at the project site.
- 1.1.12 INSTALL: To place and/or assemble furnished materials and equipment in position for the use intended.
- 1.1.13 PROVIDE: The act of both furnishing and installing.

**1.2 Correlation and Intent of the Contract Documents**

- 1.2.1.1 In the event of conflicts or inconsistencies between parts of the Contract Documents, or between the Contract Documents and applicable standards, codes and ordinances, the Contractor shall (1) provide the better quality or greater quantity of work or (2) comply with the more stringent requirements; either or both in accordance with the ARCHITECT/ENGINEER's interpretation. Interpretations will be based on the following priorities:
  - 1. Modifications.
  - 2. The Agreement.
  - 3. Addenda, with those of later date having precedence over those of earlier date.
  - 4. The Supplementary Conditions.
  - 5. The General Conditions of the Contract for Construction.
  - 6. Division 1 of the Specifications.
  - 7. Drawings and Divisions 2-49 of the Specifications.
  - 8. Other documents specifically enumerated in the Agreement as part of the Contract Documents.

- 1.2.1.2 In the case of conflicts or discrepancies between Drawings and Division 2-49 of the Specifications, or within or among the Contract Documents and not clarified by Addendum, the ARCHITECT/ENGINEER will determine which takes precedence in accordance with subparagraphs 4.2.11, 4.2.12, and 4.2.13.
- 1.2.4 Within the Contract Documents to which each Prime Contractor is responsible, any Work included by reference in any section to another specification section shall be included as Work under the Contract, whether or not it is called for under the Section referred to. Failure to cross-reference such items shall not relieve the Prime Contractor from the obligations to provide such work.

## **ARTICLE 2 – OWNER**

### **2.1 General**

- 2.1.1.1 OWNER has designated a Project Representative to serve as an advisor to Owner and to provide assistance in administering the Contract for Construction between Owner and each Contractor, and to be at the project site on a part-time basis to assist in administration and coordination of the construction phase. The Project Representative shall monitor the CONTRACTOR's construction schedule and alert the OWNER to conditions that may affect the CONTRACTOR's ability to complete the work in accordance with the schedule; attend and report to the OWNER on weekly job site meetings and/or pre-installation meetings as required by the Contract Documents; generally observe the systems and equipment testing as required in the Specifications and review nonconforming test results with the CONTRACTOR; review the CONTRACTOR's on-site copy of the Drawings and other modifications at intervals appropriate to the stage of construction and notify the OWNER of any apparent failure by the CONTRACTOR to maintain up-to-date records; review of CONTRACTOR's initial requisitions for payment with the ARCHITECT/ENGINEER; maintain a log of observations at the Project site, supplemental instructions and interpretations given to the CONTRACTOR by the ARCHITECT/ENGINEER; and generally enforcing contract requirements.
- 2.1.2 Delete the last sentence in its entirety.

### **2.2 Evidence of the Owner's Financial Arrangements**

- 2.2.1 Delete subparagraph in its entirety.

### **2.3 Information and Services Required of the Owner**

- 2.3.5.1 In the preparation of Drawings and Specifications, ARCHITECT/ENGINEER or ARCHITECT/ENGINEER's Consultants relied upon the following as-found documents of the existing conditions at the project Site:
- Drawings titled "Evening Recorder, W.J. Kline & Sons, Pub. Amsterdam, N.Y.", dated February 8, 1966, prepared by Lockwood Green Engineers, Inc., 200 Park Ave, New York 17, NY.
- 2.3.5.2 Copies of drawings itemized herein that are not included with Bidding Documents may be examined at ARCHITECT/ENGINEER's office or the Owner's project representative's office during regular business hours. Please call for an appointment. These reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which the CONTRACTOR may rely as identified and established above are incorporated therein by reference. CONTRACTOR is not entitled to rely upon other information and data utilized by ARCHITECT/ENGINEER and ARCHITECT/ENGINEER's Consultants in the preparation of the Drawings and Specifications.
- 2.2.5.3 No reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.



- 2.2.5.3 The asbestos containing material survey information which is being made available reports whether there are asbestos containing materials in the structure prior to renovation activities. The survey included identification of suspect asbestos containing materials, quantification, and bulk sampling of suspect asbestos containing materials. Laboratory analysis was performed to determine the presence and type of asbestos in sampled materials. Any material is considered asbestos containing if it contains one percent, or more, asbestos by weight. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions.
- 2.2.5.4. The information and services provided contain no other technical data upon which the CONTRACTOR may rely. The OWNER and the ARCHITECT/ENGINEER assume no responsibility or liability for the accuracy of information or on other existing conditions present. This information was intended for Bid cost purposes only, and is made available to bidders only that they may have access to identical information available. It is presented in good faith, but is not intended as a substitute for personal investigations, interpretations, or judgment of the CONTRACTOR. This information is not guaranteed and does not form part of the Contract Documents.
- 2.3.6.1 Additional copies of the Contract Drawings and Project Manuals will be furnished at cost of reproduction and postage and handling when applicable. Subcontractors and other entities desiring copies of drawings and project manuals shall obtain them via one of the Prime Contracts.
- 2.3.6.2 Electronic copies of CAD Drawings of the Contract Drawings will be provided by ARCHITECT/ENGINEER for CONTRACTOR's use in preparing submittals, through access to a project Web site administered by the ARCHITECT/ENGINEER for purposes of managing communication and documents during the construction stage. CONTRACTOR shall execute a data licensing agreement in the form of AIA Document C106, Digital Data Licensing Agreement or an Agreement form acceptable to the OWNER and ARCHITECT/ENGINEER.

### ARTICLE 3 – CONTRACTOR

#### 3.2 Review of Contract Documents and Field Conditions by Contractor

- 3.2.5 The OWNER is entitled to deduct from the Contract Sum amounts paid to the ARCHITECT/ENGINEER for evaluating and responding to the CONTRACTOR's requests for information that are not prepared in accordance with the Contract Documents, or where such information is available to the CONTRACTOR from a careful study and comparison of the Contract Documents, field conditions, other OWNER-provided information, CONTRACTOR prepared coordination drawings, or prior Project correspondence or documentation.

#### 3.3 Supervision and Construction Procedures

- 3.3.4 During periods of active construction, consult daily and cooperate with the OWNER's Project Representative. On a **continuous and daily basis**, keep the OWNER, OWNER's Project Representative and ARCHITECT/ENGINEER notified of when work will be starting, restarting, suspended and temporarily or permanently concluded.
- 3.3.5 During inclement, stormy, or freezing weather, no work shall be done, except as may be performed in a manner satisfactory to secure first-class construction and by permission of the ARCHITECT/ENGINEER. During freezing weather, approved precautions shall be taken to remove ice and frost from materials used and to prevent completed portions of the work from freezing by heating the water, sand, gravel, broken stone, bricks, or other materials and by covering and heating the completed portions of the work. The cost of such precautions shall be borne by the CONTRACTOR. If, in the opinion of the ARCHITECT/ENGINEER, any work or materials shall have been damaged or injured by reason of failure on the part of the CONTRACTOR or any Subcontractor to so protect his work, such work and materials shall be removed and replaced at the expense of the CONTRACTOR.

### **3.4 Labor and Materials**

- 3.4.2.1 During Bidding, the Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or “or-equal” materials and equipment as defined in Division 1 of the Specifications, or those substitute or materials and equipment approved by the ARCHITECT/ENGINEER and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function, and quality to be met by any proposed substitute or “or-equal” item. Request for the ARCHITECT/ENGINEER’s clarification of materials and equipment considered “or-equal” prior to the Effective Date of the Agreement must be received by the ARCHITECT/ENGINEER at least **10 days** prior to the date for receipt of Bids.

No item of material or equipment will be considered by the ARCHITECT/ENGINEER as a substitute unless written request for approval has been submitted by Bidder and has been received by the ARCHITECT/ENGINEER at least **10 days** prior to the date for receipt of Bids. The burden of proof of the merit of the proposed item is upon the Bidder. The ARCHITECT/ENGINEER’s decision of approval or disapproval of a proposed item will be final.

If the ARCHITECT/ENGINEER approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

- 3.4.2.2 After the Contract has been executed, the OWNER and ARCHITECT/ENGINEER will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications). By making requests for substitutions, the CONTRACTOR:

- .1 represents that the CONTRACTOR has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
- .2 represents that the CONTRACTOR will provide the same warranty for the substitution that the CONTRACTOR would for that specified.
- .3 certifies that the cost data presented is complete and includes all related costs under the Contract except the ARCHITECT/ENGINEER’s redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and
- .4 will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

- 3.4.2.3 The OWNER shall be entitled to deduct from the Contract Sum amounts paid to the ARCHITECT/ENGINEER to evaluate the CONTRACTOR’s proposed substitutions and to make agreed-upon changes in the Drawings and Specifications made necessary by the OWNER’s acceptance of such substitutions.

### **3.6 Taxes**

- 3.6.1 SALES TAX EXEMPTION:

All Bid prices shall include all New York State and local taxes required to be paid by the CONTRACTOR except those sales and compensating use taxes exempted by the following provisions.

The OWNER is exempt from payment of sales and compensating use taxes of the State of New York, and of cities, counties, and other subdivisions of the State, hereinafter referred to as subdivisions of the State, pursuant to the provisions of this Contract. These taxes are not to be included in the Bids. This exemption shall apply to:

1. materials permanently incorporated in the Project;
2. supplies which are permanently incorporated in the Project; and
3. materials and furnishings for the Project which are incorporated therein, such as chairs, desks, drapes, and moveable personal property.

This exemption does not, however, apply to tools, machinery, equipment, or other property purchased by, leased by or to the CONTRACTOR or Subcontractor, or to supplies or materials not incorporated into the completed Project. The CONTRACTOR and his Subcontractors shall be responsible for and shall pay any and all applicable taxes, including sales and compensating use taxes, on such tools, machinery, equipment, or other property, or such unincorporated supplies and materials.

### **3.7 Permits, Fees, Notices and Compliance with Laws**

3.7.1.1 The OWNER shall pay for only the following specific permits:

.1 **Montgomery County Building Permit.**

3.7.1.2 Available copies of the permit applications are available from the OWNER, which is also the Authority having Jurisdiction.

3.7.1.3 The CONTRACTOR shall conform to all of the requirements of these permits when performing the Work and the conditions of these permits shall be considered a part of this Contract. The CONTRACTOR shall also assume all of the responsibilities and liabilities of the OWNER as permittee for these permits for the duration of the Contract.

3.7.1.4 All other permits required shall be obtained by the CONTRACTOR responsible for the Work.

### **3.8 Allowances**

3.8.2.3 Delete sub-paragraph in its entirety.

### **3.10 Contractor's Construction and Submittal Schedules**

3.10.4 CONTRACTOR is responsible for taking such actions as are necessary to make sure that all Subcontractors perform their work in such sequence and in separate stages as required by the project and the work of other CONTRACTORS. The work must be carried out in strict accordance with the approved schedule, which may involve intermittent work in any particular area. The work shall be done expeditiously with adequate forces and shall be completed in the specified time.

### **3.12 Shop Drawings, Product Data and Samples**

3.12.7.1 Requirements noted in the Contract Documents for submission of informational submittals, including Product Data and Samples, other than those requiring selection of finishes by the Owner, and Shop Drawings required for coordination with other portions of the Work, may be waived where the Contractor provides those Products indicated as the Basis of Design.

3.12.11 The ARCHITECT/ENGINEER's review of CONTRACTOR's submittals shall be limited to examination of an initial submittal and **two** resubmittals. The ARCHITECT/ENGINEER's review of additional submittals will be made only with consent of the OWNER after notification by the ARCHITECT/ENGINEER. The OWNER shall be entitled to deduct from the Contract Sum amounts paid to the ARCHITECT/ENGINEER for evaluation of such additional resubmittals.

### **3.13 Use of Site**

3.13.1 The CONTRACTOR shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated. The CONTRACTOR shall maintain portions of the existing building affected by construction operations in a weathertight condition throughout construction period. The CONTRACTOR shall also maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. The CONTRACTOR shall repair damage caused by construction operations to the satisfaction of the Owner's Project Representative.

### **3.15 Cleaning Up**

- 3.15.1.1 At the end of each workday, the CONTRACTOR shall secure all power tools and other potentially dangerous tools and equipment, and shall remove means of access to areas of the Work site, so as to further protect the safety of occupants of the premises during such off-work hours.
- 3.15.3 All debris required to be removed from the project shall be removed in accordance with all applicable rules, regulations and statutes, which may pertain thereto. The CONTRACTOR shall warrant that all debris shall be disposed of in accordance with all rules, regulations and statutes applicable thereto and at a facility permitted and authorized to receive materials of the type and nature so removed from the premises. The CONTRACTOR shall hold the OWNER free and harmless of, from or concerning any claimed liability resulting from the improper or unlawful removal and disposal of such debris.

#### **ARTICLE 4 – ARCHITECT**

##### **4.2 Administration of the Contract**

- 4.2.1.1 OWNER will furnish a part-time Project Representative at the site who is not the ARCHITECT/ENGINEER's Representative or Employee. The OWNER's Project Representative's duties, responsibilities and limitations of Authority are as set forth by the OWNER, as enumerated in the Contract Documents.
- 4.2.2.1 The OWNER is entitled to reimbursement from the CONTRACTOR for amounts paid to the ARCHITECT/ ENGINEER for additional site visits made necessary by the fault, neglect or request of the CONTRACTOR.
- 4.2.7.1 In no case will the ARCHITECT/ENGINEER's review period on any submittal be less than **seven days** after receipt of the submittal from the CONTRACTOR. The OWNER shall be entitled to deduct from the Contract Sum amounts paid to the ARCHITECT/ENGINEER for expediting review of submittals for other than the basis of design products listed in Contract Documents, when requested by the CONTRACTOR.
- 4.2.14.1 CONTRACTOR's requests for information shall be prepared and submitted in accordance with Division 1 "General Requirements" sections on the form included in the Contract Documents or current authorized edition of AIA Document G716. The ARCHITECT will return without action requests for information that do not conform to the Contract Documents.

#### **ARTICLE 5 - SUBCONTRACTORS**

##### **5.2 Award of Subcontracts and Other Contracts for Portions of the Work**

- 5.2.1.1 Not later than **three** days after the date of commencement of the Work, the CONTRACTOR shall furnish in writing to the OWNER and ARCHITECT/ENGINEER the names of persons or entities proposed as manufacturers, fabricators or material suppliers for the products, equipment and systems identified in the General Requirements (Division 1 of the Specifications) and, where applicable, the name of the installing Subcontractor.
- 5.2.4.1 Substitution of subcontractors shall be submitted in accordance with the provisions for Substitutions included in the General Requirements (Division 1 of the Specifications).
- 5.2.4.2 The OWNER shall be entitled to deduct from the Contract Sum amounts paid to the ARCHITECT/ENGINEER to evaluate the CONTRACTOR's proposed substitution of subcontractors. The ARCHITECT/ENGINEER's review of additional submittals AS A RESULT OF SUCH SUBSTITUTION will be made only with consent of the OWNER after notification by the ARCHITECT/ENGINEER. The OWNER shall be entitled to deduct from the Contract Sum amounts paid to the ARCHITECT/ENGINEER for evaluation of such additional resubmittals.

## ARTICLE 7 – CHANGES IN THE WORK

### 7.1 General

- 7.1.4 The combined overhead and profit included in the total cost to the OWNER of a change on the Work shall be based on the following schedule:
- 7.1.4.1 For the CONTRACTOR, for Work performed by the CONTRACTOR's own forces, the CONTRACTOR's Fee shall be **ten percent (10%)** for overhead plus **five percent (5%)** for profit, subject to the following exclusions:
- .1 No overhead and profit shall be allowed on the premium portion of overtime pay.
  - .2 No overhead and profit shall be applied to payroll taxes. Payroll taxes include FICA, unemployment insurance, disability insurance, workman's compensation, and personal liability and property damage insurance.
- 7.1.4.2 For the CONTRACTOR, for Work performed by the CONTRACTOR's Subcontractors, the CONTRACTOR's Fee shall be **ten percent (10%)** for combined overhead and profit.
- 7.1.4.3 If a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to the Subcontractor as a fee shall be **five percent (5%)** for overhead plus **ten percent (10%)** for profit.
- 7.1.4.4 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs, including labor, materials, and Subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall be itemized also.

## ARTICLE 8 – TIME

### 8.2 Progress and Completion

- 8.2.1.1 The Contract Times will commence to run on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within **ten days** after the Effective Date of the Agreement. **In no event will the Contract Time commence to run later than the 45<sup>th</sup> day after the day of Bid opening or the 10th day after the Effective Date of the Agreement, whichever date is earlier.**

#### 8.2.2.1 Evidence of Insurance

When CONTRACTOR delivers the executed Agreement to OWNER, CONTRACTOR shall furnish all his required insurance certificates as provided in AIA Document A101-2017 Exhibit A attached to the Agreement prior to bringing any equipment or personnel on to the site of the Work.

- 8.2.3.1 The Work shall be substantially complete, for occupancy and use by the OWNER, in accordance with paragraph 9.8 of the General Conditions and completed and ready for final payment in accordance with paragraph 9.10 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

### 8.3 Delays and Extension of Time

- 8.3.1.1 If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate CONTRACTOR, and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a Claim for an extension of times in accordance with the General Conditions of the Contract for Construction. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER, OWNER's Consultants, ARCHITECT, ARCHITECT/ENGINEER's Consultants, and the

OWNER'S Project Representative for any delay, disruption, interference, or hindrance caused by any separate CONTRACTOR. This paragraph does not prevent recovery from OWNER, OWNER's Consultants, ARCHITECT, ARCHITECT/ENGINEER's Consultant, or OWNER'S Project Representative for activities that are their respective responsibilities.

#### 8.3.4 **Liquidated Damages**

The CONTRACTOR recognizes that its obligations for the performance of the Work within the time provided for in this agreement and the General Conditions are of the essence of this Agreement and that the OWNER will suffer financial loss if the Work is not completed within the time specified in the Contract Documents. The parties also recognize the delays, expense and difficulties involved in determining and providing the actual loss suffered by the Owner if the Work is not completed on time.

Accordingly, instead of requiring any such determination or proof, OWNER and CONTRACTOR agree that the CONTRACTOR shall be liable for and shall pay OWNER the sums hereinafter stipulated for each and every calendar day of unexcused delay, as defined in the General Conditions, as the fair and reasonable compensation to the OWNER for such losses, which compensation shall be construed as Liquidated Damages, and not as a penalty of any kind.

8.3.4.1 The CONTRACTOR and the CONTRACTOR's surety, if any, shall be liable for and shall pay the OWNER the following sums:

- .1 **Five Hundred Dollars (\$ 500.00)** prior to substantial completion
- .2 **Five Hundred Dollars (\$ 500.00)** after substantial completion

8.3.4.1 The OWNER may deduct Liquidated Damages described herein from any unpaid amounts then or thereafter due the CONTRACTOR under the Agreement. Any Liquidated Damages not so deducted from any unpaid amounts due the CONTRACTOR shall be payable to the OWNER by the CONTRACTOR upon demand by the OWNER, together with interest from the date of the demand equal to the highest lawful rate of interest.

## **ARTICLE 9 – PAYMENTS AND COMPLETION**

### **9.2 Schedule of Values**

9.2.1 Include separate line items under required principal subcontracts for operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training in the amount of five (5%) percent of the Contract Sum for that portion of the Work.

### **9.3 Applications for Payment**

9.3.1.3 The form of Application for Payment, duly notarized, shall be a current authorized edition of AIA Document G702, Application and Certificate for Payment, supported by a current authorized edition of AIA Document G703, Continuation Sheet.

9.3.1.4 Until Substantial Completion, the OWNER shall pay ninety-five (95%) percent of the amount due the CONTRACTOR on account of progress payments.

9.3.2.1 Proof of insurance for items stored off site and copies of invoices are to be provided with Application for Payment requesting payment for stored materials.

### **9.6 Progress Payments**

9.6.7.1 Sums owed to the OWNER by the CONTRACTOR may be deducted from payments otherwise due the CONTRACTOR pursuant to Article 9.

### **9.8 Substantial Completion**

9.8.3.1 Except with the consent of the OWNER, the ARCHITECT/ENGINEER will perform no more than **one** inspection to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The OWNER shall be entitled to deduct from the Contract Sum amounts paid to the ARCHITECT/ENGINEER for any additional inspections.

9.8.5.1 The payment shall be sufficient to increase the total payments to one-hundred (**100%**) percent of the Contract Sum, less **two times** the value of any remaining items to be completed and an amount necessary to satisfy any claims, lines or judgments against the CONTRACTOR which have not been suitably discharged.

#### **9.10 Final Completion and Final Payment**

9.10.1.1 Except with the consent of the OWNER, the ARCHITECT/ENGINEER will perform no more than **one** inspection to determine whether the Work or a designated portion thereof has attained Final Completion in accordance with the Contract Documents. The OWNER shall be entitled to deduct from the Contract Sum amounts paid to the ARCHITECT/ENGINEER for any additional inspections.

### **ARTICLE 10 – PROTECTION OF PERSONS AND PROPERTY**

#### **10.2 Safety of Persons and Property**

10.2.4.1 When use or storage of explosives, or other hazardous materials, substances or equipment, or unusual methods are necessary for execution of the Work, the CONTRACTOR shall give the OWNER and ARCHITECT/ENGINEER reasonable advance notice.

#### **10.5 Additional Safety Provisions**

10.5.1 The CONTRACTOR and all of its subcontractors, vendors, and material suppliers shall comply with all the provisions of the laws of the **County of Montgomery**, the State of New York, and of the United States of America which affect municipalities and municipal contracts, and more particularly; the Town Law, the Labor Law, the General Municipal Law, the Worker's Compensation Law, the Lien Law, Personal Property Law, State Unemployment Insurance Law, federal Social Security Law, state, local and municipal health and safety laws, rules and regulations, and any and all regulations promulgated by the State of New York and United States of America including amendments and additions thereto, insofar as the same shall be applicable to any contract awarded hereunder with the same force and effect as if set forth at length herein.

10.5.2 CONTRACTOR agrees to provide all equipment necessary for the safety of its workers, subcontractors, vendors, and material suppliers as well as maintain a safe work place for the protection of workers or persons lawfully at the work site. CONTRACTOR agrees to provide all elevation-related safety equipment and to comply with all applicable OSHA regulations; New York State Labor Department rules and regulations; New York State Labor Law Sections 200, 240, and 241, and all other applicable laws, rules, regulations and codes.

10.5.3 Pursuant to New York State Labor Law Section 220-h, all laborers, workers, and mechanics employed in performance of the contract shall be certified as having successfully completed an OSHA approved course in construction safety and health of at least ten hours in duration prior to performing any work on the project.

### **ARTICLE 11 – INSURANCE AND BONDS**

#### **11.1 Contractor's Insurance and Bonds**

11.1.1.1 The Owner's requirements regarding Insurance and Bonds are provided in AIA Document A101-2017 Exhibit A attached to the Agreement.

- 11.1.1.2 All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall specifically name as the additional insured, on a primary non-contributory basis, the following parties:
1. The OWNER, specifically, **Montgomery County**.
  2. The ARCHITECT/ENGINEER, specifically **C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.**
- 11.1.1.3 Section 125 of the General Municipal Law requires that any individual applying for a building permit prove to the building department that the Contractor is in compliance with the mandatory coverage provisions of the Workers' Compensation Law before the building permit is issued. The OWNER requires proof of General Liability Insurance and Workers' Compensation Insurance before a building permit can be issued. Each CONTRACTOR must submit a Certificate of Insurance showing General Liability Insurance with the OWNER as certificate holder only. They need not be additional insured. New York State mandates that the OWNER have proof of Workers' Compensation Insurance coverage. All CONTRACTORS on must prove that they are in compliance with Section 57 of the Workers' Compensation Law (WCL) by producing ONE of the following forms:
1. submit form C-105.2(9/07) as proof of Workers' Compensation Insurance; or
  2. if you are covered by the State Insurance Fund, submit U-26.3; or
  3. if you participate in Workers' Compensation Self-Insurance, submit form SI-12 or form GSI-105.2; or
  4. For entities with NO Employees - form CE-200 is required to be submitted for each specific application. (WC/DB-100 is no longer acceptable.)
- The OWNER must be listed as certificate holder on the applicable Workers' Compensation Insurance coverage submitted. ACORD FORMS ARE NOT ACCEPTABLE PROOF OF WORKERS' COMPENSATION COVERAGE.
- 11.1.1.4 When CONTRACTOR delivers the executed Agreement to OWNER, CONTRACTOR shall furnish all required insurance certificates by attaching them to page 006216 in the Contracting Forms and Supplements section of the Project Manual.
- 11.1.2.1 The CONTRACTOR shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. Bonds may be obtained through the CONTRACTOR's usual source and the cost thereof shall be included in the Contract Sum. The amount of each bond shall be equal to **100%** of the Contract Sum.
- 11.1.2.2 When CONTRACTOR delivers the executed Agreement to OWNER, CONTRACTOR shall furnish all required bonds by attaching them to page 006113 in the Contracting Forms and Supplements section of the Project Manual.
- 11.1.4 The CONTRACTOR shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.
- 11.1.5 For purposes of the insurance coverage and policies required by the Contract Documents, neither the CONTRACTOR's failure to produce certificates of insurance nor the OWNER's or ARCHITECT's failure to request such certificates shall constitute a waiver of the CONTRACTOR's obligation to obtain the required insurance coverages and maintain same throughout the CONTRACTOR's performance of the work or for the period of time otherwise specified herein.

## ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK

### 12.2 Correction of Work

- 12.2.2.4 Upon request by the OWNER and prior to the expiration of one year from the date of Substantial Completion, the ARCHITECT/ENGINEER will conduct and the CONTRACTOR shall attend a meeting with the OWNER to review the facility operations and performance.



## **ARTICLE 13 – MISCELLANEOUS PROVISIONS**

### **13.5 Tests and Inspections**

- 13.5.1.1 The cost of all inspections, tests, and approvals required by the Contract Documents shall be paid for by the CONTRACTOR responsible for that portion of the Work, with the exception of the Special Inspections and Testing required under the provisions of the International Building Code, which are to be paid for directly by the OWNER, as outlined under the Statement of Special Inspections prepared by the ARCHITECT/ENGINEER.
- 13.5.1.2 The CONTRACTOR shall be responsible for the cost of any re-inspection or re-testing of Work which fails to comply with the requirements of the Special Inspections and Testing in accordance with the Contract Documents.

## **ARTICLE 14 – TERMINATION OR SUSPENSION OF CONTRACT**

### **14.1 Termination by the Contractor**

- 14.1.3 Delete the words “costs incurred by reason of such termination.”

### **14.4 Termination by the Owner for Convenience**

- 14.4.3 Delete the words “and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.”

## **ARTICLE 15 – CLAIMS AND DISPUTES**

### **15.1 Claims**

#### **15.1.2 Time Limits on Claims**

Delete the words “but in any case not more than 10 years after the date of Substantial Completion of the Work” in the first sentence.

#### **15.1.5 Claims for Additional Cost**

After the phrase “written notice as provided herein shall be given” add the words “and written permission received.”

#### **15.1.6 Claims for Additional Time**

- 15.1.6.1 After the phrase “written notice as provided herein shall be given” add the words “and written permission received.”
- 15.1.6.3 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis of the Claim, the date upon which each cause for delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work and the number of days’ increase in the Contract Time claimed as a consequence of each such cause of delay. The CONTRACTOR shall provide such supporting documentation as the OWNER may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim.
- 15.1.6.4 The CONTRACTOR shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the CONTRACTOR.

#### **15.1.7 Waiver of Claims for Consequential Damages**

- Revise first paragraph as follows: "The Contractor waives Claims for consequential damages arising out of or relating to this Contract. This waiver includes"
- 15.1.7.1 Delete sub-paragraph in its entirety.
- Revise last paragraph as follows: "This waiver is applicable, without limitation, to all consequential damages due to 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."
- 15.1.8 Separate Contractor Claims**
- 15.1.8.1 Should CONTRACTOR cause damage to the work or property of any separate CONTRACTOR at the Site, or should any claim arising out of CONTRACTOR's performance of the Work at the Site be made by any separate CONTRACTOR against CONTRACTOR, OWNER, OWNER's Consultants, ARCHITECT/ENGINEER, or ARCHITECT/ENGINEER's Consultants, CONTRACTOR shall promptly attempt to settle with such separate CONTRACTOR by agreement, or to otherwise resolve the dispute by arbitration or at law.
- 15.1.8.2 CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless OWNER, OWNER's Consultants, ARCHITECT, ARCHITECT/ENGINEER's Consultants, and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, ARCHITECT's, attorneys and other professionals and court arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate CONTRACTOR against OWNER, OWNER's Consultants, ARCHITECT/ENGINEER, or the ARCHITECT/ENGINEER's Consultants, to the extent said claim is based on or arises out of CONTRACTOR's performance of the Work. Should a separate CONTRACTOR cause damage to the Work or property of CONTRACTOR or should the performance of work by any separate CONTRACTOR at the Site give rise to any other Claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, OWNER's Consultants, ARCHITECT/ENGINEER, or the ARCHITECT/ENGINEER's Consultants, or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER, OWNER's Consultants, ARCHITECT/ENGINEER, or the ARCHITECT/ENGINEER's Consultants on account of any such damage or Claim.
- 15.2 Initial Decision**
- 15.2.1 Delete the words "mediation of" in the second sentence.
- 15.2.5 Delete the words "to mediation and, if the parties fail to resolve their dispute through mediation," in the last sentence.
- 15.2.6 Delete paragraph in its entirety and replace with "The parties agree that any claims brought in New York State Court shall be brought in **Montgomery County**."
- 15.2.6.1 Delete sub-paragraph in its entirety.
- 15.3 Mediation**
- Delete section in its entirety.
- 15.4 Arbitration**
- Delete section in its entirety.

END OF DOCUMENT 007300

DOCUMENT 007301 - SUPPLEMENTARY CONDITIONS ADDITIONAL ARTICLES

These Supplementary Conditions add new topics to the Standard General Conditions of the Contract for construction (AIA Document A201-2017) and other provisions of the Contract Documents.

Articles and paragraphs herein are numbered as a continuation of the General Conditions. Some numbers in sequence may not appear because those numbered Articles and paragraphs are not applicable to this Project and have been deleted when transferring this Section from the office master document.

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**16. PROVISIONS REQUIRED BY LAW DEEMED INSERTED**

- 16.1 Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall read and be enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.
- 16.2 Pursuant to General Municipal Law Section 109, no contract hereunder whether in whole or in part, shall be assigned, transferred, conveyed, sublet, or otherwise disposed of by CONTRACTOR nor shall CONTRACTOR transfer or convey his right, title, or interest therein, or his power to execute such contract, to any other person, company, or corporation unless written approval is first obtained from the OWNER, which is **MONTGOMERY COUNTY**.

**17. NEW YORK STATE NONDISCRIMINATION CLAUSES**

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

- 17.1 The CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, creed, color, or national origin, and will take affirmative action to insure that they are afforded equal employment opportunities without discrimination because of race, creed, color or national origin. Such action shall be taken with reference but not limited to: recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff or termination, rates of pay other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training.
- 17.2 The CONTRACTOR will send to each labor union or representative of workers with which he/she has or is bound by a collective bargaining or other agreement or understanding, a notice, to be provided by the State Commission for Human Rights, advising such labor union or representative of the CONTRACTOR's agreement under clauses (17.1) through (17.8) hereinafter called "nondiscrimination clauses". If the CONTRACTOR was directed to do so by the contracting agency as part of the bid or negotiation of this contract, the CONTRACTOR shall request the labor union or representative to furnish him/her with a written statement that such labor union or representative will not discriminate because of race, creed, color or national origin and that such labor union or representative either will affirmatively cooperate within the limits of its legal and contractual authority in the implementation of the policy and provisions of these nondiscrimination clauses, or that it consents and agrees that recruitment, employment, and the terms and conditions of employment under this contract shall be in accordance with the purposes and provisions of these nondiscrimination clauses. If such labor union or representative fails or refuses to comply with such a request that it furnish such a statement, the CONTRACTOR shall promptly notify the State Commission for Human Rights of such failure or refusal.
- 17.3 The CONTRACTOR will post and keep posted in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Commission for Human Rights setting forth the substance of the provisions of clauses (17.1) through (17.2) and such provisions of the State's Laws against discrimination as the State Commission for Human Rights shall determine.
- 17.4 The CONTRACTOR will state, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, that all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color or national origin.
- 17.5 The CONTRACTOR will comply with the provisions of the Executive Law, Human Rights Law, Article 15, and will furnish all information and reports deemed necessary by the State Commission for Human Rights under these nondiscrimination clauses and such sections of the Executive Law, and will permit access to his books, records and accounts by the State Commission for Human Rights, the Attorney General, District Commissioner of Housing and Community Renewal and the Industrial Commission for purposes of investigation to ascertain compliance with these nondiscrimination clauses of the Executive Law, Human Rights Law, Article 15.

- 17.6 This Contract may be forthwith canceled, terminated or suspended, in whole or in part by the contracting agency upon the basis of a finding made by the State Commission for Human Rights that the CONTRACTOR has not complied with these nondiscrimination clauses, and the CONTRACTOR may be declared ineligible for future contracts made by or on behalf of the State or a public authority or agency of the State or housing authority, or an urban renewal agency, or contract requiring the approval of the Commissioner of Housing and Community Renewal, until he/she has satisfied the State Commission for Human Rights after conciliation efforts by the Commission have failed to achieve compliance with these nondiscrimination clauses and after a verified complaint has been filed with the Commission, notice thereof has been afforded him/her to be heard publicly before three members of the Commission. Such sanctions may be imposed and remedies invoked independently of or in addition to sanctions and remedies otherwise provided by law.
- 17.7 If this contract is canceled or terminated, in addition to other rights of the contracting agency provided in this Contract upon its breach by the CONTRACTOR, the CONTRACTOR will hold the contracting agency harmless against any additional expenses or costs incurred by the contracting agency in completing the work or in purchasing the services, materials, equipment or supplies contemplated by the contract, and the contracting agency may withhold payments from the CONTRACTOR in an amount sufficient for this purpose and recourse may be had against the surety on the performance bond if necessary.
- 17.8 The CONTRACTOR will include the provisions of clauses (17.1) through (17.7) in every subcontractor purchase order altered only to reflect the proper identity of the parties in such manner that such provisions will be binding upon each subcontractor or vendor as to operations to be performed within the State of New York. The CONTRACTOR will take such actions in enforcing such provisions of such subcontractor purchase order as the contracting agency may direct, including sanctions or remedies for non-compliance. If the CONTRACTOR becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency the CONTRACTOR shall promptly so notify the Attorney General, requesting him to intervene and to protect the interests of the State of New York.

## **18. NEW YORK STATE NON-COLLUSIVE BIDDING CERTIFICATION**

In addition to the other provisions herein contained to be done or performed by the CONTRACTOR as part of this Contract, the said CONTRACTOR certifies, pursuant to the provisions of Section 103-d of the New York State General Municipal Law that:

- 18.1 By submission of this bid, each bidder and such person signing on behalf of any 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 his/her 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 competitor; and
  - B. unless otherwise required by law, the prices which have been quoted in this bid have not knowingly be 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.
- 18.2 A bid shall not be considered for award nor shall any award be made where A, B, and C, above have not been complied with; provided however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where A and C above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, has determined that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder (1) has published price lists, rates, or tariffs covering items being procured, (2) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (3) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of subparagraph (A).

Any bid hereafter made to any political subdivision of state or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision (A) of this section, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

## **19. PROTECTION OF EXISTING FACILITIES**

- 19.1 The CONTRACTOR shall conduct his/her operations and take all special temporary and permanent precautions necessary to insure a stable and secure job, and as may be required by the contract documents, the ARCHITECT/ENGINEER, the OWNER, and the public utilities, to protect and sustain in normal service all existing structures, equipment, utility lines, roadways, and subsurface, submerged and overhead facilities which are to remain in place and undisturbed by his/her operations under this contract completely at his/her own expense, unless otherwise provided for in the contract documents. The CONTRACTOR shall be held accountable for damage resulting from failure to exercise proper judgment in the progress of the work.
- 19.2 When power poles, light poles, pipes, or portions of any other existing structures, or utilities, either visible or underground, constitute an unavoidable interference to his/her operations, the CONTRACTOR shall consult with the owner of such facility prior to performing any work at or near the same. If permitted by the owner of the facility, the CONTRACTOR shall relocate or temporarily remove, and later restore, the interfering portion of the facility, as directed by said owner and the project OWNER, through the ARCHITECT/ENGINEER. If the owner of the facility so elects, he will perform such work with his own forces. Under either arrangement, the work shall be done at the CONTRACTOR's expense unless stated otherwise in the contract documents.
- 19.3 The CONTRACTOR shall immediately notify the ARCHITECT/ENGINEER and the owner of any facilities, which are disturbed, damaged or injured as a result of the CONTRACTOR's operations. The CONTRACTOR shall consult with the owner of such facility as to the proper method of replacing, repairing, or restoring the affected facilities to the conditions, which existed prior to the CONTRACTOR's operations. If permitted by the owner of the facility, the CONTRACTOR shall, at his/her own expense, replace, repair, or restore the affected facilities to their original condition, to the satisfaction of said owner.
- 19.4 In the event that the owner of the facility desires to use his/her own forces to perform the replacement, repairing or restoring of affected facilities, the CONTRACTOR shall reimburse the owner of said facilities for such expenses as said owner may accrue in performing such work. The CONTRACTOR shall not be entitled to receive additional compensation under this contract for such work.
- 19.5 Upon learning of the existence and location of any utility omitted from or shown incorrectly on the contract drawings the CONTRACTOR shall notify the utility owner and the ARCHITECT/ENGINEER and assumes full responsibility for that utility's protection or relocation as described above.

## **20. MATERIALS FOUND AT THE SITE**

- 20.1 All timber, fences, buildings, stone, sand, utility lines, pipes, and any other appurtenances, materials, or articles of value found on lands or in excavations within the contract limits shall be brought to the attention of the ARCHITECT/ENGINEER.

- 20.2 If such items are found in or upon lands of the OWNER, they shall remain the property of the OWNER. Such materials may, therefore be used by the CONTRACTOR in the work at the discretion of the ARCHITECT/ENGINEER or the OWNER, for purposes for which they are acceptable. If not otherwise claimed by the OWNER or his/her representatives, such items shall be considered waste and shall be disposed of by the CONTRACTOR as stipulated hereafter.
- 20.3 If such items are found in or upon lands or easements being used in the project but being owned by parties other than the OWNER, they shall remain the property of such other owners. If claimed by these owners, the items shall be turned over to these owners at the site of the work as the ARCHITECT/ENGINEER directs. If such items are not claimed by these owners, they may similarly be used in the work as stipulated in the preceding paragraph, or be considered waste and be disposed of by the CONTRACTOR as stipulated hereafter.
- 20.4 Disposal of waste materials shall be the CONTRACTOR's responsibility as an integral part of the contract and shall be done without special payment from the OWNER. The decision as to whether disposal takes place inside or outside of the project limits shall be subject to control by the ARCHITECT/ENGINEER. If disposal takes place within the project limits, it shall be done by the CONTRACTOR subject to the direction and satisfaction of the ARCHITECT/ENGINEER. Waste material shall not be sold to parties within the project limits. If disposal takes place outside the project limits, it shall be done by the CONTRACTOR exclusively at his discretion and be solely his/her responsibility. The CONTRACTOR will be required to show the ARCHITECT/ENGINEER how he/she plans to dispose of the waste (i.e., unsuitable backfill, rock, etc.) in an environmentally acceptable manner. The ARCHITECT/ENGINEER will require copies of release forms from property owners who have agreed with CONTRACTOR to accept spoil materials.

## **21. OPERATION OF VALVES AND HYDRANTS**

- 21.1 Operation of all valves and hydrants under pressure shall be done by representatives of the Water Department or owner of the water utility of the locality where the work is performed, or under their direct supervision and with their approval.
- 21.2 The CONTRACTOR shall give sufficient notice to the ARCHITECT/ENGINEER when and where he desires operation of valves and hydrants so that the Water District representatives can be contacted and be present. The CONTRACTOR shall notify customers served by the main in adequate time before the closing of a section to permit them to draw water for their use while the main is shut down.

## **22. USE AND PROTECTION OF WATERS IN NEW YORK STATE**

- 22.1 The CONTRACTOR is advised that any work or operations which in any way disturb or affect the streambed or banks of any stream, wetlands or other waters of the United States which are classified or regulated by the New York State Department of Environmental Conservation, the United States Army Corps of Engineers, or other local agency falls under the control and supervision of the Department of Environmental Conservation, the United States Army Corps of Engineers, and other local agency. In compliance with the law, the CONTRACTOR will be required to contact the Local Permit Agent of NYSDEC, the USACOE, and/or other local agency and advise him/her of his/her intent to impact said stream, the United States Army Corps of Engineers, and other local agency. They will then advise the CONTRACTOR of the procedures and conditions to be followed, if any, in making the stream crossings and/or working on the banks of the stream.

## **23. SANITARY SEWER AND WATER MAIN SEPARATION**

- 23.1 Horizontal Separation:  
Sewer pipe and water mains shall be separated by a minimum 10 foot horizontal distance. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten foot separation, the appropriate reviewing agency may allow deviation on a case-by-case basis, if supported by data from the

design ARCHITECT/ENGINEER. Such deviation may allow installation at less than the ten foot horizontal separation provided that the water main is in a separate trench or on an undisturbed earth self located on one side of the sewer and at an elevation so the bottom of the water main is at least 18 inches above the top of the sewer.

23.2 Crossings:

At crossings of sewers and water mains, a minimum vertical distance of 18 inches shall be provided between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. At crossings of sewers and water mains, the pipe undermined during construction shall receive adequate structural support to prevent damage.

23.3 Special Conditions:

When it is impossible to obtain proper horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe, and shall be pressure tested to assure water-tightness prior to backfilling.

**24. BLASTING**

24.1 Not Applicable.

END OF DOCUMENT 007301



DOCUMENT 007343 - WAGE RATE REQUIREMENTS

NOTICE TO BIDDERS

1. New York State minimum wage rate schedules are bound at the end of these Supplementary Conditions.
  2. The labor on this contract shall be performed in all respects in full accordance with the Labor Law of the State of New York. In accordance with Section 220, Subdivision 3, and Section 220-D, of the Labor Law, the Industrial Commissioner has designated as the minimum hourly rates to be paid to employees on this work the rates shown on the attached schedules which shall be posted in a prominent and convenient place for the inspection of the Contractor's employees. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, provides, among other things, that it shall be the duty of the fiscal officer to make a determination of the schedule of wages and supplements to be paid to all laborers, workmen and mechanics employed on public works projects. The amount of supplements listed on the enclosed schedule does not necessarily include all types of prevailing supplements.
  3. The Contractor shall make provision for disability benefits, workmen's compensation, unemployment insurance and social security, as required by law.
  4. Every Contractor and Subcontractor shall submit to the Contracting Agency, which is the County, 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 in accordance with the general provisions of laws Covering Workers on Public Works Contracts.
- .

END OF DOCUMENT 007343

EXCEPT FOR PREVAILING WAGE SCHEDULE WHICH FOLLOWS  
007343.1

Kathy Hochul, Governor



Roberta Reardon, Commissioner

Montgomery County

Schedule Year 2022 through 2023  
Date Requested 09/29/2022  
PRC# 2022011157

Location Amsterdam New York  
Project ID#  
Project Type Installment of new Generator

### 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 2022 through June 2023. 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](http://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](http://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](http://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](http://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, contemporaneous, 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, but 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 journeymen 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 journeyman'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 220-e(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.



Kathy Hochul, Governor

Roberta Reardon, Commissioner

Montgomery County

Nick Lobosco, Project Architect  
50 Century Hill Drive  
Latham NY 12110

Schedule Year 2022 through 2023  
Date Requested 09/29/2022  
PRC# 2022011157

Location Amsterdam New York  
Project ID#  
Project Type Installment of new Generator

### 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.

### Contractor Information

All information must be supplied

Federal Employer Identification Number: _____		
Name: _____		
Address: _____ _____		
City: _____	State: _____	Zip: _____
Amount of Contract: \$ _____	Contract Type:	
Approximate Starting Date: ____/____/____	<input type="checkbox"/> (01) General Construction	
Approximate Completion Date: ____/____/____	<input type="checkbox"/> (02) Heating/Ventilation	
	<input type="checkbox"/> (03) Electrical	
	<input type="checkbox"/> (04) Plumbing	
	<input type="checkbox"/> (05) Other : _____	

Phone: (518) 457-5589 Fax: (518) 485-1870  
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240





### **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, <https://dol.ny.gov/public-work-and-prevailing-wage>

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: [dol.misclassified@labor.ny.gov](mailto:dol.misclassified@labor.ny.gov) .

### **Worker Notification: (Labor Law §220, paragraph a of subdivision 3-a)**

#### **Effective June 23, 2020**

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 and supplement 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](http://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.

(12.20)

**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*

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#### **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 [dol.misclassified@labor.ny.gov](mailto:dol.misclassified@labor.ny.gov). All complaints of fraud and violations are taken seriously. You can remain anonymous.**

**Employer Name:**



# 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:**

<https://dol.ny.gov/public-work-and-prevailing-wage>

If you feel that you have not received proper wages or benefits,  
please call our nearest office.\*

Albany	(518) 457-2744	Patchogue	(631) 687-4882
Binghamton	(607) 721-8005	Rochester	(585) 258-4505
Buffalo	(716) 847-7159	Syracuse	(315) 428-4056
Garden City	(516) 228-3915	Utica	(315) 793-2314
New York City	(212) 932-2419	White Plains	(914) 997-9507
Newburgh	(845) 568-5156		

\* For New York City government agency construction projects, please contact the Office of the NYC Comptroller at (212) 669-4443, or [www.comptroller.nyc.gov](http://www.comptroller.nyc.gov) – 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 or 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 requirements on projects, and may issue stop-bid 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 county-by-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 than 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](http://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

## Montgomery County General Construction

### Boilermaker

09/01/2022

#### JOB DESCRIPTION Boilermaker

DISTRICT 1

#### ENTIRE COUNTIES

Albany, Broome, Chenango, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

#### WAGES

Per hour

07/01/2022

01/01/2023

01/01/2024

Additional

Additional

Boilermaker

\$ 39.34

+ \$1.30

+ \$1.30

#### SUPPLEMENTAL BENEFITS

Per hour

07/01/2022

Journeyman

\$ 25.65

+ 1.24\*

\* This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

#### OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

#### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the day observed by the State or Nation shall be observed, and when Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

#### REGISTERED APPRENTICES

Wages per hour

( 1/2 ) year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits per hour

1st	2nd	3rd	4th	5th	6th	7th	8th
19.15	19.15	20.08	21.00	21.93	22.87	23.79	24.72
+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*

\* This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

1-197

### Carpenter - Building

09/01/2022

#### JOB DESCRIPTION Carpenter - Building

DISTRICT 2

#### ENTIRE COUNTIES

Albany, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie

#### WAGES

Per hour:

07/01/2022

07/01/2023

07/01/2024

07/01/2025

Additional

Additional

Additional

Carpenter

\$ 34.00

\$ 1.25

\$ 1.25

\$ 1.25

Floor Coverer

34.00

1.25

1.25

1.25

Carpet Layer

34.00

1.25

1.25

1.25

Dry-Wall

34.00

1.25

1.25

1.25

Diver-Wet Day

61.25

0.00

0.00

0.00

Diver-Dry Day

35.00

1.25

1.25

1.25

Diver Tender

35.00

1.25

1.25

1.25

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- Pile Drivers/Dock Builders shall receive \$0.25 per hour over the journeyman's rate of pay when performing piledriving/dock building 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 (per diem payment):
  - 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 (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 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 \$ 23.47

### OVERTIME PAY

See (B, E, \*E2, Q) on OVERTIME PAGE

\* Note - Saturday is also 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

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

#### CARPENTER APPRENTICES

Wages per hour (1040 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th	5th
55%	60%	65%	70%	80%

Supplemental Benefits per hour:

\$ 12.31	\$ 12.31	\$ 14.96	\$ 14.96	\$ 14.96
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#### PILEDRIIVER/DOCK BUILDER APPRENTICES

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
55%*	60%*	70%*	80%*

\*Pile Driver/Dock Builder apprentices shall receive an additional \$0.25 per hour worked when performing piledriving/dock building work.

Supplemental Benefits per hour:

\$ 12.31	\$ 12.31	\$ 14.96	\$ 14.96
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#### LINOLEUM, RESILIENT TILE, AND CARPET LAYER APPRENTICES

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
55%	60%	70%	80%

Supplemental Benefits per hour:

\$ 12.31	\$ 12.31	\$ 14.96	\$ 14.96
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### ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:

- 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-A1b

## 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, Schuylar, 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 west 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

Wages per hour:	07/01/2022	07/01/2023 Additional	07/01/2024 Additional
Carpenter - ONLY for Artificial Turf/Synthetic Sport Surface	\$ 33.08	\$ 2.25*	\$2.25*

\*To be allocated at a later date

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

## SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 25.45

## OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE

## HOLIDAY

Paid: See (5) on HOLIDAY PAGE  
Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When 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 (1300 hour terms at the following percentage of Journeyman's wage):

1st	2nd	3rd	4th
65%	70%	75%	80%

Supplemental Benefits per hour:

1st term	\$ 16.97
2nd term	17.41
3rd term	19.40
4th term	19.84

2-42AtSS

## Carpenter - Heavy&Highway

09/01/2022

**JOB DESCRIPTION** Carpenter - Heavy&Highway

**DISTRICT** 2

## ENTIRE COUNTIES

Albany, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

## WAGES

Per hour	07/01/2022	07/01/2023 Additional	07/01/2024 Additional
Carpenter	\$ 37.52	\$ 3.75*	\$ 4.00*
Piledriver	37.52	3.75*	4.00*
Diver-Wet Day	62.52	3.75*	4.00*
Diver-Dry Day	38.52	3.75*	4.00*
Diver-Tender	38.52	3.75*	4.00*

\*To be allocated at a later date.

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- When project owner mandates a single irregular work shift, the employee will receive an additional \$3.00 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 \$2.50 per hour.
- Certified welders when required to perform welding work will receive an additional \$2.50 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 \$ 23.80

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: 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.

- The employee must work their scheduled workday before and their scheduled workday after the holiday to receive holiday pay.

**REGISTERED APPRENTICES**

**CAPRENTER APPRENTICES**

Wages per hour (1040 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th	5th
65%	70%	75%	80%	85%

Supplemental Benefits per hour:

\$ 18.11	\$ 18.65	\$ 20.73	\$ 21.27	\$ 21.81
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**PILEDRIIVER/DOCKBUILDER APPRENTICES**

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
65%	70%	80%	85%

Supplemental Benefits per hour:

\$ 18.11	\$ 18.65	\$ 21.27	\$ 21.81
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NOTE ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:

- When project owner mandates a single irregular work shift, the employee will receive an additional \$3.00 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 \$2.50 per hour.
- Certified welders when required to perform welding work will receive an additional \$2.50 per hour.

2-291HH-Alb

**Electrician**

**09/01/2022**

**JOB DESCRIPTION** Electrician

**DISTRICT** 1

**ENTIRE COUNTIES**

Albany, Columbia, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**PARTIAL COUNTIES**



Greene: Portion of the County North of a line following the South limits of the City of Catskill in a westerly direction from the Hudson River to State Highway 23A. Then continuing on 23A to the road following the Little West Kill and continuing along this road to Delaware County.  
Otsego: Only the Towns of Decatur and Worcester

## WAGES

Per hour

	07/01/2022	06/01/2023
Electrician	\$ 45.00	\$ 47.12
Audio/Sound	45.00	47.12
Video	45.00	47.12
Tele-Data	45.00	47.12
Solar/ Photovoltaic	45.00	47.12

Notes: An additional 5% above rate for work over 30' above floor and requires use of a safety harness when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

An additional 5% above rate when Journeymen are required to work as Lead(Pb) cable splicers.

An additional 10% above rate when Journeymen Welders are required to have ASME verification.

## SUPPLEMENTAL BENEFITS

Per hour

Journeyman	\$ 29.24 +3% of wage	\$ 29.29 +3% of wage
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## OVERTIME PAY

See (B, \*E, Q) on OVERTIME PAGE

\* DOUBLE TIME AFTER 10 HOURS ON SATURDAY

For Projects Bid on or Prior to 05/31/2019

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST A FIVE (5) DAY 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 10%
3rd Shift	12:30 AM to 9:00 AM	REGULAR RATE PLUS 15%

For Projects Bid on or After 06/01/2019

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%

For Projects Bid on or After 09/01/2019

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SINGLE IRREGULAR SHIFTS OF AT LEAST A FIVE (5) DAY 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%

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Saturday, it shall be celebrated on Friday. If the holiday falls on Sunday, it shall be celebrated on Monday.

## REGISTERED APPRENTICES

Wages per hour

Terms at the following percentage of Journeyman's wage.

0-6mo	6-12mo	2nd yr	3rd yr	4th yr	5th yr
40%	45%	50%	60%	70%	80%

Notes: An additional 5% above rate for work over 30' above floor and requires use of a safety harness when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

Supplemental Benefits per hour worked

Apprentices indentured on or before 12/31/2018

0-12 month term	\$ 14.66*
2-5th year term	29.24*

Apprentices indentured on or after 01/01/2019

0-12 month term	\$ 14.66*
2nd year term	23.52*
3rd year term	24.66*
4th year term	25.81*
5th year term	29.24*

\*Plus additional 3% of wage

1-236

## Elevator Constructor

09/01/2022

**JOB DESCRIPTION** Elevator Constructor

**DISTRICT** 1

### 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

07/01/2022

01/01/2023

Mechanic

\$ 50.78

\$ 53.02

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

07/01/2022

01/01/2023

Journeyman/Helper

\$ 36.885\*

\$ 37.335\*

(\*)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

**Glazier**

**09/01/2022**

**JOB DESCRIPTION** Glazier

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**WAGES**

Per hour

	07/01/2022	05/01/2023 Additional	07/01/2023 Additional
Glazier Base Wage	\$ 31.86	+\$1.80	
+ additional \$4.05 per hour for all hours worked, not subject to overtime/premium			
High Work Base Wage*	34.01		+\$1.55
+ additional \$4.05 per hour for all hours worked, not subject to overtime/premium			

(\*)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	\$ 21.75
Journeyman High Work	27.65

**OVERTIME PAY**

See (B, E, E2, Q) on OVERTIME PAGE

Premium is applied to the respective base wage only.

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFT WORK OR SINGLE IRREGULAR SHIFTS STARTING BETWEEN THE HOURS LISTED BELOW:

4:00pm to 6:30am:	ADDITIONAL 12.5% TO APPLICABLE WAGE RATE AND SUPPLEMENTAL BENEFIT
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**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 1500 hr. terms at the following percentage of Journeymans base wage.

1st	2nd	3rd	4th
50%	65%	75%	90%
+ additional \$3.60 per hour for all hours worked for all terms			

Apprentice Glazier Hi-Work 1500 hr. terms at the following percentage of Journeymans Hi-Work base wage.

1st	2nd	3rd	4th
50%	65%	75%	90%
+ additional \$4.05 per hour for all hours worked for all terms			

Supplemental Benefits per hour worked

Apprentice	
1st term	\$ 18.08
2nd-4th term	21.75
Apprentice High Work	
1st term	21.28
2nd-4th term	27.65

**Insulator - Heat & Frost**

**09/01/2022**

**JOB DESCRIPTION** Insulator - Heat & Frost

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

**WAGES**

Wages per hour	07/01/2022	05/01/2023 Additional	05/01/2024 Additional
Asbestos Worker*	\$ 38.40	+\$2.50	+\$2.00
Insulator*	38.40		
Firestopping Worker*	32.64		

(\*)On Mechanical Systems only.

On government mandated shift work additional 12% of wage for all shifts starting after 3:30 P.M.

**SUPPLEMENTAL BENEFITS**

Per hour

Journey person \$ 24.42

**OVERTIME PAY**

See (\*B1, \*\*Q) on OVERTIME PAGE

\*B1=Double time begins after 10 hours on Saturday

\*\*Q=Triple time on Labor Day if worked.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

**REGISTERED APPRENTICES**

Wages per hour

one year terms at the following percentage of Journey person's wage.

1st	2nd	3rd	4th
60 %	70 %	80 %	90 %

Supplemental Benefits per hour worked:

Apprentices \$ 24.42

1-40

**Ironworker**

**09/01/2022**

**JOB DESCRIPTION** Ironworker

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Delaware, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**PARTIAL COUNTIES**

Fulton: Only the Townships of Broadalbin, Mayfield, Northampton, Bleecker and Johnstown.

Hamilton: Only the Townships of Hope, Benson and Wells.

Montgomery: Only the Townships of Florida, Amsterdam, Charleston, Glen, Mohawk and Root.

Otsego: Only the Towns of Unadilla, Butternuts, Morris, Otego, Oneonta, Laurens, Millford, Maryland and Worchester.

**WAGES**

Wages 07/01/2022  
Per hour

Ornamental	\$ 33.50
Reinforcing	33.50
Rodman	33.50
Structural & Precast	33.50
Mover/Rigger	33.50
Fence Erector	33.50
Stone Derrickman	33.50
Sheeter	33.75
Curtain Wall Installer	33.50
Metal Window Installer	33.50

## SUPPLEMENTAL BENEFITS

Per hour

JOURNEYPERSON \$ 31.14

## OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTWORK:

1st Shift	6:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	2:00 PM to 7:00 PM	REGULAR RATE PLUS 10%
3rd Shift	7:00 PM to 12:00 AM	REGULAR RATE PLUS 15%

THE FOLLOWING RATE WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SINGLE IRREGULAR SHIFTS:

Shift Starting 4:30 PM to 12:00 AM	REGULAR RATE PLUS 10%
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## 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:

07/01/2022

1st year	\$ 19.50
2nd year	21.50
3rd year	23.50
4th year	25.50

Supplemental Benefits per hour worked

1st year	\$ 11.78
2nd year	23.73
3rd year	25.42
4th year	27.13

1-12

## Ironworker

09/01/2022

**JOB DESCRIPTION** Ironworker

**DISTRICT** 7

## ENTIRE COUNTIES

Franklin, Herkimer, Lewis, Oneida, St. Lawrence

## PARTIAL COUNTIES

Chenango: Only the Townships of Columbus, New Berlin, North Norwich, Plymouth, Sherburne and Smyrna.

Fulton: Only the Townships of Caroga, Ephratah, Oppenheim, Stratford.

Hamilton: Only the Townships of Aretta, Indian Lake, Inlet, Lake Pleasant, Long Lake and Morehouse.

Jefferson: Only the Townships of Antwerp, Champion, Philadelphia and Wilna.

Madison: Only the Townships of Brookfield, Eaton, Hamilton, Lebanon, Madison, Oneida and Stockbridge.

Montgomery: Only the Townships of Canajoharie, Minden, Palatine and St. Johnsville.

Otsego: Only the Townships of Burlington, Cherry Valley, Decatur, Edmeston, Exeter, Hartwick, Middlefield, New Lisbon, Otsego, Pittsfield, Plainfield, Richfield, Roseboom, Springfield and Westford, and Village of Cooperstown.

## WAGES

Per hour: 07/01/2022

Structural/Reinforcing	\$ 31.25
Mach. Mover/Ornamental	31.25
Stone Derrickman	31.25
Chain Link Fence	31.25
Sheeter Ironworker	31.25
Pre-Engineered Building	31.25
Window Erector	31.25
Precast Erector	31.25
Welder	31.25

## SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 30.50

**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: 1500 hour terms at the following wage.

1-1500hrs	\$ 19.50
1501-3000hrs	21.50
3001-4500hrs	23.50
4501-6000hrs	25.50

SUPPLEMENTAL BENEFITS per hour:

1-1500hrs	\$ 12.78
1501-3000hrs	20.87
3001-4500hrs	22.02
4501-6000hrs	23.18

7-440

**Laborer - Building**

**09/01/2022**

**JOB DESCRIPTION** Laborer - Building

**DISTRICT 1**

**ENTIRE COUNTIES**

Schenectady, Schoharie

**PARTIAL COUNTIES**

Fulton: Only the Townships of Bleeker, Mayfield, Northampton, Johnstown, Broadalbin and Perth.

Montgomery: Only the Townships of Mohawk, Glen, Charleston, Amsterdam, and Florida.

Saratoga: Only the Townships of Day, Hadley, Edinburg, Corinth, Moreau, South Glens Falls, Providence, Greenfield, Wilton, Galway, Northumberland, Milton, Saratoga Springs, Charlton, Ballston, Malta and Clifton Park.

**WAGES**

Per hour

07/01/2022

07/01/2023

Additional

Group #1:

All Classifications  
except as noted in  
Groups 2 & 3

\$ 34.54

+ \$2.35

Group #2:

Blaster, Drilling equipment  
only where a separate air  
compressor unit supplies power,  
Metal formsetter (sidewalk),  
Well pointing & Laser  
operator

\$ 35.04

Group #3:

Handling of Asbestos  
or Toxic Materials

\$ 35.89

**SUPPLEMENTAL BENEFITS**

Per hour

Journeyman

\$ 23.11

**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

1000 Hour terms at the following percentage of Journeyman's basic hourly wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

	07/01/2022
Apprentices	\$ 23.11

1-157

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**Laborer - Building****09/01/2022**

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**JOB DESCRIPTION** Laborer - Building

**DISTRICT** 1

**ENTIRE COUNTIES**

Hamilton, Herkimer, Madison, Oneida

**PARTIAL COUNTIES**

Fulton: Only the Townships of Stratford, Oppenheim, Caroga and Ephratah

Montgomery: Only the Townships of Minden, St. Johnsville, Canajoharie, Palatine and Root

**WAGES**

GROUP #1: Basic

GROUP #2: Pipe Layer, Mortar Mixer, Walk behind Mortar Buggy and Power Lift

GROUP #3: Wagon Drill(Where separate air compressor unit supplies power.)

GROUP #4: Blaster, Formsetter, Riding Mortar Buggy

GROUP #5: Hazardous Waste Removal

GROUP #6: Asbestos and Lead Removal

WAGES per hour:	07/01/2022	07/01/2023
Building Laborer:		Additional
Group # 1	\$ 27.40	+ \$3.10
Group # 2	27.55	
Group # 3	27.80	
Group # 4	27.90	
Group # 5	28.90	
Group # 6	28.90	

**SUPPLEMENTAL BENEFITS**

Per hour:

	07/01/2022
All groups	\$ 24.69

**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

1000 Hour terms at the following percentage of Journeyperson's basic hourly wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

	07/01/2022
Apprentices	\$ 24.69

1-190z2B

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**Laborer - Heavy&Highway****09/01/2022**

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**JOB DESCRIPTION** Laborer - Heavy&Highway

**DISTRICT** 1

**ENTIRE COUNTIES**

Schenectady, Schoharie

**PARTIAL COUNTIES**

Fulton: Only the Townships of Bleeker, Mayfield, Northampton, Johnstown, Broadalbin and Perth.

Montgomery: Only the Townships of Mohawk, Glen, Charleston, Amsterdam, and Florida.

Saratoga: Only the Townships of Day, Hadley, Edinburg, Corinth, Moreau, South Glens Falls, Providence, Greenfield, Wilton, Galaway, Northumberland, Milton, Saratoga Springs, Charlton, Ballston, Malta and Clifton Park

## WAGES

### GROUP # A:

Basic, Drill Helper, Flagman, Outboard and Hand Boats.

### GROUP # B:

Chain Saw, Concrete Aggregate Bin, Concrete Bootmen, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of Steelmesh, Small Generators for Laborers, Tools Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Tail or Screw Operator on Asphalt Paver, Water Pump Operators (1-1/2" and Single Diaphragm) Nozzle (Asphalt, Gunite, Seeding, and Sand Blasting), Laborers on Chain Link Fence, Rock Splitter and 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 Paver/Raker and Powderman.

### GROUP # D:

Blasters, Metal Form Setters (sidewalk), Stone or Granite Curb Setters.

### GROUP # E:

Employees performing hazardous waste removal, lead abatement and removal, or asbestos abatement and removal on a State and/or Federally designated waste site & where relevant State or Federal regulations require employees to use or wear forms of personal protection.

WAGES per hour	07/01/2022	07/01/2023 Additional
Group # A	\$ 36.60	\$ 3.50
Group # B	36.80	
Group # C	37.00	
Group # D	37.20	
Group # E	39.10	

All employees who work a single irregular work day that starts from 5:00 pm to 1:00 am on a governmental mandated night shift shall be paid an additional \$5.00 per hour.

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 \$ 25.99

## 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 employer can choose to celebrate Saturday or give Friday off with pay.

## REGISTERED APPRENTICES

Wages per hour

1000 HOUR TERMS AT THE FOLLOWING PERCENTAGE OF JOURNEYMAN'S BASE WAGE

1ST	2ND	3RD	4TH
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

Apprentices  
07/01/2022  
\$ 25.99

1-157h/h



**JOB DESCRIPTION** Laborer - Heavy&Highway

**DISTRICT 1**

**ENTIRE COUNTIES**

Hamilton, Herkimer, Madison, Oneida

**PARTIAL COUNTIES**

Fulton: Only Townships of Stratford, Oppenheim, Caroga and Ephratah

Montgomery: Only Townships of Minden, St. Johnsville, Canajoharie, Palatine and Root.

**WAGES**

GROUP # A: Basic, Drill Helper, Flagman, Outboard and Hand Boats.

GROUP # B: Bull Float, Chain Saw, Concrete Aggregate Bin, Concrete Bootmen, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of all SteelMash, Small Generators for Laborers Tools, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Tail or Screw Operator on Asphalt Paver, Water Pump Operators(1-1/2" and Single Diaphragm), Nozzle (Asphalt, Gunite, Seeding, and Sand Blasting), Laborers on Chain Link Fence Erection, Rock Splitter and Power Unit, Pusher Type Concrete Saw and all other Gas, Electric, Oil and Air Tool Operators, Wrecking Laborer.

GROUP # C: Rock or Drilling Machine Operators (only where a separate air compressor unit supplies power), Acetylene Torch Operators, Asphalt Raker and Powderman.

GROUP # D: Blasters, Form Setters (prefab curb radius), Stone or Granite Curb Setters.

GROUP # E: Employees performing hazardous waste removal, lead abatement and removal, or asbestos abatement and removal on a State and/or Federally designated waste site & where relevant State or Federal regulations require employees to use or wear forms of personal protection.

Per hour:	07/01/2022	07/01/2023 Additional
Heavy/Highway Laborer:		
GROUP # A	\$ 35.15	\$ 3.50
GROUP # B	35.35	
GROUP # C	35.55	
GROUP # D	35.75	
GROUP # E	37.65	

All employees who work a single irregular work day that starts from 5:00 pm to 1:00 am on a governmental mandated night shift shall be paid an additional \$5.00 per hour.

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: \$ 27.44

**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 employer can choose to celebrate Saturday or give Friday off with pay.

**REGISTERED APPRENTICES**

Wages per hour

1000 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th
65%	70%	80%	80%

SUPPLEMENTAL BENEFITS per hour worked

Apprentices \$ 27.44

1-190z2H/H

**Laborer - Tunnel**

**09/01/2022**

**JOB DESCRIPTION** Laborer - Tunnel

**DISTRICT 1**

## ENTIRE COUNTIES

Albany, Fulton, Hamilton, Herkimer, Madison, Montgomery, Oneida, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

## WAGES

Class 1: All support laborers/sandhogs working above the shaft or tunnel

Class 2: All laborers/sandhogs working in the shaft or tunnel

Class 4: Safety Miners

Class 5: Site work related to Shaft/Tunnel

Class A: Mole nipper, powder handler, changehouse attendant and top laborer, Air spade, jackhammer, pavement breaker, Top bell, Bottom bell, side or roofbelt driller, maintenance men, burners, block layers, rodmen, caulkers, miners helper, trackmen, nippers, derailmen, electrical cablemen, hosemen, groutmen, gravelmen, form workers, movers and shaftmen, conveyor men.

Class B: Powder monkey, Blasters, ironmen and cement worker, miner, welder, heading driller, steel erectors, piledriver, rigger

Per Hour

07/01/2022

\*For projects bid on or after May 1, 2019

Class 1	\$ 43.50
Class 2	45.50
Class 4	47.75
Class 5	38.25

Toxic and hazardous waste, lead abatement and asbestos abatement work will be paid an additional \$ 3.00 an hour.

\*For projects bid on or before April 30, 2019

Class A	\$ 40.80
Class B	41.80

Toxic and hazardous waste, lead abatement and asbestos abatement work will be paid an additional \$ 2.00 an hour.

## SUPPLEMENTAL BENEFITS

Per hour

\*For projects bid on or after May 1, 2019

Journeyman	\$ 27.50
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\*For projects bid on or before April 30, 2019

Journeyman	\$ 26.75
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## OVERTIME PAY

See (B, E, Q, V, X) on OVERTIME PAGE

## HOLIDAY

Paid: See (5, 6, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

Note: If the holiday falls on a Sunday, it will be celebrated on Monday.

If the holiday falls on a Saturday, it will be celebrated on Friday.

## REGISTERED APPRENTICES

FOR APPRENTICE RATES, refer to the appropriate Laborer Heavy & Highway wage rate contained in the wage schedule for the County and Location where the work is to be performed.

1-190/157T

## Lineman Electrician

09/01/2022

**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

A 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, assembly of all electrical materials, conduit, pipe, 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.

A 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/truck driver may assist in installing conduit, pipe, cables and equipment.

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines. Also includes digging of holes for poles, anchors, footer, and foundations for electrical equipment.

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)

Per hour:	07/01/2022	05/01/2023	05/06/2024
Lineman, Technician	\$ 56.00	\$ 57.40	\$ 58.90
Crane, Crawler Backhoe	56.00	57.40	58.90
Welder, Cable Splicer	56.00	57.40	58.90
Digging Mach. Operator	50.40	51.66	53.01
Tractor Trailer Driver	47.60	48.79	50.07
Groundman, Truck Driver	44.80	45.92	47.12
Equipment Mechanic	44.80	45.92	47.12
Flagman	33.60	34.44	35.34

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	\$ 56.00	\$ 57.40	\$ 58.90
Crane, Crawler Backhoe	56.00	57.40	58.90
Cable Splicer	61.60	63.14	64.79
Certified Welder -			
Pipe Type Cable	58.80	60.27	61.85
Digging Mach. Operator	50.40	51.66	53.01
Tractor Trailer Driver	47.60	48.79	50.07
Groundman, Truck Driver	44.80	45.92	47.12
Equipment Mechanic	44.80	45.92	47.12
Flagman	33.60	34.44	35.34

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	\$ 57.32	\$ 58.72	\$ 60.22
Crane, Crawler Backhoe	57.32	58.72	60.22
Cable Splicer	63.05	64.59	66.24
Certified Welder -			
Pipe Type Cable	60.19	61.66	63.23
Digging Mach. Operator	51.59	52.85	54.20
Tractor Trailer Driver	48.72	49.91	51.19
Groundman, Truck Driver	45.86	46.98	48.18
Equipment Mechanic	45.86	46.98	48.18
Flagman	34.39	35.23	36.13

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	\$ 58.51	\$ 59.91	\$ 61.41
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Crane, Crawler Backhoe	58.51	59.91	61.41
Cable Splicer	58.51	59.91	61.41
Digging Mach. Operator	52.66	53.92	55.27
Tractor Trailer Driver	49.73	50.92	52.20
Groundman, Truck Driver	46.81	47.93	49.13
Equipment Mechanic	46.81	47.93	49.13
Flagman	35.11	35.95	36.85

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 %

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. 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):

	07/01/2022	05/01/2023	05/06/2024
Journeyman	\$ 25.90 *plus 7% of the hourly wage paid	\$ 26.40 *plus 7% of the hourly wage paid	\$ 26.90 *plus 7% of the hourly wage paid
Journeyman Lineman or Equipment Operators with Crane License	\$ 27.90 *plus 7% of the hourly wage paid	\$ 29.40 *plus 7% of the hourly wage paid	\$ 30.90 *plus 7% of the hourly wage paid

\*The 7% is based on the hourly wage paid, straight time or premium time.

### 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 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 per hour:

	07/01/2022	05/01/2023	05/06/2024
	\$ 25.90 *plus 7% of the hourly wage paid	\$ 26.40 *plus 7% of the hourly wage paid	\$ 26.90 *plus 7% of the hourly wage paid

\*The 7% is based on the hourly wage paid, straight time or premium time.

**Lineman Electrician - Teledata****09/01/2022****JOB DESCRIPTION** Lineman Electrician - Teledata**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, Westchester, Wyoming, Yates

**WAGES**

Per hour:

For outside work, stopping at first point of attachment (demarcation).

	07/01/2022	01/01/2023	01/01/2024	01/01/2025
Cable Splicer	\$ 36.28	\$ 37.73	\$ 39.24	\$ 40.81
Installer, Repairman	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Teledata Lineman	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Tech., Equip. Operator	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Groundman	\$ 18.25	\$ 18.98	\$ 19.74	\$ 20.53

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:	07/01/2022	01/01/2023	01/01/2024	01/01/2025
Journeyman	\$ 5.14	\$ 5.14	\$ 5.14	\$ 5.14
	*plus 3% of the hourly wage paid	*plus 3% of the hourly wage paid	*plus 3% of the hourly wage paid	*plus 3% of the hourly wage paid

\*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

**Lineman Electrician - Traffic Signal, Lighting****09/01/2022****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**

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/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/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)

Per hour:	07/01/2022	05/01/2023	05/06/2024
Lineman, Technician	\$ 48.19	\$ 49.32	\$ 50.54
Crane, Crawler Backhoe	48.19	49.32	50.54
Certified Welder	50.60	51.79	53.07
Digging Machine	43.37	44.39	45.49
Tractor Trailer Driver	40.96	41.92	42.96
Groundman, Truck Driver	38.55	39.46	40.43
Equipment Mechanic	38.55	39.46	40.43
Flagman	28.91	29.59	30.32

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	REGULAR RATE PLUS 31.4%

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. 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):

	07/01/2022	05/01/2023	05/06/2024
Journeyman	\$ 25.90 *plus 7% of the hourly wage paid	\$ 26.40 *plus 7% of the hourly wage paid	\$ 26.90 *plus 7% of the hourly wage paid
Journeyman Lineman or Equipment Operators with Crane License	\$ 27.90 *plus 7% of the hourly wage paid	\$ 29.40 *plus 7% of the hourly wage paid	\$ 30.90 *plus 7% of the hourly wage paid

\*The 7% is based on the hourly wage paid, straight time or premium time.

#### 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 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 per hour:

07/01/2022	05/01/2023	05/06/2024
\$ 25.90	\$ 26.40	\$ 26.90
*plus 7% of the hourly wage paid	*plus 7% of the hourly wage paid	*plus 7% of the hourly wage paid

\*The 7% is based on the hourly wage paid, straight time or premium time.

6-1249a-LT

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**Lineman Electrician - Tree Trimmer****09/01/2022**

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**JOB DESCRIPTION** Lineman Electrician - Tree Trimmer

**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**

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.

Per hour:	07/01/2022	01/01/2023
Tree Trimmer	\$ 28.25	\$ 29.80
Equipment Operator	24.98	26.35
Equipment Mechanic	24.98	26.35
Truck Driver	20.80	21.94
Groundman	17.13	18.07
Flag person	13.20*	13.20*

\*NOTE: Subject to change due to any minimum wage increases.

**SUPPLEMENTAL BENEFITS**

Per hour worked (but also required on non-worked holidays):

	07/01/2022	01/01/2023
Journeyman	\$ 10.23	\$ 10.48
	*plus 3% of the hourly wage paid	*plus 3% of the hourly wage paid

\* 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 (5, 6, 8, 15) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

NOTE: 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.

6-1249TT

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**Mason - Building****09/01/2022**

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**JOB DESCRIPTION** Mason - Building

**DISTRICT 12**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

## WAGES

Per hour 07/01/2022

Tile/Marble/Terrazzo

Setter	\$ 36.71
Finisher	28.61

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	\$ 21.43
Journeyman Finisher	18.52

## 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	60%
2nd term 501-1500 hrs	70%
3rd term 1501-2500 hrs	80%
4th term 2501-3500 hrs	85%
5th term 3501-4500 hrs	90%
6th term 4501-6000 hrs	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

07/01/2022

Setter:	
1st term 0-500 hrs	\$ 12.68
2nd term 501-1500 hrs	12.68
3rd term 1501-2500 hrs	17.05
4th term 2501-3500 hrs	17.05
5th term 3501-4500 hrs	19.24
6th term 4501-6000 hrs	21.43

Finisher:	
1st term 0-500 hrs	\$ 11.97
2nd term 501-1500 hrs	11.97
3rd term 1501-2500 hrs	15.24
4th term 2501-3700 hrs	15.24

12-2TS.1

## Mason - Building

09/01/2022

JOB DESCRIPTION Mason - Building

DISTRICT 12

## ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

## PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Lake George, Lake Luzerne, Queensbury, Stony Creek, Thurman & Warrensburg.



## WAGES

Per hour 07/01/2022

Bricklayer	\$ 39.54
Cement Mason(Bldg)	39.54
Plasterer/Fireproofing*	39.54
Pointer/Caulker/Cleaner	39.54
Stone Mason	39.54
Acid Brick	40.04

(\*)Fireproofing of 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

Journeyman	\$ 22.63
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## OVERTIME PAY

See (B, E, E2, 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

750 hour terms at the following percentage of Journey's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
60%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

All Terms	\$ 22.63
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12-2b.1

## Mason - Heavy&Highway

09/01/2022

**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

## 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 07/01/2022

Mason & Bricklayer	\$ 40.76
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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	\$ 21.48
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## OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

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
60%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

0 to 500 Hours	\$ 12.98
All Other	21.48

12-2hh.1

## Millwright

09/01/2022

**JOB DESCRIPTION** Millwright

**DISTRICT** 6

## 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

## WAGES

THE FOLLOWING RATE APPLIES TO ANY GAS/STEAM TURBINE AND OR RELATED COMPONENT WORK, INCLUDING NEW INSTALLATIONS OR MAINTENANCE AND ANY/ALL WORK PERFORMED WITHIN THE PROPERTY LIMITS OF A NUCLEAR FACILITY.

Per hour: 07/01/2022

Millwright - Power Generation \$ 41.23

NOTE: ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):

- Certified Welders shall receive an additional \$1.75 per hour provided he/she is directed to perform certified welding.
- 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 an additional \$1.50 per hour.
- An employee performing the work of a machinist shall receive an additional \$2.00 per hour. 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 \$1.00 per hour.

## SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman \$ 26.72\*

\*NOTE: Subject to OT premium

## OVERTIME PAY

See (B, E, \*E2, Q, V) on OVERTIME PAGE

\*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: One year terms at the following percentage of Journeyman's wage:

Appr. 1st year	65 %*
Appr. 2nd year	75 %*
Appr. 3rd year	80 %*
Appr. 4th year	90 %*

\*NOTE: Additional premium for the following work listed below:

Certified Welder \$ 1.75

Hazardous Waste Work	1.50
Machinist	2.00
Underground (500' and below)	1.00

SUPPLEMENTAL BENEFITS per hour:

Appr. 1st year	\$ 11.83
Appr. 2nd year	22.26
Appr. 3rd year	23.74
Appr. 4th year	25.24

6-1163Power

**Millwright**

**09/01/2022**

**JOB DESCRIPTION** Millwright

**DISTRICT 2**

**ENTIRE COUNTIES**

Albany, Chenango, Delaware, Fulton, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie

**WAGES**

Per hour: 07/01/2022

Building	\$ 35.84
Heavy & Highway	37.84

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 \$1.00.

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman	\$ 25.41
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**OVERTIME PAY**

See (B, E, \*E2, Q) on OVERTIME PAGE

\*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 Journeyman's rate.

1st	2nd	3rd	4th
65%	75%	80%	90%

Supplemental Benefits per hour:

Apprentices:	
1st term	\$ 11.93
2nd term	21.37
3rd term	22.72
4th term	24.06

2-1163.1

**Operating Engineer - Building**

**09/01/2022**

**JOB DESCRIPTION** Operating Engineer - Building

**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 Bedell Road then east along Bedell 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, whirlyies, 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, tractor-mounted 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, vacuum 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, belcrete 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

	07/01/2022
Class # A1	\$ 47.81
Class # A	47.32
Class # B	46.30
Class # C	43.40

Additional \$0.50 per hr for Tower Cranes.

Additional \$1.25 per hr for Cranes with Boom length & jib 150ft. and over.

Additional \$2.25 per hr for Cranes with Boom length & jib 200ft. and over.

Additional \$2.50 per hr over B rate for Nuclear Leader work.

Additional \$0.40 per hr for tunnel or excavation of shaft 40' or more deep.

Additional \$2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

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

07/01/2022

Journeyman \$ 30.55

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on Saturday, it will be celebrated on Friday.  
Employees who work a designated holiday shall be paid double time plus 8 hours of straight time.

## REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyperson's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

All terms \$ 25.85

1-158 Alb

## Operating Engineer - Heavy&Highway

09/01/2022

**JOB DESCRIPTION** Operating Engineer - Heavy&Highway

**DISTRICT** 1

### ENTIRE COUNTIES

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

### PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedell Road then east along Bedell 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 self-propelled), 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 Ride-on Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vacuum machine (mounted or towed), Vermeer saw (ride on, any size or type), Welder, Winch, Winch Cat

#### 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, Gunit 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.

WAGES per hour

07/01/2022

Master Mechanic	\$ 51.03
Class A*	49.42
Class B	48.51
Class C	45.94

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

Journey person	\$ 30.75
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**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 employer can choose to celebrate Saturday or give Friday off with pay.

**REGISTERED APPRENTICES**

Wages per hour

1000 hours terms at the following percentage of Journey person's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

All Terms	\$ 26.15
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1-158H/H Alb

**Operating Engineer - Survey Crew**

**09/01/2022**

**JOB DESCRIPTION** Operating Engineer - Survey Crew

**DISTRICT** 12

**ENTIRE COUNTIES**

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: 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.

07/01/2022

Party Chief	\$ 47.37
Instrument Person	43.51
Rod Person	32.26

Additional \$3.00/hr. for Tunnel Work  
Additional \$2.50/hr. for Hazardous Work Site

#### SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 28.05
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#### OVERTIME PAY

See (B, E, P, \*X) on OVERTIME PAGE

\*Note: \$24.10/Hr. Only for "ALL" premium hours paid when worked.

#### 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:

07/01/2022

0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 19.83 / PHP \$17.03
1001-2000	22.85 / " 19.45
2001-3000	25.88 / " 21.93

NOTE: PHP is premium hours paid when worked.

12-158-545 D.H.H.

#### Operating Engineer - Survey Crew - Consulting Engineer

09/01/2022

**JOB DESCRIPTION** Operating Engineer - Survey Crew - Consulting Engineer

**DISTRICT** 12

#### ENTIRE COUNTIES

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: 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 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.

07/01/2022

Party Chief	\$ 47.37
Instrument Person	43.51
Rod Person	32.26

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 \$ 28.05

### OVERTIME PAY

See (B, E, Q, \*X) on OVERTIME PAGE

\*Note: \$24.10/Hr. Only for "ALL" premium hours paid when worked.

### 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:

07/01/2022

0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 19.83 / PHP \$17.03
1001-2000	\$ 22.85 / " 19.45
2001-3000	\$ 25.88 / " 21.93

NOTE: PHP is premium hours paid when worked.

12-158-545 DCE

### Operating Engineer - Tunnel

09/01/2022

**JOB DESCRIPTION** Operating Engineer - Tunnel

**DISTRICT 7**

### ENTIRE COUNTIES

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 Bedell Road, then east along Bedell 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 the borderline of the State of 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; Vacuum Machine (mounted or towed); 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); Scarifier (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 Insertor (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

Per hour: 07/01/2022

Master Mechanic	\$ 52.60
CLASS A	50.19
CLASS B	48.97
CLASS C	46.18
CLASS D	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	\$ 54.19
Crane 2	53.19
Crane 3	52.19

#### SUPPLEMENTAL BENEFITS

Per hour:

\$ 23.70  
+ 9.35\*

\* This portion of benefits subject to same premium rate as shown for overtime wages.

#### OVERTIME PAY

See (B, B2, E, Q, X) on OVERTIME PAGE

#### HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

If a holiday falls on Sunday, it shall be observed on Monday.

#### REGISTERED APPRENTICES

WAGES:(1000) hours terms at the following percentage of Journeyman's Class B wage.

1st term	60%
2nd term	65%
3rd term	70%
4th term	75%

SUPPLEMENTAL BENEFITS per hour: Same as Journeyman

7-158-832TL.

**Painter**

**09/01/2022**

**JOB DESCRIPTION** Painter

**DISTRICT** 1

#### ENTIRE COUNTIES

Albany, Clinton, Essex, Franklin, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

## WAGES

Per hour

	07/01/2022	05/01/2023 Additional
Painter\Wallcovers	\$ 30.79**	\$ 1.50
Drywall Finishers	30.79**	
Spray Rate	30.79**	
Structural Steel*	31.79**	
Lead Abatement	31.79**	
Lead Abatement on Structural Steel	32.79**	

(\*)Employees working on objects with the use of swing stage, boatswain chair, pick and cables only will be paid at Structural Steel rate.

(\*\*) Plus Additional \$1.00 per hour not subject to Overtime/Premiums

Bridge Painter

See Bridge Painter rates for the following work:

All Bridges and Tanks

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

Journey person \$ 18.95

## OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

THE FOLLOWING ADDITIONAL HOURLY RATE WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFT(S) OR SINGULAR IRREGULAR SHIFT WHEN THE SHIFT STARTS BETWEEN THE HOURS LISTED BELOW:

2:30 PM to 6:00 AM PLUS \$1.00 TO APPLICABLE RATE\*

\*Additional \$1.00 is Not Subject to Overtime

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it shall be observed on Monday.

## REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journey person's base wage

1st	2nd	3rd	4th	5th	6th
45%	50%	60%	70%	80%	90%

Supplemental Benefits per hour

All Terms \$ 18.95

1-201-P

## Painter - Bridge & Structural Steel

09/01/2022

**JOB DESCRIPTION** Painter - Bridge & Structural Steel

**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

## WAGES

Per Hour:

STEEL:

Bridge Painting:	07/01/2022	10/01/2022
	\$ 53.00	Additional
	+ 9.63*	\$ 3.00

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.

#### SHIFT WORK:

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

#### SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker:

\$ 10.90  
+ 30.60\*

\* 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 (B, 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

1st year	\$ 21.20 + 3.86
2nd year	\$ 31.80 + 5.78
3rd year	\$ 42.40 + 7.70
Supplemental Benefits - Per hour:	
1st year	\$ .25 + 12.24
2nd year	\$ 10.90 + 18.36
3rd year	\$ 10.90 + 24.48

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

#### Painter - Line Striping

09/01/2022

**JOB DESCRIPTION** Painter - Line Striping

**DISTRICT** 8

#### ENTIRE COUNTIES

Albany, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Nassau, Orange, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

## WAGES

Per hour:

Painter (Striping-Highway):	07/01/2022
Striping-Machine Operator*	\$ 31.53

Linerman Thermoplastic	38.34
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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 BENEFITS

Per hour paid:

Journeyworker:	
Striping Machine Operator:	\$ 10.03
Linerman Thermoplastic:	10.03

## OVERTIME PAY

See (B, B2, E2, F, S) on OVERTIME PAGE

## HOLIDAY

Paid:	See (5, 20) on HOLIDAY PAGE
Overtime:	See (5, 20) on HOLIDAY PAGE

## REGISTERED APPRENTICES

One (1) year terms at the following wage rates:

1st Term:	\$ 15.00
2nd Term:	18.92
3rd Term:	25.22

Supplemental Benefits per hour:

1st term:	\$ 9.16
2nd Term:	10.03
3rd Term:	10.03

8-1456-LS

## Painter - Metal Polisher

09/01/2022

**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

	07/01/2022
Metal Polisher	\$ 37.78
Metal Polisher*	38.80
Metal Polisher**	41.78

\*Note: Applies on New Construction & complete renovation

\*\* Note: Applies when working on scaffolds over 34 feet.

## SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2022
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Journeyworker:	
All classification	\$ 11.24

## 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:

07/01/2022

1st year	\$ 16.00
2nd year	17.00
3rd year	18.00
1st year*	\$ 16.39
2nd year*	17.44
3rd year*	18.54
1st year**	\$ 18.50
2nd year**	19.50
3rd year**	20.50

\*Note: Applies on New Construction & complete renovation

\*\* Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

1st year	\$ 7.99
2nd year	7.99
3rd year	7.99

8-8A/28A-MP

### Plumber

09/01/2022

**JOB DESCRIPTION** Plumber

**DISTRICT 1**

### ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Schenectady, Schoharie

### PARTIAL COUNTIES

Hamilton: Only the Towns of Arietta, Benson, Hope, Inlet, Lake Pleasant, Morehouse and Wells.

Saratoga: Only the Towns of Charlton, Clifton Park, Galway, Halfmoon, Milton, Stillwater and Waterford and the city of Mechanicville.

### WAGES

Per hour:

07/01/2022

05/01/2023

Additional

Plumber:		
Pipefitter, Steamfitter	\$ 48.30	\$ 2.80

### SUPPLEMENTAL BENEFITS

Per hour

Journeyman	\$ 27.74
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### OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Whenever a Holiday falls on 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 Journeyperson's wage.

1st	2nd	3rd	4th	5th
\$ 22.01	\$ 26.79	\$ 31.57	\$ 36.35	\$ 43.52

Supplemental Benefits per hour:

Apprentices Indentured on or before April 30, 2019

All Terms \$ 27.74

Apprentices Indentured on or after May 1st, 2019

Terms 1-4 22.54

Terms 5 27.74

1-7-SF

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**Roofer****09/01/2022**

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**JOB DESCRIPTION** Roofer**DISTRICT 1****ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Warren, Washington

**WAGES**

Per hour

07/01/2022

07/01/2023

Additional

Roofer/Waterproofer \$ 33.55

\$ 2.50

Asphalt Cold Process 34.05

Fluid Applied Roof 34.05

Pitch &amp; Asbestos 35.55

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 \$ 22.02

**OVERTIME PAY**

See ( B, E, Q ) on OVERTIME PAGE.

**HOLIDAY**

Paid: See (1) 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 58%  
1500 hrs.

2nd Term 74%  
1 yr. and 1500 hrs. as 1st term.

3rd Term 90%  
1 yr. and 1500 hrs. as 2nd term.

3rd Term complete at 1 yr and 1050 hrs. as 3rd term

Supplemental Benefits per hour worked

1st Term \$ 20.44

2nd Term 20.87

3rd Term 21.35

1-241

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**Sheetmetal Worker****09/01/2022**

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**JOB DESCRIPTION** Sheetmetal Worker**DISTRICT 1****ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

## WAGES

Per hour

07/01/2022

06/01/2023

Additional

Sheetmetal Worker

\$ 36.50

\$ 2.45

All work requiring HAZWOPER Training additional \$1.00 per hour

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

\$ 35.73

## OVERTIME PAY

See ( B,E,E5,Q ) on OVERTIME PAGE

## HOLIDAY

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	\$ 20.27
2nd term	21.97
3rd term	22.83
4th term	23.68
5th term	22.40
6th term	23.51
7th term	25.37
8th term	27.22
9th term	29.08
10th term	30.93

Supplemental Benefits per hour

1st term	\$ 22.06
2nd term	22.67
3rd term	22.98
4th term	23.42
5th term	30.01
6th term	30.46
7th term	31.21
8th term	31.97
9th term	32.72
10th term	33.47

1-83

## Sprinkler Fitter

09/01/2022

**JOB DESCRIPTION** Sprinkler Fitter

**DISTRICT** 1

## 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

07/01/2022

Sprinkler  
Fitter

\$ 38.15

## SUPPLEMENTAL BENEFITS

Per hour

Journey person \$ 27.68

## OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: 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

One Half Year terms at the following wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 18.30	\$ 20.34	\$ 22.12	\$ 24.15	\$ 26.19	\$ 28.22	\$ 30.25	\$ 32.29	\$ 34.32	\$ 36.35

Supplemental Benefits per hour

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.37	\$ 8.37	\$ 19.76	\$ 19.76	\$ 20.01	\$ 20.01	\$ 20.01	\$ 20.01	\$ 20.01	\$ 20.01
									1-669

## Teamster - Building

09/01/2022

**JOB DESCRIPTION** Teamster - Building

**DISTRICT 1**

## ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

## PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Lake George, Lake Luzerne and Queensbury.

## WAGES

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers, dump trucks, pick-ups, panel, water trucks, fuel trucks on the site (including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

WAGES per hour

07/01/2022

Group A \$ 29.02

Group B 29.32

## SUPPLEMENTAL BENEFITS

Per hour 07/01/2022

Journey person \$ 27.54

## OVERTIME PAY

See (B, E, E2, 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.

1-294

## Teamster - Heavy&Highway

09/01/2022

**JOB DESCRIPTION** Teamster - Heavy&Highway

**DISTRICT 1**

## ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Hamilton, Herkimer, Montgomery, Oneida, Rensselaer, Saratoga, Schenectady, Schoharie, Washington



## PARTIAL COUNTIES

Chenango: Entire county except the Townships of Afton, Bainbridge, Coventry, Greene, Guilford, Oxford and Smithville.

Lewis: Only the Township of Grieg, Lewis, Leyden, Lowville, Lyonsdale, Martinsburg, Turin, West Turin and Watson.

Madison: Only the Townships of Brookfield, Eaton, Hamilton, Lebanon, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida

Otsego: Entire county EXCEPT Townships of Butternuts, Laurens, Maryland, Milford, Morris, Oneonta, Otego, Unidilla and Worchester.

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Luzerne, Caldwell (Lake George), and Queensbury.

## WAGES

### GROUP #1:

Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks(straight jobs), Single Axel Dump Trucks, Dumpsters, Material Checkers and Receivers, Greasers, Truck Tiremen, Mechanics Helpers and Parts Chasers.

### GROUP #2:

Tandems and Batch Trucks, Mechanics, Dispatcher.

### GROUP #3:

Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel Trucks.

### GROUP #4:

Specialized Earth Moving Equipment, Euclid type, or similar off-highway,where not self-loading, Straddle (Ross) Carrier, and self-contained concrete mobile truck.

### GROUP #5:

Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

WAGES per hour	07/01/2022	07/01/2023
Group #1	\$ 34.90	\$ 37.59
Group #2	34.96	37.65
Group #3	35.05	37.74
Group #4	35.18	37.87
Group #5	35.34	38.03

Hazardous waste projects that require a Level C or greater protection shall be paid an additional \$ 1.00 per hour.

All employees who work a single irregular work shift starting between 5pm and 1 am on governmental mandated night shifts shall be paid an additional \$1.50 per hour.

For work bid on or after April 1, 1995, there shall be a 12 month carryover of the last posted rate in effect at the time of the bid.

## \*\* IMPORTANT NOTICE - EFFECTIVE 04/01/2009 \*\*

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday.

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:

\$ 27.32	\$ 28.13
+\$1.00 per*	+\$1.00 per*
hour worked	hour worked

(\*) not applicable to paid holidays

## OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE

## HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE  
Overtime: See (5, 6) on HOLIDAY PAGE

1-294h/h

**Welder**

**09/01/2022**

**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

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**WAGES**

Per hour

07/01/2022

Welder: To be paid the same rate of the mechanic performing the work.\*

\*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

( 29 )      Juneteenth



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

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

**This Form Must 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 Contracting/Public Agency)

1. Name and complete address ☐ (Check if new or change)

Telephone: ( )

Fax: ( )

E-Mail:

2. NY State Units (see Item 5)

☐ 01 DOT

☐ 02 OGS

☐ 03 Dormitory Authority

☐ 04 State University  
Construction Fund

☐ 05 Mental Hygiene  
Facilities Corp.

☐ 06 OTHER N.Y. STATE UNIT

☐ 07 City

☐ 08 Local School District

☐ 09 Special Local District, i.e.,  
Fire, Sewer, Water District

☐ 10 Village

☐ 11 Town

☐ 12 County

☐ 13 Other Non-N.Y. State  
(Describe)

3. SEND REPLY TO ☐ (check if new or change)  
Name and complete address:

Telephone:( )

Fax: ( )

E-Mail:

4. SERVICE REQUIRED. Check appropriate box and provide project information.

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR  
THIS PROJECT :

OFFICE USE ONLY

**B. PROJECT PARTICULARS**

5. Project Title \_\_\_\_\_

Description of Work \_\_\_\_\_

Contract Identification Number \_\_\_\_\_

Note: For NYS units, the OSC Contract No. \_\_\_\_\_

6. Location 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)
- ☐ Tunnel
- ☐ Residential
- ☐ Landscape Maintenance
- ☐ Elevator maintenance
- ☐ Exterminators, Fumigators
- ☐ Fire Safety Director, NYC Only
- ☐ Guards, Watchmen
- ☐ Janitors, Porters, Cleaners, Elevator Operators
- ☐ Moving furniture and equipment
- ☐ Trash and refuse removal
- ☐ Window cleaners
- ☐ Other (Describe)

9. Has this project been reviewed for compliance with the Wicks 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, or under NYS Workers' Compensation Law Section 141-b, access the database at this link: <https://applications.labor.ny.gov/EDList/searchPage.do>

**For inquiries where WCB is listed as the "Agency", please call 1-866-546-9322**





**NYSDOL Bureau of Public Work Debarment List    09/21/2022**

**Article 8**

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	DOL	*****5754	0369 CONTRACTORS, LLC		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL	*****4018	ADIRONDACK BUILDING RESTORATION INC.		4156 WILSON ROAD EAST TABERG NY 13471	03/26/2019	03/26/2024
DOL	AG	*****1812	ADVANCED BUILDERS & LAND DEVELOPMENT, INC.		400 OSER AVE #2300HAUPPAUGE NY 11788	09/11/2019	09/11/2024
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	NYC		AMJED PARVEZ		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL		ANGELO GARCIA		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL		ANITA SALERNO		158 SOLAR ST SYRACUSE NY 13204	01/07/2019	01/07/2024
DOL	DOL		ANTONIO ESTIVEZ		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	NYC		ARADCO CONSTRUCTION CORP		115-46 132RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	DOL		ARNOLD A. PAOLINI		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	NYC		ARSHAD MEHMOOD		168-42 88TH AVENUE JAMAICA NY 11432	11/20/2019	11/20/2024
DOL	NYC	*****2591	AVI 212 INC.		260 CROPSEY AVENUE APT 11GBROOKLYN NY 11214	10/30/2018	10/30/2023
DOL	NYC		AVM CONSTRUCTION CORP		117-72 123RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	NYC		AZIDABEGUM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****8421	B & B DRYWALL, INC		206 WARREN AVE APT 1WHITE PLAINS NY 10603	12/14/2021	12/14/2026
DOL	NYC		BALWINDER SINGH		421 HUDSON ST SUITE C5NEW YORK NY 10014	02/20/2019	02/20/2024
DOL	NYC	*****8416	BEAM CONSTRUCTION, INC.		50 MAIN ST WHITE PLAINS NY 10606	01/04/2019	01/04/2024
DOL	DOL		BERNARD BEGLEY		38 LONG RIDGE ROAD BEDFORD NY 10506	12/18/2019	12/18/2024
DOL	NYC	*****2113	BHW CONTRACTING, INC.		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		BIAGIO CANTISANI			06/12/2018	06/12/2023
DOL	DOL	*****3627	BJB CONSTRUCTION CORP.		38 LONG RIDGE ROAD BEDFORD NY 10506	12/18/2019	12/18/2024
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		BRADLEY J SCHUKA		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	DOL		BRUCE P. NASH JR.		5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057	09/12/2018	09/12/2023
DOL	DOL	*****0225	C&D LAFACE CONSTRUCTION, INC.		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL	*****4083	C.P.D. ENTERPRISES, INC		P.O BOX 281 WALDEN NY 12586	03/03/2020	03/03/2025
DOL	DOL	*****5161	CALADRI DEVELOPMENT CORP.		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026

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DOL	DOL	*****3391	CALI ENTERPRISES, INC.		1223 PARK STREET PEEKSKILL NY 10566	05/17/2021	05/17/2026
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 KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CANTISANI HOLDING LLC			06/12/2018	06/12/2023
DOL	DOL		CARMEN RACHETTA		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	02/03/2025
DOL	DOL		CARMENA RACHETTA		8531 OSWEGO ROAD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
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	AG	*****7247	CENTURY CONCRETE CORP		2375 RAYNOR ST RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	AG		CESAR J. AGUDELO		81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY 11372	02/07/2018	02/07/2023
DOL	DOL	*****0026	CHANTICLEER CONSTRUCTION LLC		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	NYC		CHARLES ZAHRAKKA		863 WASHINGTON STREET FRANKLIN SQUARE NY 11010	03/10/2020	03/10/2025
DOL	DOL		CHRISTOPHER GRECO		26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL		CHRISTOPHER J MAINI		19 CAITLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	DOL		CHRISTOPHER PAPASTEFANO A/K/A CHRIS PAPASTEFANO		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL	*****1927	CONSTRUCTION PARTS WAREHOUSE, INC.	CPW	5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057	09/12/2018	09/12/2023
DOL	DOL	*****3228	CROSS-COUNTY LANDSCAPING AND TREE SERVICE, INC.	ROCKLAND TREE SERVICE	26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL	*****2524	CSI ELECTRICAL & MECHANICAL INC		42-32 235TH ST DOUGLSTON NY 11363	01/14/2019	01/14/2024
DOL	NYC		DALJIT KAUR BOPARAI		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	DOL	*****7619	DANCO CONSTRUCTION UNLIMITED INC.		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	NYC		DAVID WEINER		14 NEW DROP LANE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024
DOL	AG		DEBRA MARTINEZ		31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	DOL		DELPHI PAINTING & DECORATING CO INC		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL		DOMENICO LAFACE		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	*****5175	EAGLE MECHANICAL AND GENERAL CONSTRUCTION LLC		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025

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DOL	DOL		EAST COAST PAVING		2238 BAKER RD GILLET PA 16923	03/12/2018	03/12/2023
DOL	AG		EDWIN HUTZLER		23 NORTH HOWELLS RD BELLPORT NY 11713	08/04/2021	08/04/2026
DOL	DA		EDWIN HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	NYC	*****5917	EPOCH ELECTRICAL, INC		97-18 50TH AVE CORONA NY 11368	04/19/2018	04/19/2024
DOL	DOL		FAIGY LOWINGER		11 MOUNTAIN RD 28 VAN BUREN DRMONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL		FRANK BENEDETTO		19 CATLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
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	01/17/2018	01/17/2023
DOL	DA		FREDERICK HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
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	NYC		GAYATRI MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
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	DOL		GIOVANNI LAFACE		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
DOL	NYC	*****3164	GLOBE GATES INC	GLOBAL OVERHEAD DOORS	405 BARRETTO ST BRONX NY 10474	05/31/2018	05/31/2023
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	DOL		HANS RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	NYC	*****3228	HEIGHTS ELEVATOR CORP.		1766 FRONT ST YORKTOWN HEIGHTS NY 10598	01/17/2018	01/17/2023
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	DOL	*****9211	J. WASE CONSTRUCTION CORP.		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
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 C. DELGIACCO		722 8TH AVE WATERVLIET NY 12189	06/05/2018	06/05/2023
DOL	DOL		JAMES J. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
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		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	*****7993	JBS DIRT, INC.		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	*****5368	JCH MASONRY & LANDSCAPING INC.		35 CLINTON AVE OSSINING NY 10562	09/12/2018	09/12/2023

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DOL	NYC		JENNIFER GUERRERO		1936 HEMPSTEAD TURNPIKE EAST MEADOW NY 11554	11/29/2019	11/29/2024
DOL	DOL		JIM PLAUGHER		17613 SANTE FE LINE ROAD WAYNEFIELD OH 45896	07/16/2021	07/16/2026
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	DOL		JOHN LUCIANO			05/14/2018	05/14/2023
DOL	DOL		JOHN MARKOVIC		47 MANDON TERRACE HAWTHORN NJ 07506	03/29/2021	03/29/2026
DOL	DOL		JOHN WASE		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
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	05/29/2019	05/29/2024
DOL	DOL		JORGE RAMOS		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
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	NYC		JOSEPH MARTINO		1535 RICHMOND AVENUE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	DOL		JOY MARTIN		2404 DELAWARE AVE NIGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL		KARIN MANGIN		796 PHELPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	DOL		KATE E. CONNOR		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KATIE BURDICK		2238 BAKER RD GILLET PA 16923	03/12/2018	03/12/2023
DOL	DOL	*****2959	KELC DEVELOPMENT, INC		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KIMBERLY F. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
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		LAVERN GLAVE		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	AG	*****3291	LINTECH ELECTRIC, INC.		3006 TILDEN AVE BROOKLYN NY 11226	02/16/2022	02/16/2027
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	DOL		LOUIS A. CALICCHIA		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	NYC		LUBOMIR PETER SVOBODA		27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
DOL	NYC		M & L STEEL & ORNAMENTAL IRON CORP.		27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024

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DOL	DOL	*****2196	MAINSTREAM SPECIALTIES, INC.		11 OLD TOWN RD SELKIRK NY 12158	02/02/2021	02/02/2026
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	NYC		MARIA NUBILE		84-22 GRAND AVENUE ELMHURST NY 11373	03/10/2020	03/10/2025
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 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		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	*****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		MSR ELECTRICAL CONSTRUCTION CORP.		31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	NYC		MUHAMMED A. HASHEM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	NYC		NAMOW, INC.		84-22 GRAND AVENUE ELMHURST NY 11373	03/10/2020	03/10/2025
DOL	DA	*****9786	NATIONAL INSULATION & GC CORP		180 MILLER PLACE HICKSVILLE NY 11801	12/12/2018	12/12/2023
DOL	DOL	*****3684	NATIONAL LAWN SPRINKLERS, INC.		645 N BROADWAY WHITE PLAINS NY 10603	05/14/2018	05/14/2023
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL	*****7429	NICOLAE I. BARBIR	BESTUCCO CONSTRUCTION, INC.	444 SCHANTZ ROAD ALLEN TOWN PA 18104	09/17/2020	09/17/2025
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	DOL		PAULINE CHAHALES		935 S LAKE BLVD MAHOPAC NY 10541	03/02/2021	03/02/2026
DOL	DOL		PETER STEVENS		11 OLD TOWN ROAD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DOL	*****0466	PRECISION BUILT FENCES, INC.		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	NYC		RASHEL CONSTRUCTION CORP		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****1068	RATH MECHANICAL CONTRACTORS, INC.		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL	*****2633	RAW POWER ELECTRIC CORP.		3 PARK CIRCLE MIDDLETOWN NY 10940	01/30/2018	01/30/2023
DOL	DOL	*****2633	RAW POWER ELECTRIC CORP.		3 PARK CIRCLE MIDDLETOWN NY 10940	07/11/2022	07/11/2027
DOL	AG	*****7015	RCM PAINTING INC.		69-06 GRAND AVENUE 2ND FLOORMASPETH NY 11378	02/07/2018	02/07/2023
DOL	DA	*****7559	REGAL CONTRACTING INC.		24 WOODBINE AVE NORTHPORT NY 11768	10/01/2020	10/01/2025
DOL	DOL		REGINALD WARREN		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023

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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		RICHARD REGGIO		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	DOL	****9148	RICHARD TIMIAN	RICH T CONSTRUCTION	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		ROBBYE BISSEAR		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		5 MORNINGSIDE DRIVE AUBURN NY 13021	05/28/2019	05/28/2024
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	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	07/11/2022	07/11/2027
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	****7172	RZ & AL INC.		198 RIDGE AVENUE VALLEY STREAM NY 11581	06/06/2022	06/06/2027
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	DOL		SAL FRESINA MASONRY CONTRACTORS, INC.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL		SAL MASONRY CONTRACTORS, INC.		(SEE COMMENTS) SYRACUSE NY 13202	07/16/2021	07/16/2026
DOL	DOL	****9874	SALFREE ENTERPRISES INC		P.O BOX 14 2821 GARDNER RDPOMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		SALVATORE A FRESINA A/K/A SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
DOL	DOL		SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
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	****1130	SCANA CONSTRUCTION CORP.		863 WASHINGTON STREET FRANKLIN SQUARE NY 11010	03/10/2020	03/10/2025
DOL	DOL	****2045	SCOTT DUFFIE	DUFFIE'S ELECTRIC, INC.	P.O BOX 111 CORNWALL NY 12518	03/03/2020	03/03/2025
DOL	DOL		SCOTT DUFFIE		P.O BOX 111 CORNWALL NY 12518	03/03/2020	03/03/2025
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 GILLET PA 16923	03/12/2018	03/12/2023
DOL	DOL		SHANE BURDICK		2238 BAKER ROAD GILLET 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

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DOL	DOL	*****0816	SOLAR ARRAY SOLUTIONS, LLC		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL	*****0440	SOLAR GUYS INC.		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	NYC		SOMATIE RAMSUNAHAI		115-46 132ND ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	DOL	*****2221	SOUTH BUFFALO ELECTRIC, INC.		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	DOL	*****3661	SPANIER BUILDING MAINTENANCE CORP		200 OAK DRIVE SYOSSET NY 11791	03/14/2022	03/14/2027
DOL	DOL		STANADOS KALOGELAS		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
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	*****9528	STEEL-IT, LLC.		17613 SANTE FE LINE ROAD WAYNESFIELD OH 45896	07/16/2021	07/16/2026
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		STEVE TATE		415 FLAGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DOL		STEVEN MARTIN		2404 DELWARE AVE NIAGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	DOL	*****3800	SUBURBAN RESTORATION CO. INC.		5-10 BANTA PLACE FAIR LAWN PLACE NJ 07410	03/29/2021	03/29/2026
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		SYED RAZA		198 RIDGE AVENUE NY 11581	06/06/2022	06/06/2027
DOL	DOL	*****8209	SYRACUSE SCALES, INC.		158 SOLAR ST SYRACUSE NY 13204	01/07/2019	01/07/2024
DOL	DOL		TALAILA OCAMPA		1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442	01/16/2018	01/16/2023
DOL	DOL		TERRY THOMPSON		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	DOL	*****9733	TERSAL CONSTRUCTION SERVICES INC		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13208	07/16/2021	07/16/2026
DOL	DOL		TERSAL CONTRACTORS, INC.		221 GARDNER RD P.O BOX 14POMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		TERSAL DEVELOPMENT CORP.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL		TEST		P.O BOX 123 ALBANY NY 12204	05/20/2020	05/20/2025
DOL	DOL	*****6789	TEST1000		P.O BOX 123 ALBANY NY 12044	03/01/2021	03/01/2026
DOL	DOL	*****5766	THE COKER CORPORATION	COKER CORPORATION	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL	*****5766	THE COKER CORPORATION	COKER CORPORATION	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DA	*****4106	TRIPLE H CONCRETE CORP		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****6392	V.M.K CORP.		8617 THIRD AVE BROOKLYN NY 11209	09/17/2018	09/17/2023
DOL	DOL	*****6418	VALHALLA CONSTRUCTION, LLC.		796 PHLEPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	NYC	*****2426	VICKRAM MANGRU	VICK CONSTRUCTION	21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	NYC		VICKRAM MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	DOL		VICTOR ALICANTI		42-32 235TH ST DOUGLSTON NY 11363	01/14/2019	01/14/2024
DOL	NYC		VIKTAR PATONICH		2630 CROSEY AVE BROOKLYN NY 11214	10/30/2018	10/30/2023



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DOL	DOL		VIKTORIA RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
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	*****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 G. PROERFRIEDT		85 SPRUCEWOOD ROAD WEST BABYLON NY 11704	01/19/2021	01/19/2026
DOL	DOL	*****5924	WILLIAM G. PROPHY, LLC	WGP CONTRACTIN G, INC.	54 PENTAQUIT AVE BAYSHORE NY 11706	01/19/2021	01/19/2026
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	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

DOCUMENT 008010 – NEW YORK STATE CONTRACT PROVISIONS

The parties to the attached contract further agree to be bound by the following, which are hereby made a part of said contract:

1. Attached hereto is a copy of Appendix A to the contract between the State of New York and the OWNER (grantee). To the extent that clauses wherein which bind the OWNER (grantee) are related to the manner in which the work is prosecuted by the contractor(s), or the business relationships, business practices, or hiring practices of contractors or subcontractors working on this project, all of the terms and conditions of said Appendix A are equally binding upon the CONTRACTOR. Any provisions therein which appear to apply only to a contract between the State and its Contractor(s) shall be deemed revised to make them binding upon the CONTRACTOR, and any references to statutory provisions which apply only to State contracts shall be deemed to be revised to reference such other and different statutory provisions as may be applicable to municipal contracts for construction of public improvements; provided, that this paragraph shall not apply to any agreement with any supplier which is located in and subject to the laws of a State other than New York with respect to its relationships, business practices and hiring practices.
  - a. The following provisions are not applicable: Paragraphs 3, 11, and 21.

END OF DOCUMENT 008010

EXCEPT FOR ABOVE REFERENCED ITEMS WHICH FOLLOW

SECTION 008010.1 - STANDARD CLAUSES FOR  
NYS CONTRACTS (Appendix A)

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licensor, licensee, lessor, lessee or any other party):

**1. EXECUTORY CLAUSE.** In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

**2. NON-ASSIGNMENT CLAUSE.** In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

**3. COMPTROLLER'S APPROVAL.** In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$25,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$85,000 (State Finance Law § 163.6-a). However, such pre-approval shall not be required for any contract established as a centralized contract through the Office of General Services or for a purchase order or other transaction issued under such centralized contract.

**4. WORKERS' COMPENSATION BENEFITS.** In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

**5. NON-DISCRIMINATION REQUIREMENTS.** To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment, nor subject any individual to harassment, because of age, race, creed, color, national origin, sexual orientation, gender identity or expression, military status, sex, disability, predisposing genetic characteristics, familial status, marital status, or domestic violence victim status or because the individual has opposed any practices forbidden under the Human Rights Law or has filed a complaint, testified, or assisted in any proceeding under the Human Rights Law. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

**6. WAGE AND HOURS PROVISIONS.** If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28,

2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.

**7. NON-COLLUSIVE BIDDING CERTIFICATION.**

In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

**8. INTERNATIONAL BOYCOTT PROHIBITION.**

In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2 NYCRR § 105.4).

**9. SET-OFF RIGHTS.** The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

**10. RECORDS.** The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively,

the "Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

**11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION.**

(a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.

(b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

**12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN.**

In accordance with Section 312 of the Executive Law and 5 NYCRR Part 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and (c) the Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a," "b," and "c" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section

312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this clause. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

**13. CONFLICTING TERMS.** In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

**14. GOVERNING LAW.** This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

**15. LATE PAYMENT.** Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

**16. NO ARBITRATION.** Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

**17. SERVICE OF PROCESS.** In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

**18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS.** The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for

an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in § 165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

**19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES.**

In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

**20. OMNIBUS PROCUREMENT ACT OF 1992.** It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development  
Division for Small Business  
Albany, New York 12245  
Telephone: 518-292-5100  
Fax: 518-292-5884 email: [opa@esd.ny.gov](mailto:opa@esd.ny.gov)

A directory of certified minority- and women-owned business enterprises is available from:

NYS Department of Economic Development  
Division of Minority and Women's Business  
Development  
633 Third Avenue  
New York, NY 10017  
212-803-2414  
email: [mwbecertification@esd.ny.gov](mailto:mwbecertification@esd.ny.gov)  
<https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp>

The Omnibus Procurement Act of 1992 (Chapter 844 of the Laws of 1992, codified in State Finance Law § 139-i and Public Authorities Law § 2879(3)(n)-(p)) requires that by

signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than \$1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority- and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

**21. RECIPROCITY AND SANCTIONS PROVISIONS.**

Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively, codified in State Finance Law § 165(6) and Public Authorities Law § 2879(5)) ) require that they be denied contracts which they would otherwise obtain. NOTE: As of October 2019, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii.

**22. COMPLIANCE WITH BREACH NOTIFICATION AND DATA SECURITY LAWS.**

Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law § 899-aa and State Technology Law § 208) and commencing March 21, 2020 shall also comply with General Business Law § 899-bb.

**23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW.**

If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4)(g) of the State

Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller

**24. PROCUREMENT LOBBYING.** To the extent this agreement is a "procurement contract" as defined by State Finance Law §§ 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law §§ 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

**25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.** To the extent this agreement is a contract as defined by Tax Law § 5-a, if the contractor fails to make the certification required by Tax Law § 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law § 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

**26. IRAN DIVESTMENT ACT.** By entering into this Agreement, Contractor certifies in accordance with State Finance Law § 165-a that it is not on the "Entities Determined to be Non-Responsive Bidders/Offers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at: <https://ogs.ny.gov/list-entities-determined-be-non-responsive-biddersofferers-pursuant-nys-iran-divestment-act-2012>

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law § 165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation

of the Act within 90 days after the determination of such violation, then the state agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

**26. IRAN DIVESTMENT ACT.** By entering into this Agreement, Contractor certifies in accordance with State Finance Law § 165-a that it is not on the "Entities Determined to be Non-Responsive Bidders/Offers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at:

<https://ogs.ny.gov/list-entities-determined-be-non-responsive-biddersofferers-pursuant-nys-iran-divestment-act-2012>

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law § 165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then the state agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The state agency reserves the right to reject any bid, request for assignment, renewal or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

**27. ADMISSIBILITY OF REPRODUCTION OF CONTRACT.** Notwithstanding the best evidence rule or any other legal principle or rule of evidence to the contrary, the Contractor acknowledges and agrees that it waives any and all objections to the admissibility into evidence at any court proceeding or to the use at any examination before trial of an electronic reproduction of this contract, in the form approved by the State Comptroller, if such approval was required, regardless of whether the original of said contract is in existence.

END OF SECTION 008010.1

SECTION 009113 - ADDENDA

1.1 NOTICE TO BIDDERS

- A. Addendum shall be issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. After Bid Opening and Contract Award, any addenda and modifications will be bound in this Project Manual immediately following this page.

END OF SECTION 009113

(Following to be completed after Bidding)

EXCEPT FOR ADDENDA AND MODIFICATIONS WHICH FOLLOW





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## **DIVISION 1**

### **General Requirements**

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
1. Project information.
  2. Work covered by Contract Documents.
  3. Contractor's use of site and premises.
  4. Coordination with occupants.
  5. Work restrictions.
  6. Specification and Drawing conventions.
  7. Miscellaneous provisions.
- B. Related Requirements:
1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
  2. Section 017300 "Execution" for coordination of Owner-installed products.

1.3 PROJECT INFORMATION

- A. Project Identification: **Montgomery County Phase 1 Generator**  
1. Project Location: 1 Venner Road  
Amsterdam, New York 12010.
- B. Owner: Montgomery County  
County Annex Building  
P.O. Box 1500 – 20 Park Street  
Fonda, New York 12068-1500
1. Owner's Project Representative:  
Eric M. Mead, Commissioner  
Department of Public Works  
6 Park Street - P.O. Box 1500  
Fonda, NY 12068-1500  
E-mail: emead@co.montgomery.ny.us  
Tel: (518) 853-3814
- C. Architect: Nicholas M. Lobosco, R.A.  
C.T. MALE ASSOCIATES  
Engineering, Surveying, Architecture, Landscape Architecture&Geology, DPC  
50 Century Hill Drive, Latham, New York 12110  
Tel. (518) 786-7400  
Email: n.lobosco@ctmale.com

1. Structural Engineer: Christopher M. Shaver, P.E.  
C.T. MALE ASSOCIATES  
Engineering, Surveying, Architecture, Landscape Architecture & Geology, DPC  
50 Century Hill Drive, Latham, New York 12110  
Tel. (518) 786-7400

D. Architect's Consultants: The Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Electrical Engineer: Bruce R. Wallman, P.E.  
ERDMAN ANTHONY  
145 Culver Road, Suite 200, Rochester, NY 14620  
Tel. (585) 427-8888, ext. 1060

E. Project Web Site: A project Web site administered by the **Architect/Engineer** will be used for purposes of managing communication and documents during the construction stage.

1. See Section 013100 "Project Management and Coordination." for requirements for using the Project Web site.

#### 1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Alterations as required to a portion of the existing building to accommodate the installation of an exterior backup generator, as well as the installation of related equipment as described in the Contract Documents.
  - a. It is the policy of the State of New York that contracts for public works--defined as the erection, construction, reconstruction or alteration of buildings--be governed by certain requirements. The reason for these requirements is to assure the taxpayers of the prudent and economical use of public money and to ensure that the products purchased or the facility being built achieves maximum quality at the lowest possible cost as per General Municipal Law §100-a. The type of project and the cost of the purchase or project determine the procedures that are followed as per General Municipal Law §103.
2. 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.
3. The Contractor shall be totally responsible for periodic cleaning up of the building and premises daily. In addition to general broom cleaning, the Contractor shall remove all refuse, waste materials and debris of any kind regardless as to who may have left same. All such refuse shall be removed from the property of the Owner and disposed of in a legal manner to the end that at all times the building and premises shall present a neat, orderly and workmanlike appearance. The definition of "periodic" shall mean - "as necessary and/or at the direction of the Owner or his representative."
4. The Work will be deemed to be complete when it is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.
5. The Work shall be substantially complete, for occupancy and use by the Owner, within **335** calendar days, in Phases as described in the Bid Documents, and completed and ready for final payment within **365** days after the date when the contract time commences to run. Time limits stated in the Contract Documents are of the essence of the Contract

B. Americans with Disabilities Act Requirements

1. The Owner is fully committed to the Americans with Disabilities Act (the "ADA"), which guarantees non-discrimination and equal access for persons with disabilities in employment,

public accommodations, transportation, and all programs, activities and services conducted by the Owner. The Owner's contractors, subcontractors, vendors, and/or suppliers are subject to this ADA policy. All persons and entities entering into contracts with the Owner are required to make the same commitment. By signing and submitting the enclosed Bid Form, each Bidder agrees to comply with the ADA in connection with its performance of any contract awarded hereunder.

- C. Compliance with Laws; Permits, Fees and Notices:
  - 1. The successful bidder shall be required to comply with all local, state and federal laws, rules, regulations and ordinances applicable to the Contract and to the services contemplated thereby.
    - a. The successful bidder shall be required to obtain, at its expense, all permits, licenses and other authorizations necessary for the performance of the services, except that the Owner shall obtain, at its expense, a Building Permit required for completion of the Project.
    - b. The successful bidder shall be responsible for giving all required notices and certifications, and for complying with all laws, ordinances, rules, regulations and directives of any public authority bearing on the performance of the work, regardless of whether those notices, certifications, laws, ordinances, rules, regulations and directives are expressly referenced in the Contract.
  - 2. A complete description of the size, code classification for occupancy and construction type, and compliance criteria is included in the Code Compliance Plan and Analysis Drawing.
- D. Type of Contract:
  - 1. Project will be constructed under a single prime contract.

#### 1.5 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Restricted Use of Site: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Limits on Use of Site: Limit use of Project site to Work in areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Driveways, Walkways and Entrances: Keep driveways, parking garage, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period.
  - 1. Repair damage caused by construction operations.
- D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

#### 1.6 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy portions of the premises outside the limits of the Work for limited purposes during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than [72] hours' notice to Owner of activities that will affect Owner's operations.

#### 1.7 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
  1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated.
  1. Weekend Hours: Subject to Owner's restrictions on times permitted for weekend work.
  2. Early Morning Hours: Subject to regulations by authorities having jurisdiction for restrictions on noisy work.
  3. Except in an emergency, the employment of workers who work in excess of an eight-hour day and a five-day week is prohibited in accordance with Labor Law §220 (2).
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:
  1. Notify **Owner's Project Representative** not less than [two] business days in advance of proposed utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to adjoining property Owners.
  1. Notify **Owner's Project Representative** not less than [two] business days in advance of proposed disruptive operations.
- E. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on the Project site is not permitted.
- F. Employee Identification: Provide identification, consisting of valid driver's license and a form acceptable to the Owner for Contractor personnel working on Project site. Require personnel to carry identification at all times.

#### 1.8 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
  3. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.

- C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
  - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011000

## SECTION 012100 - ALLOWANCES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Lump-sum allowances.
  - 2. Unit-cost allowances.
  - 3. Quantity allowances.
  - 4. Contingency allowances.
  - 5. Testing and inspecting allowances.
- C. Related Sections:
  - 1. Section 012200 "Unit Prices" for procedures for using unit prices, including adjustment of quantity allowances when applicable.
  - 2. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders for allowances.
  - 3. Section 014000 "Quality Requirements" for procedures governing the use of allowances for field testing by an independent testing agency.
  - 4. Divisions 02 through 49 Sections for items of Work covered by allowances.

#### 1.3 DEFINITIONS

- A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

#### 1.4 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.5 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.8 UNIT-COST ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.9 QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.



- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

#### 1.10 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

#### 1.11 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.
- C. Costs of testing and inspection services not specifically required by the Contract Documents are Contractor responsibilities and are not included in the allowance.
- D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

#### 1.12 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
  - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
  - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
  - 3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.

4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
  1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
  2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

### 3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

### 3.3 SCHEDULE OF ALLOWANCES

- A. General Construction Contract:
  1. Allowance No. 1: Contingency Allowance: Include the sum of **\$15,000.00** for use according to Owner's instructions due to unforeseen conditions.
  2. Allowance No. 2: Testing and Inspection Allowance: Include the sum of **\$5,000.00** for Arc Flash / Short Circuit Study and AF Warning Labels as requested by Architect/Engineer in accordance with Owner's instructions.
    - a. This allowance includes uncovering of portions of the Work, which the Architect/Engineer has not specifically requested to observe prior to its being covered, other than specific quality-assurance and -control requirements for individual construction activities as specified in the Sections that specify those activities performed as a responsibility of the Contractor, in accordance with Section 014000 "Quality Requirements."

END OF SECTION 012100

## SECTION 012500 - SUBSTITUTION PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Document 002600 "Procurement Substitution Procedures" for requirements for substitution requests prior to award of Contract.
  - 2. Section 012100 "Allowances" for products selected under an allowance.
  - 3. Section 012300 "Alternates" for products selected under an alternate.
  - 4. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
  - 5. Divisions 02 through 49 Sections for specific requirements and limitations for substitutions.

#### 1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

#### 1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use CSI Form 13.1A sample included in Project Manual.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - e. Samples, where applicable or requested.
  - f. Certificates and qualification data, where applicable or requested.
  - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
  - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES or other applicable code organization.
  - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - k. Cost information, including a proposal of change, if any, in the Contract Sum.
  - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
  - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect/Engineer will request additional information or documentation for evaluation within **[7] seven** days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within **[15] fifteen** days of receipt of request, or **[7] seven** days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials.
  - 1. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

## 1.6 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

## 1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than **[15] fifteen** days prior to time required for preparation and review of related submittals.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. Substitution request is fully documented and properly submitted.

- c. Requested substitution will not adversely affect Contractor's construction schedule.
  - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
  - e. Requested substitution is compatible with other portions of the Work.
  - f. Requested substitution has been coordinated with other portions of the Work.
  - g. Requested substitution provides specified warranty.
  - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within **[30 thirty]** days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect.
- 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - b. Requested substitution does not require extensive revisions to the Contract Documents.
    - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - d. Substitution request is fully documented and properly submitted.
    - e. Requested substitution will not adversely affect Contractor's construction schedule.
    - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - g. Requested substitution is compatible with other portions of the Work.
    - h. Requested substitution has been coordinated with other portions of the Work.
    - i. Requested substitution provides specified warranty.
    - j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 012500

## SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.
  - 2. Section 013100 "Project Management and Coordination" for requirements for forms for contract modifications provided as part of web-based Project management software.

#### 1.3 MINOR CHANGES IN THE WORK

- A. Architect/Engineer will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions" **AIA Document G710** form included in the Project Manual.

#### 1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect/Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Work Change Proposal Requests issued by Architect/Engineer are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request, or **[10] ten** days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
    - e. Quotation Form: forms provided. Sample copies are included in Project Manual.
  - 3. Work Change Proposal Request Form: AIA Document G709 for Proposal Requests.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect/Engineer.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  4. Include costs of labor and supervision directly attributable to the change.
  5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
  7. Proposal Request Form: Use forms provided by Architect. Sample copies is included in Project Manual.

#### 1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

#### 1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701 form included in Project Manual.

#### 1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714 form included in Project Manual.
1. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  2. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

#### PART 2 - PRODUCTS (NOT USED)

#### PART 3 - EXECUTION (NOT USED)

END OF SECTION 012600

## SECTION 012900 - PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Document 004473 "Proposed Schedule of Values Form" for requirements for furnishing proposed schedule of values following bid.
  - 2. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 3. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 4. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

#### 1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

#### 1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
  - 2. Submit the schedule of values to Architect through **Owner's Project Representative** at earliest possible date but no later than [7] seven days before the date scheduled for submittal of initial Applications for Payment.
  - 3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
  - 4. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values correlated with each element.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
  - 1. Identification: Include the following Project identification on the schedule of values:
    - a. Project name and location.
    - b. Owner's name.
    - c. Owner's Project number.



- d. Name of Architect.
- e. Architect's project number.
- f. Contractor's name and address.
- g. Date of submittal.
2. Arrange schedule of values consistent with format of **AIA Document G703** in tabular form with separate columns to indicate the following for each item listed:
  - a. Related Specification Section or Division.
  - b. Description of the Work.
  - c. Name of subcontractor.
  - d. Name of manufacturer or fabricator.
  - e. Name of supplier.
  - f. Change Orders (numbers) that affect value.
  - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.
    - 1) Labor.
    - 2) Materials.
    - 3) Equipment.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents.
  - a. Provide multiple line items for principal subcontract amounts in excess of **[5]** five percent of Contract Sum.
4. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. Where required, include evidence of insurance or bonded warehousing.
5. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity.
  - a. Use information indicated in the Contract Documents to determine quantities.
6. Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract.
  - a. Show line-item value of purchase contract. Indicate owner payments or deposits, if any, and balance to be paid by Contractor.
7. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
8. Closeout Costs: Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling **[5]** five percent of the Contract Sum and subcontract amount.
9. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum or if further breakdown required to facilitate continued evaluation of Applications for Payment.
  - a. Include at least one separate line item for each Change Order and Construction Change Directive.

## 1.5 APPLICATIONS FOR PAYMENT

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

- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
1. Submit draft copy of Application for Payment [7] seven days prior to due date for review by Architect.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
1. Other Application for Payment forms proposed by the Contractor shall not be acceptable to Architect and Owner.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
  4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit [3] three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment, including subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  2. When an application shows completion of an item, submit conditional final or full waivers.
  3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work who is lawfully entitled to a lien.
  5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.

- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Schedule of values.
  3. Contractor's construction schedule (preliminary if not final).
  4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
  5. Products list (preliminary if not final).
  6. Submittal schedule (preliminary if not final).
  7. List of Contractor's staff assignments.
  8. Copies of building permits.
  9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  10. Initial progress report.
  11. Certificates of insurance and insurance policies.
  12. Performance and payment bonds.
  13. Data needed to acquire Owner's insurance.
- I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
    - a. Complete administrative actions, submittals, and Work preceding this application, as described in Section 017700 "Closeout Procedures."
  2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims" or equivalent Document provided by Owner, as described in the General Conditions.
  5. AIA Document G706A, "Contractor's Affidavit of Release of Liens" or equivalent Document provided by the Owner as described in the General Conditions.
  6. AIA Document G707, "Consent of Surety to Final Payment" or equivalent Document provided by the Owner as described in the General Conditions.
  7. Evidence that claims have been settled.
  8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Administrative and supervisory personnel.
  - 3. Coordination drawings.
  - 4. Requests for Information (RFIs).
  - 5. Digital project management procedures.
  - 6. Project meetings.
- B. Contractor shall participate in coordination requirements through **Owner's Project Representative**.
  - 1. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
  - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
  - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect/Engineer, or Contractor seeking information from each other during construction.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A and include the following information in tabular form:
  - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Prior to starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site.
  - 1. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names,

addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

2. Post copies of list in project meeting room, in temporary field office, in web-based Project software directory, and in prominent location in built facility. Keep list current at all times.

#### 1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.
  1. Schedule construction operations in sequence required to obtain the best results, where installation of one part of the Work depends on installation of other components, before or after its own installation.
  2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  1. Prepare similar memoranda for Owner, and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  1. Preparation of Contractor's construction schedule.
  2. Preparation of the schedule of values.
  3. Installation and removal of temporary facilities and controls.
  4. Delivery and processing of submittals.
  5. Progress meetings.
  6. Preinstallation conferences.
  7. Project closeout activities.
  8. Startup and adjustment of systems.

#### 1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. Project Site Superintendent: Contractor shall provide a full-time on-site Project Site Superintendent while any Work related to this Contract is being performed on site, including the activities of their subcontractors, or require the coordination of Work related to this Contract.
  1. Superintendent may be a Working Foreman as long as the daily requirements of the Contract are maintained, as they relate to the Construction Documents and the Project Schedule. The Construction Site Representative reserves the right to revoke this privilege if in their opinion these requirements are not maintained.
  2. Superintendent shall participate in weekly meetings to schedule and coordinate the Work, in a manner that best promotes the Master Construction Schedule and the objectives of the Project.
  3. Superintendent shall be able to make binding decisions on behalf of the Prime Contractor, as they relate to the daily activities of their crew, adjustments in Work scope, and achieving the goals of the Project.
- B. Project Site Superintendent shall be an individual with minimum of five (5) years experience in this field of Work.
  1. The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection.

2. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.
- C. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
  1. Include special personnel required for coordination of operations with other contractors.

#### 1.7 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings in accordance with requirements in individual Sections, where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
  1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
    - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    - f. Indicate required installation sequences.
    - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Digital Data Files: Prepare coordination digital data files in accordance with the following requirements:
  1. File Preparation Format: Same digital data software program, version, and operating system as the original Drawings.
  2. Architect will furnish Contractor one set of digital data files of the Drawings for use in preparing coordination digital data files.
    - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to the Drawings.
    - b. Each Contractor shall execute a data licensing agreement in the form of AIA Document C106, prepared by the Architect.

#### 1.8 REQUESTS FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
  1. Architect/Engineer will return RFIs submitted to Architect by other entities controlled by Contractor with no response.

2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
  2. Owner name.
  3. Owner's Project number.
  4. Name of Architect/Engineer.
  5. Architect's Project number.
  6. Date.
  7. Name of Contractor.
  8. RFI number, numbered sequentially.
  9. RFI subject.
  10. Specification Section number and title and related paragraphs, as appropriate.
  11. Drawing number and detail references, as appropriate.
  12. Field dimensions and conditions, as appropriate.
  13. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  14. Contractor's signature.
  15. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: AIA Document G716 form, a sample of which bound in the Project Manual.
1. RFI Form will be submitted to Architect/Engineer in electronic draft format, which that can be edited and finalized by the Architect/Engineer.
  2. Attachments shall be electronic files in PDF format.
- D. Architect's Action: Architect/Engineer will review each RFI, determine action required, and respond. Allow **[7] seven** working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
  3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
    - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect/Engineer and **Owner's Project Representative** in writing within **[5] five** days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly with Application for Payment. Include the following:
1. Project name.
  2. Name and address of Contractor.

3. Name and address of Architect/Engineer.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect/Engineer and **Owner's Project Representative** within [7] seven days if Contractor disagrees with response.

1. Use CSI Log Form 13.2B, a sample of which bound in the Project Manual.

#### 1.9 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Use of Architect's Digital Data Files: Digital data files of Architect's CAD drawings will be provided by Architect/Engineer for Contractor's use during construction.

1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project record Drawings.
2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
3. Digital Drawing Software Program: Contract Drawings are available in AutoCAD 2017 format.
4. Contractor shall execute a data licensing agreement in the form of AIA Document C106 Digital Data Licensing Agreement acceptable to the Architect/Engineer.
  - a. Subcontractors, and other parties granted access by Contractor to Architect's digital data files shall execute a data licensing agreement in the form of AIA Document C106 Digital Data Licensing Agreement acceptable to the Architect/Engineer.
5. The following digital data files will be furnished for each appropriate discipline:
  - a. Floor plans.
  - b. Reflected ceiling plans.

- B. Web-Based Project Software: Use Architect's web-based Project software site for purposes of hosting and managing Project communication and documentation until Final Completion.

1. Web-based Project software site includes, at a minimum, the following features:
  - a. Compilation of Project data, including Contractor, subcontractors, Architect/Engineer, Owner, and other entities involved in Project. Include names of individuals and contact information.
  - b. Access control for each entity for each workflow process, to determine entity's digital rights to create, modify, view, and print documents.
  - c. Document workflow planning between project entities.
  - d. Tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, and Supplemental Instructions.
  - e. Procedures for handling PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
  - f. Distributing meeting minutes.
  - g. Document management for Drawings, Specifications, and coordination drawings, including revision control.
  - h. Management of construction progress photographs and field reports.
  - i. Project schedule.
2. Architect's Transfer Site: The Architect/Engineer maintains a secure file transfer site to facilitate digital project management procedures over the Internet through a service called Onehub.
  - a. The site is completely web-based, supporting browsers such as Internet Explorer or a recent version of Firefox.



- C. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  2. Name file with submittal number or other unique identifier, including revision identifier.
  3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

#### 1.10 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify **Owner's Project Representative** of scheduled meeting dates and times prior to a minimum of **[7] seven** working days meeting.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, and Architect, within three days of the meeting.
    - a. Use CSI Form 08-0A Meeting Minutes, a sample of which bound in the Project Manual, or a form acceptable to the Architect/Engineer and Owner.
- B. Preconstruction Conference: **Owner's Project Representative** will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than **[15] fifteen** days after execution of the Agreement.
1. Conduct the conference to review responsibilities and personnel assignments.
  2. Attendees: Authorized representatives of Owner, Architect/Engineer, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Responsibilities and personnel assignments.
    - b. Tentative construction schedule.
    - c. Phasing.
    - d. Critical work sequencing and long-lead items.
    - e. Designation of key personnel and their duties.
    - f. Lines of communications.
    - g. Use of web-based Project software.
    - h. Procedures for processing field decisions and Change Orders.
    - i. Procedures for RFIs.
    - j. Procedures for testing and inspecting.
    - k. Procedures for processing Applications for Payment.
    - l. Distribution of the Contract Documents.
    - m. Submittal procedures.
    - n. Preparation of Record Documents.
    - o. Use of the premises and off-site Owner's facilities.
    - p. Work restrictions.
    - q. Working hours.
    - r. Owner's occupancy requirements.
    - s. Responsibility for temporary facilities and controls.
    - t. Construction waste management and recycling.
    - u. Disposal requirements for hauling excess fill materials off-site.
    - v. Parking availability.
    - w. Office, work, and storage areas.
    - x. Equipment deliveries and priorities.

- y. Security.
    - z. Progress cleaning.
  - 4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Each Contractor shall conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect/Engineer through **Owner's Project Representative**, and Owner's Special Inspector, if needed, of scheduled meeting dates.
  - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
    - a. Contract Documents.
    - b. Options.
    - c. Related RFIs.
    - d. Related Change Orders.
    - e. Purchases.
    - f. Deliveries.
    - g. Submittals.
    - h. Review of mockups.
    - i. Possible conflicts.
    - j. Compatibility problems.
    - k. Time schedules.
    - l. Weather limitations.
    - m. Manufacturer's written recommendations.
    - n. Warranty requirements.
    - o. Compatibility of materials.
    - p. Acceptability of substrates.
    - q. Temporary facilities and controls.
    - r. Space and access limitations.
    - s. Regulations of authorities having jurisdiction.
    - t. Testing and inspecting requirements.
    - u. Installation procedures.
    - v. Coordination with other work.
    - w. Required performance results.
    - x. Protection of adjacent work.
    - y. Protection of construction and personnel.
  - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
  - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: **Owner's Project Representative** will schedule and conduct a Project closeout conference, at a time convenient to Owner and Architect/Engineer, but no later than **[15] fifteen** days prior to the scheduled date of Substantial Completion.
- 1. Conduct the conference to review requirements and responsibilities related to Project closeout.
  - 2. Attendees: Authorized representatives of Owner, Architect/Engineer; Contractors and their superintendents; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
    - a. Preparation of Record Documents.
    - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    - c. Procedures for completing and archiving web-based Project software site data files.
    - d. Submittal of written warranties.
    - e. Requirements for preparing operations and maintenance data.
    - f. Requirements for delivery of material samples, attic stock, and spare parts.
    - g. Requirements for demonstration and training.
    - h. Preparation of Contractor's punch list.
    - i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
    - j. Submittal procedures.
    - k. Coordination of separate contracts.
    - l. Owner's partial occupancy requirements.
    - m. Installation of Owner's furniture, fixtures, and equipment.
    - n. Responsibility for removing temporary facilities and controls.
  4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: **Owner's Project Representative** will conduct progress meetings at monthly intervals.
1. Coordinate dates of meetings with preparation of monthly payment requests.
  2. Attendees: In addition to Architect/Engineer and Owner, each Contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
      - 1) Review schedule for next period.
    - b. Review present and future needs of each entity present, including the following:
      - 1) Interface requirements.
      - 2) Sequence of operations.
      - 3) Status of submittals.
      - 4) Deliveries.
      - 5) Off-site fabrication.
      - 6) Access.
      - 7) Site utilization.
      - 8) Temporary facilities and controls.
      - 9) Work hours.
      - 10) Hazards and risks.
      - 11) Progress cleaning.
      - 12) Quality and work standards.
      - 13) Status of correction of deficient items.
      - 14) Field observations.
      - 15) Status of RFIs.
      - 16) Status of proposal requests.
      - 17) Pending changes.
      - 18) Status of Change Orders.

- 19) Pending claims and disputes.
- 20) Documentation of information for payment requests.
- 4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
  - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
- F. Coordination Meetings: Conduct Project coordination meetings at weekly intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
  - 1. Attendees: In addition to **Owner's Project Representative**, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    - b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
    - c. Review present and future needs of each contractor present, including the following:
      - 1) Interface requirements.
      - 2) Sequence of operations.
      - 3) Status of submittals.
      - 4) Deliveries.
      - 5) Off-site fabrication.
      - 6) Access.
      - 7) Site use.
      - 8) Temporary facilities and controls.
      - 9) Work hours.
      - 10) Hazards and risks.
      - 11) Progress cleaning.
      - 12) Quality and work standards.
      - 13) Status of RFIs.
      - 14) Proposal Requests.
      - 15) Change Orders.
      - 16) Pending changes.
  - 3. Reporting: Entity responsible for conducting the meeting will record and distribute the meeting minutes to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 013100

## SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Startup construction schedule.
  - 2. Contractor's Construction Schedule.
  - 3. Construction schedule updating reports.
  - 4. Daily construction reports.
  - 5. Material location reports.
  - 6. Site condition reports.
  - 7. Unusual event reports.
- B. Related Requirements:
  - 1. Section 012900 "Payment Procedures" for schedule of values and requirements for use of cost-loaded schedule for Applications for Payment.
  - 2. Section 013300 "Submittal Procedures" for submitting schedules and reports.
  - 3. Section 014000 "Quality Requirements" for submitting a schedule of tests and inspections.

## 1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
  - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
  - 2. Predecessor Activity: An activity that precedes another activity in the network.
  - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the schedule of values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Architect.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of the Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.

- F. Float: The measure of leeway in starting and completing an activity.
  - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
  - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
  - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
  - 1. Working electronic copy of schedule file.
  - 2. PDF file.
- B. Startup construction schedule.
  - 1. Submittal of cost-loaded startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
  - 1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals.
- D. Reports: Concurrent with schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
  - 1. Activity Report: List of activities sorted by activity number and then early start date, or actual start date if known.
  - 2. Logic Report: List of preceding and succeeding activities for each activity, sorted in ascending order by activity number and then by early start date, or actual start date if known.
- E. Construction Schedule Updating Reports: Submit with Applications for Payment.
- F. Daily Construction Reports: Submit at weekly intervals.
- G. Material Location Reports: Submit at monthly intervals.
- H. Site Condition Reports: Submit at time of discovery of differing conditions.
- I. Unusual Event Reports: Submit at time of unusual event.

#### 1.5 COORDINATION

- A. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

## 1.6 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
  - 1. Schedules to be submitted in digital form in Primavera P6 Professional or Microsoft Project
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial and final completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
  - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
  - 2. Procurement Activities: Include procurement process activities for all long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  - 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
  - 4. Startup and Testing Time: Include not less than **[7] seven** days for startup and testing.
  - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
  - 6. Punch List and Final Completion: Include not more than **[30] thirty** days for completion of punch list items and final completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.
  - 1. Phasing: Arrange list of activities on schedule by phase.
  - 2. Work under More Than One Contract: Include a separate activity for each contract.
  - 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
  - 4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
  - 5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
  - 6. Work Restrictions: Show the effect of the following items on the schedule:
    - a. Coordination with existing construction.
    - b. Limitations of continued occupancies.
    - c. Uninterruptible services.
    - d. Partial occupancy before Substantial Completion.
    - e. Use of premises restrictions.
    - f. Provisions for future construction.
    - g. Seasonal variations.
    - h. Environmental control.
  - 7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
    - a. Submittals.
    - b. Purchases.
    - c. Mockups.
    - d. Fabrication.

- e. Sample testing.
  - f. Deliveries.
  - g. Installation.
  - h. Tests and inspections.
  - i. Adjusting.
  - j. Curing.
  - k. Startup and placement into final use and operation.
8. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
- a. Demolition.
  - b. Temporary enclosure and space conditioning.
  - c. Interior framing.
  - d. Interior finishes.
  - e. Completion of mechanical installation.
  - f. Completion of electrical installation.
  - g. Substantial Completion.
9. Other Constraints:
- a. Tests and Inspections.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion, and the following interim milestones:
- 1. Site Mobilization.
  - 2. Demolition.
  - 3. Interior Framing.
  - 4. Plumbing Rough-in.
  - 5. Mechanical Rough-in.
  - 6. Electrical Rough-in.
- F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
- 1. Unresolved issues.
  - 2. Unanswered Requests for Information.
  - 3. Rejected or unreturned submittals.
  - 4. Notations on returned submittals.
  - 5. Pending modifications affecting the Work and the Contract Time.
- G. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
- 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  - 3. As the Work progresses, indicate final completion percentage for each activity.
- H. Recovery Schedule: When periodic update indicates the Work is **[10] ten** or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule.
- 1. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- I. Distribution: Distribute copies of approved schedule to Architect/Engineer, **Owner's Project Representative**, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.



1. Post copies to Project website.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

#### 1.7 START-UP CONSTRUCTION SCHEDULE

- A. Gantt-Chart Schedule: Submit startup, horizontal, Gantt-chart-type construction schedule within **[7] seven** days of date established for commencement of the Work.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
  1. Outline significant construction activities for first **[90] ninety** days of construction.
  2. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

#### 1.8 GANTT-CHART SCHEDULE REQUIREMENTS

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's construction schedule within **[15] fifteen** days of date established for commencement of the Work.
  1. Base schedule on the Preliminary construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
  1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in **[10] ten** percent increments within time bar.

#### 1.9 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
  1. List of subcontractors at Project site.
  2. List of separate contractors at Project site.
  3. Approximate count of personnel at Project site.
  4. Equipment at Project site.
  5. Material deliveries.
  6. High and low temperatures and general weather conditions, including presence of rain or snow.
  7. Testing and inspection.
  8. Accidents.
  9. Meetings and significant decisions.
  10. Unusual events.
  11. Stoppages, delays, shortages, and losses.
  12. Meter readings and similar recordings.
  13. Emergency procedures.
  14. Orders and requests of authorities having jurisdiction.
  15. Change Orders received and implemented.
  16. Construction Change Directives received and implemented.
  17. Services connected and disconnected.
  18. Equipment or system tests and startups.

19. Partial completions and occupancies.
  20. Substantial Completions authorized.
- B. Material Location Reports: At **monthly** intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
1. Material stored prior to previous report and remaining in storage.
  2. Material stored prior to previous report and since removed from storage and installed.
  3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.
- D. Unusual Event Reports: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, responses by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.
1. Submit unusual event reports directly to Architect/Engineer and **Owner's Project Representative** within **[1] one** day of an occurrence. Distribute copies of report to parties affected by the occurrence.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION (NOT USED)

END OF SECTION 013200

## SECTION 013300 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Submittal schedule requirements.
  - 2. Administrative and procedural requirements for submittals.
- B. Related Requirements:
  - 1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
  - 2. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
  - 3. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
  - 4. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
  - 5. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
  - 6. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  - 7. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
  - 8. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

#### 1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect/Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect/Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

#### 1.4 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect/Engineer and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
  2. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
    - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
  3. Format: Arrange the following information in a tabular format:
    - a. Scheduled date for first submittal.
    - b. Specification Section number and title.
    - c. Submittal category: Action, informational.
    - d. Name of subcontractor.
    - e. Description of the Work covered.
    - f. Scheduled date for Architect/Engineer's final release or approval.
    - g. Scheduled dates for purchasing.
    - h. Scheduled date of fabrication.
    - i. Scheduled dates for installation.
    - j. Activity or event number.

#### 1.5 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
1. Project name.
  2. Date.
  3. Name of Architect/Engineer.
  4. Name of Contractor.
  5. Name of firm or entity that prepared submittal.
  6. Names of subcontractor, manufacturer, and supplier.
  7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
  8. Category and type of submittal.
  9. Submittal purpose and description.
  10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
  11. Drawing number and detail references, as appropriate.
  12. Indication of full or partial submittal.
  13. Location(s) where product is to be installed, as appropriate.
  14. Other necessary identification.
  15. Remarks.
  16. Signature of transmitter.
- B. Options: Identify options requiring selection by Architect/Engineer.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect/Engineer on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

- D. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.
1. Transmittal for Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using CSI Form 12.1A submittal transmittal sample form included in Project Manual.
  2. Place a permanent label or title block on each submittal item for identification; include name of firm or entity that prepared submittal.
  3. Provide a space approximately 3 by 5 inches to record Contractor's review and approval markings and action taken by Architect/Engineer.

## 1.6 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Email: Prepare submittals as PDF package and transmit to Architect/Engineer by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect/Engineer.
    - a. Architect/Engineer will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.
  2. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Architect/Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect/Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow **[10] ten** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect/Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow **[10] ten** days for review of each resubmittal.
  4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow **[15] fifteen** days for initial review of each submittal.
    - a. Submittals requiring color or other finish selection by Owner.
    - b. Submittals involving allowances included in Contract Documents.
  5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Owner or Owner's consultants, allow **[15] fifteen** days for review of each submittal. Submittal will be returned to Architect/Engineer before being returned to Contractor.

- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
  - 1. Note date and content of previous submittal.
  - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  - 3. Resubmit submittals until they are marked with approval notation from Architect/Engineer's action stamp.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.
  - 1. Show distribution on transmittal forms.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect/Engineer's action stamp.

## 1.7 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Standard color charts.
    - d. Statement of compliance with specified referenced standards.
    - e. Testing by recognized testing agency.
    - f. Application of testing agency labels and seals.
    - g. Notation of coordination requirements.
    - h. Availability and delivery time information.
  - 4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams that show factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  - 5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.
  - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
    - a. Project name and submittal number.
    - b. Generic description of Sample.
    - c. Product name and name of manufacturer.
    - d. Sample source.
    - e. Number and title of applicable Specification Section.
    - f. Specification paragraph number and generic name of each item.
  3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics, and identification information for record.
  4. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
  5. Paper Transmittal: Include paper transmittal including complete submittal information indicated.
  6. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
  7. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit **[1] one** full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect/Engineer will return submittal with options selected.
  8. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
    - a. Number of Samples: Submit **[3] three** sets of Samples. Architect/Engineer will retain **[2] two** Sample sets; remainder will be returned. One retained Sample set will remain as a project record Sample.
      - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
      - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least **[3] three** sets of paired units that show approximate limits of variations.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
  2. Manufacturer and product name, and model number if applicable.
  3. Number and name of room or space.
  4. Location within room or space.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

- F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- G. Certificates:
1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
  2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
  3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
  4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
  5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
  6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- H. Test and Research Reports:
1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
  2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
  3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
  4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
  5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
  6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
    - a. Name of evaluation organization.
    - b. Date of evaluation.
    - c. Time period when report is in effect.
    - d. Product and manufacturers' names.
    - e. Description of product.
    - f. Test procedures and results.
    - g. Limitations of use.



1.8 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect/Engineer.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file and **[3] three** paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

1.9 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect/Engineer.
- B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
  - 1. Architect/Engineer will not review submittals received from Contractor that do not have Contractor's review and approval.

1.10 ARCHITECT/ENGINEER'S REVIEW

- A. Action Submittals: Architect/Engineer will review each submittal, indicate corrections or revisions required, and return it.
  - 1. PDF Submittals: Architect/Engineer will indicate, via markup on each submittal, the appropriate action.
- B. Informational Submittals: Architect/Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect/Engineer will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect/Engineer will return without review or discard submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect/Engineer without action.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 013300

SECTION 013516 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes special procedures for alteration work.
- B. Related Requirements:
  - 1. Section 017300 "Execution" for cutting and patching procedures.
  - 2. Section 024119 "Selective Demolition" for demolition and removal of selected portions of building or structure.

1.3 DEFINITIONS

- A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.
- B. Consolidate: To strengthen loose or deteriorated materials in place.
- C. Design Reference Sample: A sample that represents the Architect/Engineer's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.
- D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.
- E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect/Engineer.
- F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.
- G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.
- H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.
- I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.
- J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.
- K. Retain: To keep an element or detail secure and intact.

- L. Strip: To remove existing finish down to base material unless otherwise indicated.

#### 1.4 COORDINATION

- A. Alteration Work Sub-schedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.
  - 1. Schedule construction operations in sequence required to obtain best Work results.
  - 2. Coordinate sequence of alteration work activities to accommodate the following:
    - a. Owner's continuing occupancy of portions of existing building.
    - b. Owner's partial occupancy of completed Work.
    - c. Other known work in progress.
    - d. Tests and inspections.
  - 3. Detail sequence of alteration work, with start and end dates.
  - 4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
  - 5. Use of stairs.

#### 1.5 PROJECT MEETINGS FOR ALTERATION WORK

- A. Preliminary Conference for Alteration Work: Before starting alteration work, conduct conference at Project site.
  - 1. Attendees: In addition to representatives of **Owner's Project Representative**, Architect/Engineer, and Contractor(s), and demolition subcontractor(s) shall be represented at the meeting.
  - 2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:
    - a. Alteration Work Sub-schedule: Discuss and finalize; verify availability of materials, specialists' personnel, equipment, and facilities needed to make progress and avoid delays.
    - b. Fire-prevention plan.
    - c. Governing regulations.
    - d. Areas where existing construction is to remain and the required protection.
    - e. Hauling routes.
    - f. Sequence of alteration work operations.
    - g. Storage, protection, and accounting for salvaged and specially fabricated items.
    - h. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
    - i. Qualifications of personnel assigned to alteration work and assigned duties.
    - j. Requirements for extent and quality of work, tolerances, and required clearances.
    - k. Embedded work such as flashings and lintels, special details, collection of waste, protection of occupants and the public, and condition of other construction that affects the Work or will affect the work.
  - 3. Reporting: Record conference results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from conference.

#### 1.6 MATERIALS OWNERSHIP

- A. Historic items, equipment, and similar objects including, but not limited to, items of interest or value to Owner that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain Owner's property.

1. Carefully dismantle and salvage each item or object in a manner to prevent damage and protect it from damage, then promptly deliver it to Owner where directed at Project site.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Alteration Work Sub-schedule:
  1. Submit alteration work sub-schedule within **seven [7]** days of date established for commencement of alteration work.
- B. Preconstruction Documentation: Identify preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.
- C. Alteration Work Program: Submit before work begins.
- D. Fire-Prevention Plan: Submit before work begins.

#### 1.8 QUALITY ASSURANCE

- A. Specialist Qualifications: An experienced firm regularly engaged in specialty work similar in nature, materials, design, and extent to alteration work as specified in each Section and that has completed a minimum of **[five]** recent projects with a record of successful in-service performance that demonstrates the firm's qualifications to perform this work.
  1. Field Supervisor Qualifications: Full-time supervisors experienced in alteration work similar in nature, material, design, and extent to that indicated for this Project. Supervisors shall be on-site when alteration work begins and during its progress. Supervisors shall not be changed during Project except for causes beyond the control of the Contractor.
- B. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.
  1. Dust Control: Include locations of proposed temporary dust-control partitions coordinated with continuing on-site operations and other known work in progress.
  2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.
- C. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.
- D. Safety and Health Standard: Comply with ANSI/ASSP A10.6.

#### 1.9 STORAGE AND HANDLING OF SALVAGED MATERIALS

- A. Salvaged Materials:
  1. Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.
  2. Store items in a secure area until delivery to Owner.
  3. Transport items to Owner's storage area on-site where designated by Owner.
  4. Protect items from damage during transport and storage.

- B. Salvaged Materials for Reinstallation:
  - 1. Repair and clean items for reuse as indicated.
  - 2. Protect items from damage during transport and storage.
  - 3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.
- C. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect/Engineer, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after alteration and other construction work in the vicinity is complete.
- D. Storage Space:
  - 1. Owner will arrange for limited on-site location(s) for free storage of salvaged material.

#### 1.10 FIELD CONDITIONS

- A. Discrepancies: Notify Architect?Engineer through **Owner's Project Representative** of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.
- B. Owner's Removals: Before beginning alteration work, verify in correspondence with Owner that the items indicated on the Drawings have been removed.
- C. Size Limitations in Existing Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within existing spaces, areas, rooms, and openings, including temporary protection

#### PART 2 - PRODUCTS - (NOT USED)

#### PART 3 - EXECUTION

##### 3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding improvements from harm resulting from alteration work.
  - 1. Use only proven protection methods, appropriate to each area and surface being protected.
  - 2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
  - 3. Erect temporary barriers to form and maintain fire-egress routes.
  - 4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
  - 5. Contain dust and debris generated by alteration work and prevent it from reaching the public or adjacent surfaces.
  - 6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
  - 7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
- B. Temporary Protection of Materials to Remain:
  - 1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
  - 2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.

- C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.
- D. Utility and Communications Services:
  - 1. Notify Owner, Architect/Engineer, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
  - 2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
  - 3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.
- E. Existing Drains: Prior to the start of work in an area, **Plumbing Contractor** to test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.
  - 1. Prevent solids such as adhesive or mortar residue or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
  - 2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.
- F. Existing Roofing: Prior to the start of work in an area, install roofing protection.

### 3.2 PROTECTION FROM FIRE

- A. General: Follow fire-prevention plan and the following:
  - 1. Comply with NFPA 241 requirements unless otherwise indicated.
  - 2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.
    - a. If combustible material cannot be removed, provide fire blankets to cover such materials.
- B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or combustible materials, including welding, torch-cutting, soldering, brazing, removing paint with heat, or other operations where open flames or implements using high heat or combustible solvents and chemicals are anticipated:
  - 1. Use of open-flame equipment is not permitted. Notify Owner **at least 72 hours** before each occurrence, indicating location of such work.
  - 2. As far as practicable, restrict heat-generating equipment to shop areas or outside the building.
  - 3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
  - 4. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.
  - 5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
  - 6. Fire Watch: Before working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows:
- C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.

- D. Sprinklers: Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to sprinklers, shield them temporarily with guards.
  - 1. Remove temporary guards at the end of work shifts, whenever operations are paused, and when nearby work is complete.

### 3.3 GENERAL ALTERATION WORK

- A. Have specialty work performed only by qualified specialists.
- B. Ensure that supervisory personnel are present when work begins and during its progress.
- C. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.
- D. Notify Architect/Engineer through **Owner's Project Representative** of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.
  - 1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 013516



## SECTION 014000 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, Owner's Representative or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
  - 1. Section 012100 "Allowances" for testing and inspecting allowances.
  - 2. Section 013200 "Construction Progress Documentation" for developing a schedule of required tests and inspections.
  - 3. Divisions 02 through 49 Sections for specific test and inspection requirements.

#### 1.3 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of **[5] five** previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
  - 1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).

- D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.
- E. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" shall have the same meaning as the term "testing agency."
- H. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work, to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- I. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work, to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect/Engineer or **Owner's Project Representative**.

#### 1.4 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Statement: Submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

#### 1.5 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect/Engineer for clarification before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements.
  - 1. Refer uncertainties to Architect/Engineer for a decision before proceeding.

1.6 ACTION SUBMITTALS

- A. Mockup Shop Drawings:
  - 1. Include plans, sections, elevations, and details, indicating materials and size of mockup construction.
  - 2. Indicate manufacturer and model number of individual components.
  - 3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.7 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:
  - 1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
  - 2. Primary wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
  - 1. Specification Section number and title.
  - 2. Entity responsible for performing tests and inspections.
  - 3. Description of test and inspection.
  - 4. Identification of applicable standards.
  - 5. Identification of test and inspection methods.
  - 6. Number of tests and inspections required.
  - 7. Time schedule or time span for tests and inspections.
  - 8. Requirements for obtaining samples.
  - 9. Unique characteristics of each quality-control service.
- F. Reports: Prepare and submit certified written reports and documents as specified.
- G. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

1.8 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within **[7] days** of the **Notice to Proceed**, and not less than **five** days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities and to coordinate Owner's quality-assurance and quality-control activities. Coordinate with Contractor's Construction Schedule.

- B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
  - 1. Project quality-control manager may also serve as Project superintendent.
- C. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
  - 1. Contractor-performed tests and inspections, including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
  - 2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.
  - 3. Owner-performed tests and inspections indicated in the Contract Documents, including tests and inspections indicated to be performed by the Special Inspector.
- D. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring the Work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- E. Monitoring and Documentation: Maintain testing and inspection reports, including log of approved and rejected results. Include Work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming Work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

## 1.9 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
  - 1. Name, address, and telephone number of technical representative making report.
  - 2. Statement on condition of substrates and their acceptability for installation of product.
  - 3. Statement that products at Project site comply with requirements.
  - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.

5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  6. Statement whether conditions, products, and installation will affect warranty.
  7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
  2. Statement that equipment complies with requirements.
  3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  4. Statement whether conditions, products, and installation will affect warranty.
  5. Other required items indicated in individual Specification Sections.

#### 1.10 QUALITY ASSURANCE

- A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged in the activities indicated.
1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented in accordance with ASTM E329, and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following Contractor's responsibilities, including the following:
  - 1. Provide test specimens representative of proposed products and construction.
  - 2. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
  - 3. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
  - 4. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect/Engineer, through **Owner's Project Representative**, with copy to Contractor. Interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  - 1. Build mockups of size indicated.
  - 2. Build mockups in location indicated or, if not indicated, as directed by Architect/Engineer or **Owner's Project Representative**.
  - 3. Notify Architect Engineer and **Owner's Representative [7] seven** days in advance of dates and times when mockups will be constructed.
  - 4. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.
  - 5. Demonstrate the proposed range of aesthetic effects and workmanship.
  - 6. Obtain Architect/Engineer's approval of mockups before starting corresponding Work, fabrication, or construction.
    - a. Allow **[7] seven** days for initial review and each re-review of each mockup.
  - 7. Promptly correct unsatisfactory conditions noted by Architect/Engineer's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
  - 8. Approval of mockups by the Architect/Engineer does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  - 10. Demolish and remove mockups when directed unless otherwise indicated.

#### 1.11 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
  - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
  - 2. Payment for these services will be made from testing and inspection allowances specified in Section 012100 "Allowances," as authorized by Change Orders.
  - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
  2. Engage a qualified testing agency to perform quality-control services.
  3. Notify testing agencies at least [24] hours in advance of time when Work that requires testing or inspection will be performed.
  4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect/Engineer, **Owner's Project Representative**, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect/Engineer, **Owner's Project Representative** and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Determine location from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
  4. Facilities for storage and field curing of test samples.
  5. Delivery of samples to testing agencies.
  6. Preliminary design mix proposed for use for material mixes that require control by testing agency.

7. Security and protection for samples and for testing and inspection equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
  1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Document as a component of Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's Construction Schedule. Update as the Work progresses.
  1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

#### 1.12 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified **testing agency** to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
  1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures, and reviewing the completeness and adequacy of those procedures to perform the Work.
  2. Notifying Architect/Engineer, **Owner's Project Representative**, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
  3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect/Engineer, through **Owner's Project Representative**, with copy to Contractor and to authorities having jurisdiction.
  4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
  5. Interpreting tests and inspections, and stating in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
  6. Retesting and reinspecting corrected Work.

#### 1.13 ACCEPTABLE TESTING AGENCIES

- A. Subject to compliance with requirements, testing agencies offering services that may be incorporated into the Work include, but are not limited to, the following:
  1. SJB Services, Inc. 5 Knabner Road, Mechanicville, New York 12118, tel. 518-899-7491
  2. Construction Technology Inspection & Testing, 4 William Street, Ballston Lake, New York 12019, tel. 518-399-1848
  3. PSI, 104 Erie Boulevard, Suite 1, Schenectady, NY 12305, tel. 518-377-9841.
  4. QCQA Labs, Inc. 1594 State Street, Schenectady, NY 12304, tel. 518-370-5558.
  5. Others as recommended by the manufacturer of the product or equipment being tested.

#### PART 2 - PRODUCTS (NOT USED)

#### PART 3 - EXECUTION

##### 3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:



1. Date test or inspection was conducted.
  2. Description of the Work tested or inspected.
  3. Date test or inspection results were transmitted to Architect.
  4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect/Engineer's reference during normal working hours.

### 3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.
  - 2. Divisions 02 through 49 Sections for temporary heat, ventilation, and humidity requirements for products in those Sections.

1.3 USE CHARGES

- A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Owner's Project Representative, Architect/Engineer, testing agencies, and authorities having jurisdiction.
- B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use **without metering and without payment of use charges**.
  - 1. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use **without metering and without payment of use charges**.
  - 1. Provide connections and extensions of services as required for construction operations.
- D. Gas Service: Gas from Owner's existing natural gas system is available for use **without metering and without payment of use charges**.
  - 1. Provide connections and extensions of services as required for construction operations for temporary use of existing equipment.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
  - 1. Include location for concrete washout where required.
- B. Implementation and Termination Schedule: Within [7] **seven** days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility based upon approved construction schedule.
- C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

- D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
  - 1. Person responsible may also serve as Project superintendent.
- E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.
  - 1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
  - 2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
  - 3. Indicate methods to be used to avoid trapping water in finished work.
- F. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. HVAC system isolation schematic drawing.
  - 3. Location of proposed air-filtration system discharge.
  - 4. Waste-handling procedures.
  - 5. Other dust-control measures.

## 1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the *Building Code of New York State* and *ICC/ANSI A117.1*.

## 1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10 mils minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.
- B. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches.

- C. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

## 2.2 TEMPORARY FACILITIES

- A. Field Offices: Owner will provide conditioned interior space for field offices **for duration of Project**.
  - 1. Placement of additional Contractor Field Offices will be subject to approval of site utilization plan by the **Owner's Project Representative**.
- B. Common-Use Field Office: **General Construction Contract** to provide of sufficient size to accommodate needs of **Owner's Project Representative**, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
  - 1. Furniture required for Project-site documents, including file cabinets, plan tables, and plan racks.
  - 2. Conference area of sufficient size to accommodate meetings of [12] individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot-square tack and marker boards.
  - 3. Drinking water.
  - 4. Supplemental heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
  - 5. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
- C. Storage and Fabrication Sheds and Enclosures: Provide sheds and enclosures sized, furnished, and equipped to accommodate materials and equipment for construction operations. Store combustible materials apart from building.
  - 1. Owner will provide conditioned interior space for storage of material **for duration of Project**.
  - 2. Placement subject to approval of site utilization plan by the **Owner's Project Representative**.
  - 3. No storage shall be permitted in common-use field office.

## 2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent, as required by locations and classes of fire exposures, to be provided by **General Construction Contract**.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
    - a. Only indirect heater units may be used to temporary heat in enclosed spaces
  - 2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
  - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction following permanent enclosure and system startup, Contractor requesting use shall provide filter with MERV of 8 at each return-air grille in system and remove at end of construction.
    - a. **Contractor** to clean HVAC system as required in Section 230130.51 "HVAC Air-Distribution System Cleaning."
- C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

## PART 3 - EXECUTION

### 3.1 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

### 3.2 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  - 1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay.
  - 1. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- C. Isolation of Work Areas: Prevent dust, fumes, and odors from entering existing HVAC system.
  - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
    - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    - b. Maintain negative air pressure within work area, using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
  - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

### 3.3 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- C. Sanitary Facilities: **Contractor** to provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
  - 1. New sanitary facilities shall **NOT** be used by Construction Personnel.
- D. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
  - 1. **Contractor** to provide minimum 110A (120V) temporary power service to within 50 feet of all work areas. Verify capacity and distribution requirements in field, as required.

- E. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel.
  - 1. **Contractor** to provide temporary **WiFi cell phone access equipment** as required to support construction operations.
  - 2. **Contractor** to provide superintendent with cellular telephone.
- F. Electronic Communication Service: **Contractor** to provide secure WiFi wireless connection to internet with provisions for access by Architect and Owner's Representative.

### 3.4 SUPPORT FACILITIES INSTALLATION

- A. General: **Contractor** shall comply with the following:
  - 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
  - 2. Utilize designated area within existing building for temporary field offices.
  - 3. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Field Office: **Contractor** shall maintain common use field office.
  - 1. Keep office clean and orderly.
- C. Traffic Controls: Comply with requirements of authorities having jurisdiction.
  - 1. Protect existing site improvements to remain, including curbs, pavement, and utilities.
    - a. Maintain access for fire-fighting equipment and access to fire hydrants.
- D. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- E. Storage and Staging: Use designated areas of Project site for storage and staging needs.
- F. Project Signs: Unauthorized signs are not permitted.
  - 1. **Contractor** to provide project identification signage.
  - 2. **Contractor** to provide other temporary signs as indicated and as required to inform public and individuals seeking entrance to Project.
    - a. Provide temporary, directional signs for construction personnel and visitors.
    - b. Maintain and touchup signs so they are legible at all times.
- G. Waste Disposal Facilities: Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."
  - 1. **Contractor** to provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Section 017300 "Execution" for progress cleaning requirements.
  - 2. **Contractor** is responsible for daily cleanup and disposal of waste materials.
    - a. All debris and waste are to be consolidated prior to placement into dumpsters provided by the **Contractor**.
- H. Lifts and Hoists: **Contractor** to provide facilities necessary for hoisting materials and personnel.
  - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

### 3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: **Contractor** to protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
  - 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: **Contractor** to provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
  - 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Pest Control: **Contractor** to engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion.
  - 1. Perform control operations lawfully, using environmentally safe materials.
- D. Security Enclosure and Lockup: **Contractor** to provide temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
  - 1. Lock entrances at end of each work day.
- E. Barricades, Warning Signs, and Lights: **Contractor** shall be responsible to comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- F. Temporary Egress: **Contractor** shall maintain temporary egress from existing facilities as indicated and as required by authorities having jurisdiction.
- G. Temporary Enclosures: **Contractor** to provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
  - 1. Where heating or cooling is needed and permanent enclosure is not complete, **Contractor** shall be responsible to insulate temporary enclosures as required for their Work.
- H. Temporary Fire Protection: **Contractor** shall provide temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
  - 1. **Contractor** shall maintain existing fire-protection facilities. Operation of sprinkler control valves shall be allowed only by properly authorized personnel and shall be accompanied by notification of duly designated parties. Where the sprinkler protection is being regularly turned off and on to facilitate connection of newly completed segments, the sprinkler control valves shall be checked at the end of each work period to ascertain that protection is in service.
  - 2. Prohibit smoking on Owner's property.
  - 3. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
  - 4. **Contractor** shall develop and supervise an overall fire-prevention and -protection program at Project site.
    - a. Review needs with local fire department and establish procedures to be followed.
    - b. Instruct personnel in methods and procedures.
    - c. Post warnings and information.

### 3.6 MOISTURE AND MOLD CONTROL

- A. Moisture and Mold Protection: **Contractor** shall protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.
  - 1. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, **Contractor** shall protect their Work as follows:
  - 1. Protect porous materials from water damage.
  - 2. Protect stored and installed material from flowing or standing water.
  - 3. Keep porous and organic materials from coming into prolonged contact with concrete.
  - 4. Remove standing water from decks.
  - 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, **Contractor** shall protect their Work as follows:
  - 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
  - 2. Keep interior spaces reasonably clean and protected from water damage.
  - 3. Periodically collect and remove waste containing cellulose or other organic matter.
  - 4. Discard or replace water-damaged material.
  - 5. Do not install material that is wet.
  - 6. Discard, replace or clean stored or installed material that begins to grow mold.
  - 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, **Contractor** shall maintain as follows:
  - 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
  - 2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
  - 3. **Contractor** shall comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
    - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for [48] hours are considered defective and require replacing.
    - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for [48] hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
    - c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

### 3.7 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: **Contractor** shall enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.



- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are property of Contractor.
  - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 015000

## SECTION 016000 - PRODUCT REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for Contractor requirements related to Owner-furnished products.
  - 2. Section 012100 "Allowances" for products selected under an allowance.
  - 3. Section 012300 "Alternates" for products selected under an alternate.
  - 4. Section 012500 "Substitution Procedures" for requests for substitutions.
  - 5. Section 014200 "References" for applicable industry standards for products specified.
  - 6. Section 01770 "Closeout Procedures" for submitting warranties.

#### 1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products, unless indicated otherwise.
  - 3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in Part 2 "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.
  - 1. Evaluation of Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification. Manufacturer's published attributes and characteristics of basis-of-design product also establish salient characteristics of products for purposes of evaluating comparable products.

- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.
- D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:
  - 1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
  - 2. Data indicating compliance with the requirements specified in Part 2 "Comparable Products" Article.
- E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."
- F. Substitution: Refer to Section 012500 "Substitution Procedures" for definition and limitations on substitutions.

#### 1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
  - 1. Resolution of Compatibility Disputes between Multiple Contractors:
    - a. Contractors are responsible for providing products and construction methods compatible with products and construction methods of other contractors.
    - b. If a dispute arises between the multiple contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
  - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.
  - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service- or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:
    - a. Name of product and manufacturer.
    - b. Model and serial number.
    - c. Capacity.
    - d. Speed.
    - e. Ratings.
  - 3. See individual identification Sections in Divisions 21, 22, 23, and 26 for additional equipment identification requirements.

#### 1.5 COORDINATION

- A. Modify or adjust affected work as necessary to integrate work of approved comparable products and approved substitutions.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
  - 1. Store products to allow for inspection and measurement of quantity or counting of units.
  - 2. Store materials in a manner that will not endanger Project structure.
  - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  - 4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  - 6. Protect stored products from damage and liquids from freezing.
  - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment furnished by Owner. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  - 1. Manufacturer's Warranty: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of the Owner or endorsed by manufacturer to Owner.
  - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of the Owner or endorsed by manufacturer to Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
  - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  - 2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
  - 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
  - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  - 4. Where products are accompanied by the term "as selected," Architect will make selection.
  - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
  - 6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
    - a. Submit additional documentation required by Architect through **Owner's Representative** in order to establish equivalency of proposed products. Evaluation of "or equal" product status is by the Architect, whose determination is final.
- B. Product Selection Procedures:
  - 1. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
    - a. Limited list of products may be indicated by the phrase "Subject to compliance with requirements, provide one of the following."
  - 2. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed or an unnamed product that complies with requirements.
    - a. Non-limited list of products is indicated by the phrase "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following."
    - b. Provision of an unnamed product is not considered a substitution, if the product complies with requirements.
  - 3. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
    - a. Limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, provide products by one of the following."
  - 4. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed or a product by an unnamed manufacturer that complies with requirements.
    - a. Non-limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following."
    - b. Provision of products of an unnamed manufacturer is not considered a substitution, if the product complies with requirements.

5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
  - a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.
- C. Visual Matching Specification: Where Specifications require the phrase "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
  1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or a similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:
  1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
  2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
  3. Evidence that proposed product provides specified warranty.
  4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
  5. Samples, if requested.
- B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 013300 "Submittal Procedures."
  1. Form of Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
  2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- C. Submittal Requirements, Single-Step Process: When acceptable to Architect, incorporate specified submittal requirements of individual Specification Section in combined submittal for comparable products. Approval by the Architect of Contractor's request for use of comparable product and of individual submittal requirements will also satisfy other submittal requirements.

## PART 3 - EXECUTION (NOT USED)

END OF SECTION 016000

## SECTION 017300 - EXECUTION

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Installation of the Work.
  - 3. Cutting and patching.
  - 4. Coordination of Owner's portion of the Work.
  - 5. Coordination of Owner-installed products.
  - 6. Progress cleaning.
  - 7. Starting and adjusting.
  - 8. Protection of installed construction.
  - 9. Correction of the Work.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for coordination of Owner-furnished products, Owner-performed work, Owner's separate contracts, and limits on use of Project site.
  - 2. Section 013300 "Submittal Procedures" for submitting surveys.
  - 3. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
  - 4. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.
  - 5. Section 078413 "Penetration Firestopping" for patching penetrations in fire-rated construction.

#### 1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

#### 1.3 PREINSTALLATION MEETINGS

- A. Cutting and Patching Conference: Conduct conference at Project site.
  - 1. Prior to commencing work requiring cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Inform Architect/Engineer and **Owner's Project Representative** of scheduled meeting. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:
    - a. Contractor's superintendent.
    - b. Trade supervisor responsible for cutting operations.
    - c. Trade supervisor(s) responsible for patching of each type of substrate.
    - d. Mechanical, electrical, and utilities contractors' supervisors, to the extent each trade is affected by cutting and patching operations.

2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

B. Layout Conference: Conduct conference at Project site.

1. Prior to establishing layout of partitions, review building location requirements. Review benchmark, control point, and layout and dimension requirements. Inform **Owner's Project Representative** of scheduled meeting. Require representatives of each entity directly concerned with Project layout to attend, including the following:
  - a. Contractor's superintendent.
2. Review meanings and intent of dimensions, notes, terms, graphic symbols, and other layout information indicated on the Drawings.
3. Review requirements for including layouts on Shop Drawings and other submittals.
4. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.4 INFORMATIONAL SUBMITTALS

- A. Cutting and Patching Plan: Submit plan describing procedures at least **[10]** days prior to the time cutting and patching will be performed. Include the following information:
1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
  2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
  3. Products: List products to be used for patching and firms or entities that will perform patching work.
  4. Dates: Indicate when cutting and patching will be performed.
  5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.
    - a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.

1.5 CLOSEOUT SUBMITTALS

- A. As-built Construction Layout Drawing: Submit two **[2]** copies showing all the Work performed and record layout data.

1.6 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
1. Structural Elements: When cutting and patching structural elements, or when encountering the need for cutting and patching of elements whose structural function is not known, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
  2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
    - a. Primary operational systems and equipment.



- b. Fire separation assemblies.
    - c. Air or smoke barriers.
    - d. Fire-suppression systems.
    - e. Plumbing piping systems.
    - f. Mechanical systems piping and ducts.
    - g. Control systems.
    - h. Communication systems.
    - i. Fire-detection and -alarm systems.
    - j. Electrical wiring systems.
    - k. Operating systems of special construction.
  - 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
    - a. Water, moisture, or vapor barriers.
    - b. Membranes and flashings.
    - c. Exterior curtain-wall construction.
    - d. Sprayed fire-resistive material.
    - e. Equipment supports.
    - f. Piping, ductwork, vessels, and equipment.
    - g. Noise- and vibration-control elements and systems.
  - 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching.
    - a. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities.
    - b. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. Where possible retain the original installer or fabricator to cut and patch the following categories of exposed Work, or if it is not possible to engage the original installer or fabricator, engage another recognized experienced and specialized firm.
  - 2. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.
- C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
  - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
  - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - 1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
  - 2. List of detrimental conditions, including substrates.
  - 3. List of unacceptable installation tolerances.
  - 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Existing Utility Information: Furnish information to **Owner's Project Representative** that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction.
  - 1. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product.
  - 1. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect through **Owner's Representative** in accordance with requirements in Section 013100 "Project Management and Coordination."

### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks and existing conditions. If discrepancies are discovered, notify Architect/Engineer and **Owner's Project Representative** promptly.
- B. Lay out the Work, using the following accepted practices:
  - 1. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  - 2. Inform installers of lines and levels to which they must comply.
  - 3. Check the location, level and plumb, of every major element as the Work progresses.
  - 4. Notify Architect/Engineer and **Owner's Project Representative** when deviations from required lines and levels exceed allowable tolerances.
- C. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and **Owner's Project Representative**.

### 3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
  - 4. Maintain minimum headroom clearance of **108 inches** in occupied spaces and **96 inches** in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure satisfactory results as judged by Architect. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.
- F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.
- J. Repair or remove and replace damaged, defective, or nonconforming Work.
  - 1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

### 3.5 CUTTING AND PATCHING

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of Work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements in Section 011000 "Summary."
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  6. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as practicable, as judged by Architect. Provide materials and comply with installation requirements specified in other Sections, where applicable.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch, corner to corner of wall and edge to edge of ceiling. Provide additional coats until patch blends with adjacent surfaces.
  4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.6 COORDINATION OF OWNER'S PORTION OF THE WORK

- A. Site Access: Provide access to Project site for Owner's construction personnel and Owner's separate contractors.
1. Provide temporary facilities required for Owner-furnished, Contractor-installed and Owner-furnished, Owner-installed products.
  2. Refer to Section 011000 "Summary" for other requirements for Owner-furnished, Contractor-installed and Owner-furnished, Owner-installed products
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel and Owner's separate contractors.
1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
  2. Preinstallation Conferences: Include Owner's construction personnel and Owner's separate contractors at preinstallation conferences covering portions of the Work that are to receive

Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

### 3.7 PROGRESS CLEANING

- A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
  - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
    - a. Use containers intended for holding waste materials of type to be stored.
  - 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls." And Section 017419 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 017900 "Demonstration and Training."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.9 PROTECTION AND REPAIR OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
- C. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- D. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace damaged, defective, or nonconforming Work. Restore damaged substrates and finishes.
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
- C. Restore permanent facilities used during construction to their specified condition.
- D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300





## SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
  - 1. Salvaging nonhazardous demolition and construction waste.
  - 2. Recycling nonhazardous demolition and construction waste.
  - 3. Disposing of nonhazardous demolition and construction waste.
- B. Related Requirements:
  - 1. Section 011200 "Multiple Contract Summary" for coordination of responsibilities for waste management.
  - 2. Section 042000 "Unit Masonry" for disposal requirements for masonry waste.

#### 1.3 DEFINITIONS

- A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.
- C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

#### 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition and construction waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within [7] **seven** days of date established for commencement of the Work.

1.6 INFORMATIONAL SUBMITTALS

- A. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- B. Refrigerant Recovery: Comply with requirements in Section 024119 "Selective Demolition" for refrigerant recovery submittals.

1.7 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Refrigerant Recovery Technician Qualifications: Comply with requirements in Section 024119 "Selective Demolition."
- C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
  - 1. Review and discuss waste management plan including responsibilities of each contractor.
  - 2. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
  - 3. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
  - 4. Review waste management requirements for each trade.

1.8 WASTE MANAGEMENT PLAN

- A. General: Plan shall consist of waste identification and waste reduction work plan. Distinguish between demolition and construction waste.
- B. Waste Identification: Indicate anticipated types of demolition, site-clearing, and, construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of off-site.
  - 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work in compliance with Section 024119 "Selective Demolition."
  - 2. Recycled Materials: Include type of recycled materials that will be accepted.
  - 3. Disposed Materials: Indicate how and where materials will be disposed of.
  - 4. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste to on-site recycling center. Facilitate recycling and salvage of materials, including the following:
1. Demolition Waste:
    - a. Asphalt paving.
    - b. Concrete.
    - c. Concrete reinforcing steel.
    - d. Brick.
    - e. Concrete masonry units.
    - f. Wood studs.
    - g. Wood joists.
    - h. Plywood and oriented strand board.
    - i. Wood paneling.
    - j. Wood trim.
    - k. Structural and miscellaneous steel.
    - l. Rough hardware.
    - m. Roofing.
    - n. Insulation.
    - o. Doors and frames.
    - p. Door hardware.
    - q. Windows.
    - r. Glazing.
    - s. Metal studs.
    - t. Gypsum board.
    - u. Acoustical tile and panels.
    - v. Carpet.
    - w. Carpet pad.
    - x. Demountable partitions.
    - y. Equipment.
    - z. Cabinets.
    - aa. Plumbing fixtures.
    - bb. Piping.
    - cc. Supports and hangers.
    - dd. Valves.
    - ee. Sprinklers.
    - ff. Mechanical equipment.
    - gg. Refrigerants.
    - hh. Electrical conduit.
    - ii. Copper wiring.
    - jj. Lighting fixtures.
    - kk. Lamps.
    - ll. Ballasts.
    - mm. Electrical devices.
    - nn. Switchgear and panelboards.
    - oo. Transformers.
  2. Construction Waste:
    - a. Masonry and CMU.
    - b. Lumber.
    - c. Wood sheet materials.
    - d. Wood trim.

- e. Metals.
- f. Roofing.
- g. Insulation.
- h. Carpet and pad.
- i. Gypsum board.
- j. Piping.
- k. Electrical conduit.
- l. Packaging:
  - 1) Paper.
  - 2) Cardboard.
  - 3) Boxes.
  - 4) Plastic sheet and film.
  - 5) Polystyrene packaging.
  - 6) Wood crates.
  - 7) Plastic pails.
- 3. Construction Office Waste:
  - a. Paper.
  - b. Aluminum cans.
  - c. Glass containers.

### PART 3 - EXECUTION

#### 3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
  - 1. Comply with operation, termination, and removal requirements in Section 015000 "Temporary Facilities and Controls."
- B. Waste Management Coordinator: **Owner's Representative** to provide coordination, monitoring, and reporting on status of waste management work plan.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
  - 1. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
  - 2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

#### 3.2 SALVAGING DEMOLITION WASTE

- A. Comply with requirements in Section 024119 "Selective Demolition" for salvaging demolition waste.
- B. Salvaged Items for Reuse in the Work: Salvage items for reuse and handle as follows:
  - 1. Clean salvaged items.
  - 2. Store items in a secure area until installation.

3. Protect items from damage during transport and storage.
4. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

C. Salvaged Items for Sale: **Not permitted** on Project site.

D. Salvaged Items for Owner's Use: Salvage items for Owner's use and handle as follows:

1. Clean salvaged items.
2. Store items in a secure area until delivery to Owner.
3. Transport items to Owner's storage area on-site designated by Owner.
4. Protect items from damage during transport and storage.

E. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.

F. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.

G. Plumbing Fixtures: Separate by type and size.

H. Lighting Fixtures: Separate lamps by type and protect from breakage.

I. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.

### 3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
  - a. Inspect containers and bins for contamination and remove contaminated materials if found.
2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.4 DISPOSAL OF WASTE

- A. General: Except for items or materials to be recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
  - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 017419

## SECTION 017700 - CLOSEOUT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
- B. Related Requirements:
  - 1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial Completion and Final Completion.
  - 2. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
  - 3. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 4. Section 017900 "Demonstration and Training" for requirements to train the Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

#### 1.3 DEFINITIONS

- A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Architect's use prior to Architect's inspection, to determine if the Work is substantially complete.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest-control inspection.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items required by other Sections.

1.7 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of [7] **seven** days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by **Architect/Engineer**. Label with manufacturer's name and model number.
  5. Submit testing, adjusting, and balancing records.
  6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of [7] **seven** days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
  2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  3. Complete startup and testing of systems and equipment.
  4. Perform preventive maintenance on equipment used prior to Substantial Completion.
  5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
  6. Advise Owner of changeover in utility services.
  7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
  8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  9. Complete final cleaning requirements.
  10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of [7] **seven** days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, **Architect/Engineer** will either proceed with inspection or notify Contractor of unfulfilled requirements. **Architect/Engineer** will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by **Architect/Engineer**, that must be completed or corrected before certificate will be issued.



1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. When Architect is required to perform second and additional inspections due to failure of Work to comply with certifications of Prime Contractor, Owner will compensate **Architect/Engineer** for additional services and deduct amount paid from Final Payment to Prime Contractor.
3. Results of completed inspection will form the basis of requirements for final completion.

#### 1.8 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
  1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
  2. Certified List of Incomplete Items: Submit certified copy of **Architect/Engineer's** Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Submit pest-control final inspection report.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of [7] **seven** days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, **Architect/Engineer** will either proceed with inspection or notify Contractor of unfulfilled requirements.
  1. **Architect/Engineer** will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
- C. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  1. When **Architect/Engineer** is required to perform second and additional inspections due to failure of Work to comply with certifications of Prime Contractor, Owner will compensate **Architect/Engineer** for additional services and deduct amount paid from Final Payment to Prime Contractor.

#### 1.9 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  1. Organize list of spaces in sequential order, according to Drawings.
  2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect/Engineer.
    - d. Name of Contractor.
    - e. Page number.
  4. Submit list of incomplete items in one of the following formats:
    - a. MS Excel Electronic File: **Architect/Engineer**, through **Owner's Project Representative**, will return annotated file.
- B. Use CSI Form 14.1A.

## 1.10 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within **[15] fifteen** days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
  - 1. Submit on digital media acceptable to Architect and by uploading to web-based project software site.
- E. Warranties in Paper Form:
  - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- F. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned.
  - 1. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. All Contractors shall leave Project clean and ready for occupancy.

- C. General Construction Contractor shall complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
1. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
  2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
  3. Remove tools, construction equipment, machinery, and surplus material from Project site.
  4. Remove snow and ice to provide safe access to building.
  5. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition.
  6. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, equipment rooms, attics, and similar spaces.
  7. Clean flooring, removing debris, dirt, and staining; clean according to manufacturer's recommendations.
  8. Vacuum and mop concrete.
  9. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
  10. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
  11. Remove labels that are not permanent.
  12. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  13. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  14. Clean exposed surfaces of diffusers, registers, and grills.
  15. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
  16. Clean strainers.
  17. Leave Project clean and ready for occupancy.
- D. Plumbing Contractor shall complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
1. Leave plumbing fixtures in a sanitary condition, free of stains, including stains resulting from water exposure.
  2. Remove labels that are not permanent.
  3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
  4. Leave Project clean and ready for occupancy.
- E. Mechanical (HVAC) Contractor shall complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
1. Wipe surfaces of mechanical equipment. Remove excess lubrication, paint and other foreign substances.
  2. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  3. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection].
    - a. Clean HVAC system in compliance with Section 230130.51 "HVAC Air-Distribution System Cleaning." Provide written report on completion of cleaning.
  4. Remove labels that are not permanent.
  5. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
  6. Leave Project clean and ready for occupancy.
- F. Electrical Contractor shall complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

1. Leave light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
2. Wipe surfaces of fire alarm equipment. Remove excess lubrication, paint and other foreign substances.
3. Remove labels that are not permanent.
4. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
5. Leave Project clean and ready for occupancy.

3.2 PEST CONTROL:

- A. General Construction Contractor shall engage an experienced, licensed exterminator to make a final inspection and rid building of rodents, insects, and other pests.
  1. Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

3.3 CONSTRUCTION WASTE DISPOSAL:

- A. Construction Waste Disposal: Comply with waste-disposal requirements in Section 015000 "Temporary Facilities and Controls." and Section 017419 "Construction Waste Management and Disposal."

3.4 REPAIR OF THE WORK

- A. Complete repair and restoration operations required by Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.
- B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
  1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
  2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
    - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
  3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
  4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory manuals.
  - 2. Emergency manuals.
  - 3. Systems and equipment operation manuals.
  - 4. Systems and equipment maintenance manuals.
  - 5. Product maintenance manuals.
- B. Related Requirements:
  - 1. Division 01 Section "Multiple Contract Summary" for coordinating operation and maintenance manuals covering the Work of multiple contracts.
  - 2. Division 01 Section "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
  - 3. Divisions 02 through 49 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

- A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
  - 1. **Architect/Engineer** will comment on whether content of operation and maintenance submittals is acceptable.
  - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operation and maintenance manuals in the following format:
  - 1. Submit on digital media acceptable to Architect by uploading to web-based project software site. Enable reviewer comments on draft submittals.
- C. Initial Manual Submittal: Submit draft copy of each manual at least **[30]** days before commencing demonstration and training. **Architect/Engineer** will comment on whether general scope and content of manual are acceptable.

- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least **[15]** days before commencing demonstration and training. **Architect/Engineer** will return copy with comments.
  - 1. Correct or revise each manual to comply with Architect/Engineer's comments. Submit copies of each corrected manual within **[15]** days of receipt of Architect/Engineer's comments and prior to commencing demonstration and training.
- E. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

#### 1.5 FORMAT OF OPERATION AND MAINTENANCE MANUALS

- A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
  - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  - 2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- B. Manuals, Paper Copy: Submit manuals in the form of hard-copy, bound and labeled volumes.
  - 1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
    - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
    - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
  - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
  - 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment. Enclose title pages and directories in clear plastic sleeves.
  - 4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
  - 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
    - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
    - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

## 1.6 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  - 1. Title page.
  - 2. Table of contents.
  - 3. Manual contents.
- B. Title Page: Include the following information:
  - 1. Subject matter included in manual.
  - 2. Name and address of Project.
  - 3. Name and address of Owner.
  - 4. Date of submittal.
  - 5. Name and contact information for Contractor.
  - 6. Name and contact information for Architect.
  - 7. Name and contact information for Commissioning Authority.
  - 8. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
  - 9. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
  - 1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

## 1.7 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY MANUAL

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals. List items and their location to facilitate ready access to desired information. Include the following:
  - 1. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
  - 2. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
  - 3. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

## 1.8 EMERGENCY MANUALS

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
  2. Emergency instructions.
  3. Emergency procedures.
- C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
1. Fire.
  2. Flood.
  3. Gas leak.
  4. Water leak.
  5. Power failure.
  6. Water outage.
  7. System, subsystem, or equipment failure.
  8. Chemical release or spill.
- D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- E. Emergency Procedures: Include the following, as applicable:
1. Instructions on stopping.
  2. Shutdown instructions for each type of emergency.
  3. Operating instructions for conditions outside normal operating limits.
  4. Required sequences for electric or electronic systems.
  5. Special operating instructions and procedures.

#### 1.9 SYSTEMS AND EQUIPMENT OPERATION MANUALS

- A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.
1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  2. Performance and design criteria if Contractor has delegated design responsibility.
  3. Operating standards.
  4. Operating procedures.
  5. Operating logs.
  6. Wiring diagrams.
  7. Control diagrams.
  8. Piped system diagrams.
  9. Precautions against improper use.
  10. License requirements including inspection and renewal dates.
- C. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.
  2. Manufacturer's name.



3. Equipment identification with serial number of each component.
  4. Equipment function.
  5. Operating characteristics.
  6. Limiting conditions.
  7. Performance curves.
  8. Engineering data and tests.
  9. Complete nomenclature and number of replacement parts.
- D. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
  2. Equipment or system break-in procedures.
  3. Routine and normal operating instructions.
  4. Regulation and control procedures.
  5. Instructions on stopping.
  6. Normal shutdown instructions.
  7. Seasonal and weekend operating instructions.
  8. Required sequences for electric or electronic systems.
  9. Special operating instructions and procedures.
- E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- F. Piped Systems: Diagram piping as installed, and identify color coding where required for identification.

#### 1.10 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.
1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds as described below.
- C. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:
1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

- a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
    2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
    3. Identification and nomenclature of parts and components.
    4. List of items recommended to be stocked as spare parts.
  - E. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
    1. Test and inspection instructions.
    2. Troubleshooting guide.
    3. Precautions against improper maintenance.
    4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
    5. Aligning, adjusting, and checking instructions.
    6. Demonstration and training video recording, if available.
  - F. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
    1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
    2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
  - G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
  - H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
  - I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
    1. Include procedures to follow and required notifications for warranty claims.
  - J. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
    1. Do not use original project record documents as part of maintenance manuals.
- 1.11 PRODUCT MAINTENANCE MANUALS
- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
  - B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
  - C. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

- D. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.
- E. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.
- F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 017823

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
  - 1. Record Drawings.
  - 2. Record Specifications.
  - 3. Record Product Data.
  - 4. Miscellaneous record submittals.
- B. Related Requirements:
  - 1. Division 01 Section "Multiple Contract Summary" for coordinating project record documents covering the Work of multiple contracts.
  - 2. Division 01 Section "Execution" for construction layout and field engineering.
  - 3. Division 01 Section "Closeout Procedures" for general closeout procedures.
  - 4. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
  - 5. Divisions 02 through 49 Sections for specific requirements for project record documents of the Work in those Sections.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit copies of record Drawings as follows:
    - a. Initial Submittal:
      - 1) Submit PDF electronic files of scanned record prints and **[one]** set of file prints.
      - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
    - b. Final Submittal:
      - 1) Submit PDF electronic files of scanned Record Prints and **[two]** set(s) of file prints.
      - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit **two paper copies** or **annotated PDF electronic files** of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit **two paper copies** or **annotated PDF electronic files** of each submittal.
  - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: Refer to other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit **two paper copies** or **annotated PDF electronic files** of each submittal.

- E. Reports: Submit monthly written report, in conjunction with application for payment, indicating items incorporated in Project record documents concurrent with progress of the Work, including modifications, concealed conditions, field changes, product selections, and other notations incorporate

#### 1.4 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
  - 1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding photographic documentation.
  - 2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Depths of foundations.
    - d. Locations and depths of underground utilities.
    - e. Revisions to routing of piping and conduits.
    - f. Revisions to electrical circuitry.
    - g. Actual equipment locations.
    - h. Duct size and routing.
    - i. Locations of concealed internal utilities.
    - j. Changes made by Change Order or Construction Change Directive.
    - k. Changes made following Architect's written orders.
    - l. Details not on the original Contract Drawings.
    - m. Field records for variable and concealed conditions.
    - n. Record information on the Work that is shown only schematically.
  - 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  - 4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  - 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  - 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect and **Owner's Project Representative**. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
- C. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect and **Owner's Project Representative**. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
  - 1. Format: Annotated PDF electronic file with comment function enabled.
  - 2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
  - 3. Refer instances of uncertainty to Architect/Engineer through **Owner's Project Representative** for resolution.

4. Architect will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.
  - a. See Section 013100 "Project Management and Coordination" for requirements related to use of Architect's digital data files.
  - b. Architect/Engineer will provide data file layer information. Record markups in separate layers.
- D. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  2. Format: Annotated PDF electronic file with comment function enabled.
  3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
  4. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect.
    - e. Name of Contractor.

#### 1.5 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.
  1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
  3. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
  4. Note related Change Orders, Record Product Data, and Record Drawings where applicable.
- B. Format: Submit record specifications as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Specifications.

#### 1.6 RECORD PRODUCT DATA

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.
- C. Format: Submit Record Product Data as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data.

1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

1.7 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as PDF electronic file or scanned PDF electronic file(s) of marked-up miscellaneous record submittals.
  1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

1.8 MAINTENANCE OF RECORD DOCUMENTS

- A. Maintenance of Record Documents: Store Record Documents in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes.
  1. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss.
  2. Provide access to Project Record Documents for Architect/Engineer's and **Owner Project Representative's** reference during normal working hours.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 017839

SECTION 017900 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
  - 1. Demonstration of operation of systems, subsystems, and equipment.
  - 2. Training in operation and maintenance of systems, subsystems, and equipment.
- B. Related Requirements:
  - 1. Divisions 02 through 49 Sections for specific requirements for demonstration and training for products in those Sections.

1.3 INFORMATIONAL SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
  - 1. Indicate proposed training modules utilizing manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of live instructional module.
- B. Qualification Data: For instructor, if requested by **Architect/Engineer**.

1.4 CLOSEOUT SUBMITTALS

- 1. At completion of training, submit complete training manual(s) for Owner's use prepared in same paper and PDF file format required for operation and maintenance manuals specified in Section 017823 "Operation and Maintenance Data."

1.5 QUALITY ASSURANCE

- A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.

1.6 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.



- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data have been reviewed and approved by **Architect/Engineer**.

#### 1.7 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
  - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
    - a. System, subsystem, and equipment descriptions.
    - b. Performance and design criteria if Contractor is delegated design responsibility.
    - c. Operating standards.
    - d. Regulatory requirements.
    - e. Equipment function.
    - f. Operating characteristics.
    - g. Limiting conditions.
    - h. Performance curves.
  - 2. Documentation: Review the following items in detail:
    - a. Emergency manuals.
    - b. Operations manuals.
    - c. Maintenance manuals.
    - d. Project record documents.
    - e. Identification systems.
    - f. Warranties and bonds.
    - g. Maintenance service agreements and similar continuing commitments.
  - 3. Emergencies: Include the following, as applicable:
    - a. Instructions on meaning of warnings, trouble indications, and error messages.
    - b. Instructions on stopping.
    - c. Shutdown instructions for each type of emergency.
    - d. Operating instructions for conditions outside of normal operating limits.
    - e. Sequences for electric or electronic systems.
    - f. Special operating instructions and procedures.
  - 4. Operations: Include the following, as applicable:
    - a. Startup procedures.
    - b. Equipment or system break-in procedures.
    - c. Routine and normal operating instructions.
    - d. Regulation and control procedures.
    - e. Control sequences.
    - f. Safety procedures.
    - g. Instructions on stopping.
    - h. Normal shutdown instructions.
    - i. Operating procedures for emergencies.
    - j. Operating procedures for system, subsystem, or equipment failure.
    - k. Seasonal and weekend operating instructions.
    - l. Required sequences for electric or electronic systems.
    - m. Special operating instructions and procedures.
  - 5. Adjustments: Include the following:

- a. Alignments.
  - b. Checking adjustments.
  - c. Noise and vibration adjustments.
  - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
  - a. Diagnostic instructions.
  - b. Test and inspection procedures.
7. Maintenance: Include the following:
  - a. Inspection procedures.
  - b. Types of cleaning agents to be used and methods of cleaning.
  - c. List of cleaning agents and methods of cleaning detrimental to product.
  - d. Procedures for routine cleaning
  - e. Procedures for preventive maintenance.
  - f. Procedures for routine maintenance.
  - g. Instruction on use of special tools.
8. Repairs: Include the following:
  - a. Diagnosis instructions.
  - b. Repair instructions.
  - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - d. Instructions for identifying parts and components.
  - e. Review of spare parts needed for operation and maintenance.

#### 1.8 PREPARATION

- A. Assemble training modules into a training manual organized in coordination with requirements in Division 01 Section "Operations and Maintenance Data."

#### 1.9 INSTRUCTION

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  1. Owner will furnish instructor a description of Owner's operational philosophy.
  2. Owner will furnish Contractor with names and positions of participants.
- B. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
  1. Schedule training with Owner with at least **[7] seven** days advance notice.
- C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- D. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

#### PART 2 - PRODUCTS - (NOT USED)

#### PART 3 - EXECUTION - (NOT USED)

END OF SECTION 017900



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## **DIVISION 2**

### **Existing Conditions**

## SECTION 024119 – SELECTIVE DEMOLITION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Demolition and removal of selected portions of building or structure.
  - 2. Demolition and removal of selected site elements.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
  - 2. Section 017300 "Execution" for cutting and patching procedures.
  - 3. Section 013516 "Alteration Project Procedures" for general protection and work procedures for alteration projects.

#### 1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

#### 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 5. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
  - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
  - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
  - 3. Coordination for shutoff, capping, and continuation of utility services.
  - 4. Use of roof scuttle.
  - 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

1.8 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
  - 1. Before selective demolition, Owner will remove the following items:
    - a. Furnishings, fixtures and equipment.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.

- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-alarm facilities in service during selective demolition operations.

#### 1.9 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

#### 1.10 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

#### 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

### 3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
  - 6. Provide temporary cap on storm sewer utilities to remain. Discard sections that were cut and removed.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  - 1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  - 5. Maintain fire watch during and for at least two (2) hours after flame-cutting operations.
  - 6. Maintain adequate ventilation when using cutting torches.
  - 7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  - 8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  - 9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  - 10. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal."
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

- C. Removed and Salvaged Items:
  - 1. Clean salvaged items.
  - 2. Pack or crate items after cleaning. Identify contents of containers.
  - 3. Store items in a secure area until delivery to Owner.
  - 4. Transport items to Owner's storage area on-site.
  - 5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
  - 1. Clean and repair items to functional condition adequate for intended reuse.
  - 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  - 3. Protect items from damage during transport and storage.
  - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least **3/4 inch** at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.
- C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.

### 3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
  - 4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.

### 3.7 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.
  - 1. Return adjacent areas to condition existing before selective demolition operations began.



3.8 SELECTIVE DEMOLITION SCHEDULE

- A. Remove: selective portions of existing structure as shown on Drawings.
- B. Remove: selective portions of existing systems as shown on Drawings.
- C. Remove and Reinstall: Obstructions within limits of Work.
- D. Existing to Remain: Any items that occur in, or are adjacent to, construction being demolished, but are not being removed and reinstalled as shown on Drawings.
- E. Dismantle: items attached to existing substrates that require special care in removal where indicated to be salvaged or reused; otherwise items are to be disposed.

END OF SECTION 024119



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## **DIVISION 3**

### **Concrete**

## SECTION 033000 - CAST-IN-PLACE CONCRETE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.
- B. Related Requirements:
  - 1. Section 024119 "Selective Demolition" for removal of selected portions of existing concrete slabs-on-grade for new underslab plumbing piping .

#### 1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.
- B. W/C Ratio: The ratio by weight of water to cementitious materials.

#### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
    - a. Contractor's superintendent.
    - b. Concrete subcontractor.
  - 2. Review special inspection and testing and inspecting agency procedures for field quality control, concrete finishes and finishing, cold- and hot-weather concreting procedures, curing procedures, construction contraction and isolation joints, and joint-filler strips, semirigid joint fillers, forms and form removal limitations, shoring and reshoring procedures, vapor-retarder installation, anchor rod and anchorage device installation tolerances, steel reinforcement installation, floor and slab flatness and levelness measurement, concrete repair procedures, and concrete protection.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

- B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
  - 1. Indicate amounts of mixing water to be withheld for later addition at Project site.
- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- D. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
  - 1. Location of construction joints is subject to approval of the Architect.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer, manufacturer, and testing agency.
- B. Welding certificates.
- C. Material Certificates: For each of the following, signed by manufacturers:
  - 1. Cementitious materials.
  - 2. Admixtures.
  - 3. Form materials and form-release agents.
  - 4. Steel reinforcement and accessories.
  - 5. Floor and slab treatments.
  - 6. Bonding agents.
  - 7. Adhesives.
  - 8. Vapor retarders.
  - 9. Semirigid joint filler.
  - 10. Joint-filler strips.
  - 11. Repair materials.
- D. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
  - 1. Aggregates. Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.
- E. Field quality-control reports.
- F. Minutes of preinstallation conference.

#### 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
  - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

- C. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
  - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
  - 2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.
- D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
- E. Welding Qualifications: Qualify procedures and personnel according to AWS D1.4/D 1.4M, "Structural Welding Code - Reinforcing Steel."
- F. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
  - 1. ACI 301, "Specifications for Structural Concrete," Sections 1 through 5.
  - 2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
- G. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

## 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

## PART 2 - PRODUCTS

### 2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
  - 1. ACI 301.
  - 2. ACI 117.

### 2.2 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
  - 1. Plywood, metal, or other approved panel materials.
  - 2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
    - a. High-density overlay, Class 1 or better.
    - b. Medium-density overlay, Class 1 or better; mill-release agent treated and edge sealed.
    - c. Structural 1, B-B or better; mill oiled and edge sealed.
    - d. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.

- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.
- D. Pan-Type Forms: Glass-fiber-reinforced plastic or formed steel, stiffened to resist plastic concrete loads without detrimental deformation.
- E. Void Forms: Biodegradable paper surface, treated for moisture resistance, structurally sufficient to support weight of plastic concrete and other superimposed loads.
- F. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch (19 by 19 mm), minimum.
- G. Rustication Strips: Wood, metal, PVC, or rubber strips, kerfed for ease of form removal.
- H. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
  - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- I. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
  - 1. Furnish units that will leave no corrodible metal closer than 1 inch (25 mm) to the plane of exposed concrete surface.
  - 2. Furnish ties that, when removed, will leave holes no larger than 1 inch (25 mm) in diameter in concrete surface.
  - 3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

## 2.3 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
- B. Plain-Steel Wire: ASTM A 82/A 82M, as drawn.
- C. Plain-Steel Welded Wire Reinforcement: ASTM A 1064/A1064M, plain, fabricated from as-drawn steel wire into flat sheets.

## 2.4 REINFORCEMENT ACCESSORIES

- A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
  - 1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

## 2.5 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
  - 1. Portland Cement: ASTM C 150, Type I/II, gray. Supplement with the following:
    - a. Fly Ash: ASTM C 618, Class F or C.
    - b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- B. Silica Fume: ASTM C 1240, amorphous silica.
- C. Normal-Weight Aggregates: ASTM C 33, Class 3S coarse aggregate or better, graded. Provide aggregates from a single source with documented service record data of at least 10 years' satisfactory service in similar applications and service conditions using similar aggregates and cementitious materials.
  - 1. Maximum Coarse-Aggregate Size: 1-1/2 inches (38 mm) nominal.
  - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- D. Water: ASTM C 94/C 94M and potable.

## 2.6 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
  - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
  - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
  - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
  - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
  - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
  - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

## 2.7 LIQUID FLOOR TREATMENTS

- A. Water Repellant Floor Treatment: Clear, VOC compliant, odorless, penetrating, water repellant 100 percent reactive waterborne silane-siloxane blend.
  - 1. Surpass NCHRP 244 Series II by reducing water penetration by 85 percent and salt penetration by 90 percent.
  - 2. Warranty: 10 years.
- B. Available Products:
  - a. Aquapel + Plus, by L&M Construction Chemicals.

## 2.8 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BASF Construction Chemicals - Building Systems; Confilm.

- b. Conspec by Dayton Superior; Aquafilm.
  - c. Dayton Superior Corporation; Sure Film (J-74).
  - d. Edoco by Dayton Superior; BurkeFilm.
  - e. Euclid Chemical Company (The), an RPM company; Eucobar.
  - f. L&M Construction Chemicals, Inc.; E-CON.
  - g. Meadows, W. R., Inc.; EVAPRE.
  - h. Sika Corporation; SikaFilm.
  - i. Symons by Dayton Superior; Finishing Aid.
- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.

## 2.9 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.
- B. Semi-rigid Joint Filler: Two-component, semirigid, 100 percent solids, epoxy resin with a Type A shore durometer hardness of 80 per ASTM D 2240.
- C. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- D. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements, and as follows:
  - 1. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

## 2.10 REPAIR MATERIALS

- A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch (3.2 mm) and that can be feathered at edges to match adjacent floor elevations.
  - 1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
  - 2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
  - 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3.2 to 6 mm) or coarse sand as recommended by underlayment manufacturer.
  - 4. Compressive Strength: Not less than 4100 psi (29 MPa) at 28 days when tested according to ASTM C 109/C 109M.
- B. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch (6.4 mm) and that can be filled in over a scarified surface to match adjacent floor elevations.
  - 1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
  - 2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.



3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3.2 to 6 mm) or coarse sand as recommended by topping manufacturer.
4. Compressive Strength: Not less than 5000 psi (34.5 MPa) at 28 days when tested according to ASTM C 109/C 109M.

## 2.11 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
  1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- B. Cementitious Materials Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
  1. Fly Ash: 25 percent.
  2. Ground Granulated Blast-Furnace Slag: 50 percent.
  3. Combined Fly Ash and Ground Granulated Blast-Furnace Slag: 50 percent portland cement minimum, with fly ash not exceeding 25 percent.
  4. Silica Fume: 10 percent.
  5. Combined Fly Ash and Silica Fume: 35 percent with fly ash not exceeding 25 percent and silica fume not exceeding 10 percent.
  6. Combined Fly Ash, Ground Granulated Blast-Furnace Slag, and Silica Fume: 50 percent with fly ash not exceeding 25 percent and silica fume not exceeding 10 percent.
- C. Limit water-soluble, chloride-ion content in hardened concrete to 0.06 percent by weight of cement.
- D. Admixtures: Use admixtures according to manufacturer's written instructions.
  1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.
  2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
  3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

## 2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS

- A. Exterior Slabs-on-Grade, Equipment Pads, and Bollards: Proportion normal-weight concrete mixture as follows:
  1. Minimum Compressive Strength: 4500 psi (31 MPa) at 28 days.
  2. Maximum Water-Cementitious Materials Ratio: 0.45.
  3. Slump Limit: 4 inches (100 mm), plus or minus 1 inch (25 mm).
  4. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery.

## 2.13 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

## 2.14 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M, and furnish batch ticket information.
  - 1. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
- B. Project-Site Mixing: Not permitted.

## PART 3 - EXECUTION

### 3.1 FORMWORK INSTALLATION

- A. Install insulated concrete forms according to manufacturer's specifications.
  - 1. Alternate methods of forming, subject to review and approval by Architect, shall be constructed as indicated below.
- B. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- C. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- D. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
  - 1. Class A, 1/8 inch (3.2 mm) for smooth-formed finished surfaces.
  - 2. Class B, 1/4 inch (6 mm) for rough-formed finished surfaces.
- E. Construct forms tight enough to prevent loss of concrete mortar.
- F. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
  - 1. Install keyways, reglets, recesses, and the like, for easy removal.
  - 2. Do not use rust-stained steel form-facing material.
- G. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- H. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- I. Chamfer exterior corners and edges of permanently exposed concrete unless noted otherwise.
- J. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

- K. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- L. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- M. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

### 3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
  - 1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

### 3.3 REMOVING AND REUSING FORMS

- A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete. Concrete has to be hard enough to not be damaged by form-removal operations and curing and protection operations need to be maintained.
  - 1. Leave formwork for beam soffits, joists, slabs, and other structural elements that supports weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
  - 2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.
- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

### 3.4 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
  - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
  - 1. Weld reinforcing bars according to AWS D1.4/D 1.4M, where indicated.

- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

### 3.5 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
  - 1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
  - 2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
  - 3. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
  - 4. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
  - 5. Space vertical joints in walls as required. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
  - 6. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- C. Grooved Contraction Joints in Exterior Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints as follows:
  - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius as indicated. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
- D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
  - 1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.
  - 2. Terminate full-width joint-filler strips not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished concrete surface where joint sealants, specified in Division 07 Section "Joint Sealants," are indicated.
  - 3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.
- E. Doweled Joints: Install dowels at joints where indicated, according to manufacturer's specifications.

### 3.6 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

- C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
  - 1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
  - 1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
  - 2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
  - 3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
  - 1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
  - 2. Maintain reinforcement in position on chairs during concrete placement.
  - 3. Screed slab surfaces with a straightedge and strike off to correct elevations.
  - 4. Slope surfaces uniformly to drains where required.
  - 5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
- F. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
  - 1. When average high and low temperature is expected to fall below 40 deg F (4.4 deg C) for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
  - 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
  - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- G. Hot-Weather Placement: Comply with ACI 301 and as follows:
  - 1. Maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
  - 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

### 3.7 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
  1. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.
- C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:
  1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.
  2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.
  3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout. Mix one part portland cement and one part fine sand with a 1:1 mixture of bonding agent and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Compress grout into voids by grinding surface. In a swirling motion, finish surface with a cork float.
- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

### 3.8 FINISHING FLOORS AND SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, restraighening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch (6 mm) in one direction.
  1. Apply scratch finish to surfaces indicated and to receive concrete floor toppings or to receive mortar setting beds for bonded cementitious floor finishes.
  2. Scratch finish shall not be provided in areas that are specified to receive resinous flooring systems. Resinous flooring applicator shall prepare concrete surface as required by flooring manufacturer.
- C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraighening until surface is left with a uniform, smooth, granular texture.
  1. Apply float finish to surfaces indicated to receive trowel finish and to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.
- D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces indicated, exposed to view, or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
- E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces indicated where ceramic or quarry tile is to be installed by either thickset or thin-set method. While concrete is still plastic, slightly scarify surface with a fine broom.
  1. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.
- F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.
  1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

### 3.9 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction.
  1. Provide other miscellaneous concrete filling indicated or required to complete the Work.

### 3.10 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
  1. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations.
  1. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
  1. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
- E. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
  1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive.
  - a. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

### 3.11 LIQUID FLOOR TREATMENTS

- A. Penetrating Liquid Floor Treatment: Prepare, apply, and finish penetrating liquid floor treatment according to manufacturer's written instructions.

### 3.12 JOINT FILLING

- A. Prepare, clean, and install joint filler according to manufacturer's written instructions.
  1. Do not fill joints until construction traffic has permanently ceased.
- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.
- C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches (50 mm) deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

### 3.13 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.
- B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
  1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13 mm) in any dimension to solid concrete. Limit cut depth to 3/4 inch (19 mm). Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
  2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
  3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.



1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
  2. After concrete has cured at least 14 days, correct high areas by grinding.
  3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
  4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
  5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch (6 mm) to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
  6. Repair defective areas, except random cracks and single holes 1 inch (25 mm) or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch (19-mm) clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
  7. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- E. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.
- F. Repair materials and installation not specified above may be used, subject to Architect's approval.

### 3.14 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Inspections:
1. Steel reinforcement placement.
  2. Steel reinforcement welding.
  3. Verification of use of required design mixture.
  4. Concrete placement, including conveying and depositing.
  5. Curing procedures and maintenance of curing temperature.
  6. Verification of concrete strength before removal of shores and forms from beams and slabs.
- C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
  - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each composite sample.
5. Compression Test Specimens: ASTM C 31/C 31M.
  - a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
6. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
  - a. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
7. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
8. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
9. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
10. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.
11. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
12. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

### 3.15 PROTECTION OF LIQUID FLOOR TREATMENTS

- A. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by liquid floor treatments installer.

END OF SECTION 033000



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## **DIVISION 6**

### **Woods, Plastics and Composites**

SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
  - 1. Wood blocking, cants, and nailers.
  - 2. Wood furring and grounds.
  - 3. Plywood backing panels.
- B. Related Requirements:
  - 1. Section 099123 "Interior Painting" for painting exposed plywood backing panels..

1.3 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- C. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
  - 2. NHLA: National Hardwood Lumber Association.
  - 3. NLGA: National Lumber Grades Authority.
  - 4. SPIB: The Southern Pine Inspection Bureau.
  - 5. WCLIB: West Coast Lumber Inspection Bureau.
  - 6. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preserved treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  - 2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
  - 3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.5 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
  - 1. Preservative-treated wood.

2. Power-driven fasteners.
3. Powder-actuated fasteners.
4. Metal framing anchors.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Installer should be experienced in performing work of this Section and should have specialized in installation of work similar to that required for this project.

## 1.7 DELIVERY, STORAGE, AND HANDLING

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

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  1. Factory mark each piece of lumber with grade stamp of grading agency.
  2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece or omit grade stamp and provide certificates of grade compliance issued by grading agency.
  3. Dress lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: **19 percent** unless otherwise indicated.

### 2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
  1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. **Do not use inorganic boron (SBX) for sill plates.**
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
  1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
4. Wood framing members that are less than 18 inches above the ground in crawl spaces or unexcavated areas.
5. Wood floor plates that are installed over concrete slabs-on-grade.

## 2.3 DIMENSION LUMBER FRAMING

- A. Non-Load-Bearing Interior Partitions: Construction or No. 2 and any of the following species:
  1. Mixed southern pine; SPIB.
  2. Spruce-pine-fir; NLGA.
- B. Load-Bearing Walls: No. 2 or better grade and any of the following species:
  1. Douglas fir-larch; WCLIB or WWPA.
  2. Spruce-pine-fir; NLGA.
- C. Other framing: No. 2 or better grade and any of the following species:
  1. Douglas fir-larch; WCLIB or WWPA.
  2. Spruce-pine-fir; NLGA.

## 2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  1. Blocking.
  2. Nailers.
  3. Rooftop equipment bases and support curbs.
  4. Cants.
  5. Furring.
  6. Grounds.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber with 19 percent maximum moisture content and any of the following species:
  1. Mixed southern pine; SPIB.
  2. Spruce-pine-fir; NLGA.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
  1. Mixed southern pine, No. 2 grade; SPIB.
  2. Spruce-pine-fir, Construction or 2 Common grade; NLGA.
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
- E. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

## 2.5 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: DOC PS 1, Exterior, AC in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

## 2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
  - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Metal Framing: ASTM C 1002, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).
- G. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
  - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
  - 2. Material for wood-preservative-treated lumber and where indicated: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

## 2.7 METAL FRAMING ANCHORS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Simpson Strong-Tie Co., Inc.
  - 2. USP Structural Connectors.
- B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- C. Hot-Dip Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 (Z550) coating designation; and not less than 0.036 inch (0.9 mm) thick.
  - 1. Use for wood-preservative-treated lumber and where indicated.
- D. Stainless-Steel Sheet: ASTM A 666, Type 304.
  - 1. Use for exterior locations and where indicated.

## 2.8 MISCELLANEOUS MATERIALS

- A. Adhesives for Gluing Furring to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.

1. Use adhesives that have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- B. Flexible Flashing: Self-adhesive, rubberized-asphalt compound, bonded to a high-density, polyethylene film to produce an overall thickness of not less than 0.025 inch.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- C. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels.
- D. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- E. Do not splice structural members between supports unless otherwise indicated.
- F. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
  1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.
- G. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
  1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
  2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal thickness.
  3. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal-thickness.
- H. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber.
  1. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- I. Comply with AWP A M4 for applying field treatment to cut surfaces of preservative-treated lumber.
  1. Use inorganic boron for items that are continuously protected from liquid water.
  2. Use copper naphthenate for items not continuously protected from liquid water.
- J. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.



- K. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
  - 2. ICC-ES evaluation report for fastener.
- L. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials.
  - 1. Make tight connections between members.
  - 2. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

### 3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work.
  - 1. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading.
  - 1. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material.
  - 1. Remove temporary grounds when no longer required.

### 3.3 WOOD FURRING INSTALLATION

- A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.
- B. Furring to Receive Plywood or Hardboard Paneling: Install 1-by-3-inch nominal-size furring horizontally and vertically at 24 inches o.c.
- C. Furring to Receive Gypsum Board: Install 1-by-2-inch nominal-size furring vertically at 16 inches o.c.

### 3.4 WALL AND PARTITION FRAMING INSTALLATION

- A. General: Provide single bottom plate and double top plates using members of 2-inch nominal thickness whose widths equal that of studs, except single top plate may be used for non-load-bearing partitions. Fasten plates to supporting construction, unless otherwise indicated.
  - 1. For interior partitions and walls, provide 2-by-6-inch nominal- and 2-by-4-inch nominal-size wood studs spaced 16 inches o.c., unless otherwise indicated.
  - 2. Provide continuous horizontal blocking at mid-height of partitions more than 96 inches high, using members of 2-inch nominal thickness and of same width as wall or partitions.
- B. Construct corners and intersections with three or more studs.
- C. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Support headers on jamb studs.
  - 1. For non-load-bearing partitions, provide double-jamb studs and headers not less than 4-inch nominal depth for openings 48 inches and less in width, 6-inch nominal depth for openings 48 to 72 inches in width, 8-inch nominal depth for openings 72 to 120 inches in width, and not less than 10-inch nominal depth for openings 10 to 12 feet in width.

2. For load-bearing walls, provide double-jamb studs for openings 60 inches and less in width, and triple-jamb studs for wider openings. Provide headers of depth indicated.

3.5 PROTECTION

- A. Protect miscellaneous rough carpentry from weather. If, despite protection, miscellaneous rough carpentry becomes wet, apply EPA-registered borate treatment.
  1. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061053



**MONTGOMERY**  
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## **DIVISION 7**

### **Thermal and Moisture Protection**

## SECTION 078413 - PENETRATION FIRESTOPPING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Penetrations in fire-resistance-rated walls.
  - 2. Penetrations in horizontal assemblies.
  - 3. Penetrations in smoke barriers.
- B. Related Requirements:
  - 1. Section 078443 "Joint Firestopping" for joints in or between fire-resistance-rated construction and in smoke barriers.

#### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
  - 1. Indicate design number for each firestop proposed to be used which is detailed in the UL Fire Resistance Directory, Inchcape Directory of Listed Products, Factory Mutual Approval Guide, or the Omega Point Laboratories Listings Directory.
  - 2. State the specific locations where each firestop system is proposed to be installed.
- B. Product Schedule: For each penetration firestopping system. Include location, illustration of firestopping system, and design designation of qualified testing and inspecting agency.
  - 1. Engineering Judgments: Where Project conditions require modification to a qualified testing and inspecting agency's illustration for a particular penetration firestopping system, submit illustration, with modifications marked, approved by penetration firestopping system manufacturer's fire-protection engineer as an engineering judgment or equivalent fire-resistance-rated assembly. Obtain approval of authorities having jurisdiction prior to submittal.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Test Reports: For each penetration firestopping system, for tests performed by a qualified testing agency.

1.6 CLOSEOUT SUBMITTALS

- A. Installer Certificates: From Installer indicating that penetration firestopping systems have been installed in compliance with requirements and manufacturer's written instructions.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A firm that has been approved by FM Global according to FM Global 4991, "Approval of Firestop Contractors," or been evaluated by UL and found to comply with its "Qualified Firestop Contractor Program Requirements."

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install penetration firestopping system when ambient or substrate temperatures are outside limits permitted by penetration firestopping system manufacturers or when substrates are wet because of rain, frost, condensation, or other causes.
- B. Install and cure penetration firestopping materials per manufacturer's written instructions using natural means of ventilations or, where this is inadequate, forced-air circulation.

1.9 COORDINATION

- A. Coordinate construction of openings and penetrating items to ensure that penetration firestopping systems can be installed according to specified firestopping system design.
- B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate penetration firestopping systems.
- C. Where firestopping is not assigned to a single-source firestop specialty contractor, the installation of each scope of work is to be performed jurisdictionally correct per existing trade agreements.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics:
  - 1. Perform penetration firestopping system tests by a qualified testing agency acceptable to authorities having jurisdiction.
  - 2. Test per testing standards referenced in "Penetration Firestopping Systems" Article. Provide rated systems complying with the following requirements:
    - a. Penetration firestopping systems shall bear classification marking of a qualified testing agency.
      - 1) UL in its "Fire Resistance Directory."
      - 2) Intertek Group in its "Directory of Listed Building Products."
      - 3) FM Global in its "Building Materials Approval Guide."

## 2.2 MANUFACTURER

- A. Basis-of-Design Product: The performance requirements for the insulating concrete forms is based upon the following:
  - 1. Hilti, Inc.
- B. Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following subject to conformance with the performance requirements stated herein and as shown on the Drawings:
  - 1. A/D Fire Protection Systems Inc.
  - 2. Grace Construction Products.
  - 3. Johns Manville.
  - 4. 3M Fire Protection Products.
  - 5. Tremco, Inc.; Tremco Fire Protection Systems Group.
  - 6. USG Corporation.

## 2.3 PENETRATION FIRESTOPPING SYSTEMS

- A. Penetration Firestopping Systems: Systems that resist spread of fire, passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated. Penetration firestopping systems shall be compatible with one another, with the substrates forming openings, and with penetrating items if any.
- B. Penetrations in Fire-Resistance-Rated Walls: Provide penetration firestopping with ratings determined per ASTM E 814 or UL 1479, based on testing at a positive pressure differential of 0.01-inch wg.
  - 1. F-Rating: Not less than the fire-resistance rating of constructions penetrated.
- C. Penetrations in Horizontal Assemblies: Provide penetration firestopping with ratings determined per ASTM E 814 or UL 1479, based on testing at a positive pressure differential of 0.01-inch wg.
  - 1. Horizontal assemblies include ceiling membranes of roof/ceiling assemblies.
  - 2. F-Rating: At least 1 hour, but not less than the fire-resistance rating of constructions penetrated.
  - 3. T-Rating: At least 1 hour, but not less than the fire-resistance rating of constructions penetrated except for floor penetrations within the cavity of a wall.
- D. Penetrations in Smoke Barriers: Provide penetration firestopping with ratings determined per UL 1479.
  - 1. L-Rating: Not exceeding 5.0 cfm/sq. ft of penetration opening at and no more than 50-cfm cumulative total for any 100 sq. ft. at both ambient and elevated temperatures.
- E. Exposed Penetration Firestopping: Provide products with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, as determined per ASTM E 84.
- F. Accessories: Provide components for each penetration firestopping system that are needed to install fill materials and to maintain ratings required. Use only those components specified by penetration firestopping system manufacturer and approved by qualified testing and inspecting agency for conditions indicated.
  - 1. Permanent forming/damming/backing materials.
  - 2. Substrate primers.
  - 3. Collars.
  - 4. Steel sleeves.

## 2.4 FILL MATERIALS

- A. Cast-in-Place Firestop Devices: Factory-assembled devices for use in cast-in-place concrete floors and consisting of an outer sleeve lined with an intumescent strip, a flange attached to one end of the sleeve for fastening to concrete formwork, and a neoprene gasket.
- B. Latex Sealants: Single-component latex formulations that do not re-emulsify after cure during exposure to moisture.
- C. Firestop Devices: Factory-assembled collars formed from galvanized steel and lined with intumescent material sized to fit specific diameter of penetrant.
- D. Intumescent Composite Sheets: Rigid panels consisting of aluminum-foil-faced intumescent elastomeric sheet bonded to galvanized-steel sheet.
- E. Intumescent Putties: Nonhardening, water-resistant, intumescent putties containing no solvents or inorganic fibers.
- F. Intumescent Wrap Strips: Single-component intumescent elastomeric sheets with aluminum foil on one side.
- G. Mortars: Prepackaged dry mixes consisting of a blend of inorganic binders, hydraulic cement, fillers and lightweight aggregate formulated for mixing with water at Project site to form a nonshrinking, homogeneous mortar.
- H. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.
- I. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants.

## 2.5 MIXING

- A. Penetration Firestopping Materials: For those products requiring mixing before application, comply with penetration firestopping system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

- A. Surface Cleaning: Before installing penetration firestopping systems, clean out openings immediately to comply with manufacturer's written instructions and with the following requirements:

1. Remove from surfaces of opening substrates and from penetrating items foreign materials that could interfere with adhesion of penetration firestopping materials.
  2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with penetration firestopping materials. Remove loose particles remaining from cleaning operation.
  3. Remove laitance and form-release agents from concrete.
- A. Prime substrates where recommended in writing by manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

### 3.3 INSTALLATION

- A. General: Install penetration firestopping systems to comply with manufacturer's written installation instructions and published drawings for products and applications.
- B. Install forming materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings.
1. After installing fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not forming permanent components of firestopping.
- C. Install fill materials by proven techniques to produce the following results:
1. Fill voids and cavities formed by openings, forming materials, accessories and penetrating items to achieve required fire-resistance ratings.
  2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
  3. For fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

### 3.4 IDENTIFICATION

- A. Wall Identification: Permanently label walls containing penetration firestopping systems with the words "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS," using lettering not less than 3 inches high and with minimum 0.375-inch strokes.
1. Locate in accessible concealed floor, floor-ceiling, or attic space at 15 feet from end of wall and at intervals not exceeding 30 feet.
- B. Penetration Identification: Identify each penetration firestopping system with legible metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of penetration firestopping system edge so labels are visible to anyone seeking to remove penetrating items or firestopping systems. Use mechanical fasteners or self-adhering-type labels with adhesives capable of permanently bonding labels to surfaces on which labels are placed. Include the following information on labels:
1. The words "Warning - Penetration Firestopping - Do Not Disturb. Notify Building Management of Any Damage."
  2. Contractor's name, address, and phone number.
  3. Designation of applicable testing and inspecting agency.
  4. Date of installation.
  5. Manufacturer's name.
  6. Installer's name.



3.5 FIELD QUALITY CONTROL

- A. Owner will engage a qualified testing agency to perform tests and inspections.
- B. Where deficiencies are found or penetration firestopping is damaged or removed because of testing, repair or replace penetration firestopping to comply with requirements.
- C. Proceed with enclosing penetration firestopping with other construction only after inspection reports are issued and installations comply with requirements.

3.6 CLEANING AND PROTECTION

- A. Clean off excess fill materials adjacent to openings as the Work progresses by methods and with cleaning materials that are approved in writing by penetration firestopping manufacturers and that do not damage materials in which openings occur.
- B. Provide final protection and maintain conditions during and after installation that ensure that penetration firestopping is without damage or deterioration at time of Substantial Completion.
  - 1. If, despite such protection, damage or deterioration occurs, immediately cut out and remove damaged or deteriorated penetration firestopping and install new materials to produce systems complying with specified requirements.

3.7 PENETRATION FIRESTOPPING SCHEDULE

- A. Where UL-classified systems are indicated, they refer to system numbers in UL's "Fire Resistance Directory" under product Category XHEZ.
  - 1. Penetration Firestopping Systems for Metallic Pipes, Conduit, or Tubing.
  - 2. Penetration Firestopping Systems for Nonmetallic Pipe, Conduit, or Tubing.
  - 3. Penetration Firestopping Systems for Electrical Cables.
  - 4. Penetration Firestopping Systems for Insulated Pipes.
  - 5. Penetration Firestopping Systems for Miscellaneous Electrical Penetrants.
  - 6. Penetration Firestopping Systems for Miscellaneous Mechanical Penetrants.

3.8 SCHEDULE OF COMMON FIRESTOP SYSTEMS

- A. Basis of design: Hilti, Inc.

CONCRETE FLOORS			CONCRETE OR BLOCK WALLS		
TYPE OF PENETRANT	F- RATING (HR)	BASIS OF DESIGN UL SYSTEM	TYPE OF PENETRANT	F- RATING (HR)	BASIS OF DESIGN UL SYSTEM
CIRCULAR BLANK OPENINGS	1	F-A-0008, C-AJ-0055, C-AJ-0090	CIRCULAR BLANK OPENINGS	1	C-AJ-0055, C-AJ-0090
	2	F-A-0008, C-AJ-0055, C-AJ-0090		2	C-AJ-0055, C-AJ-0090
	3	F-A-0008, C-AJ-0055, C-AJ-0090		3	C-AJ-0055, C-AJ-0090
SINGLE METAL PIPES OR CONDUIT	1	C-AJ-1226, F-A-1026, F-A-1017	SINGLE METAL PIPES OR CONDUIT	1	C-AJ-1226, W-J-1067, W-J-1020
	2	C-AJ-1226, F-A-1026, F-A-1017		2	C-AJ-1226, W-J-1067, W-J-1020, W-J-1248
	3	C-AJ-1226, F-A-1017		3	C-AJ-1226, W-J-1041, W-J-1068
	4	C-BJ-1037, C-BJ-1034		4	C-BJ-1034, C-BJ-1037, W-J-1041, W-J-1042, W-J-1068
SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098, C-AJ-2271, C-AJ-2167, C-AJ-2098, C-AJ-2271, C-AJ-2167, C-BJ-2021, C-AJ-2371, C-AJ-2342	SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342
	2	F-A-2054, C-AJ-2109, C-AJ-2098, C-AJ-2371, C-AJ-2342		2	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342
	3	C-BJ-2016, C-AJ-2017		3	C-AJ-2109, C-AJ-2098, C-AJ-2371, C-AJ-2342
SINGLE/CABLE BUNDLES	1	F-A-3007, C-AJ-3095, C-AJ-3180, C-AJ-3263	SINGLE/CABLE BUNDLES	1	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167
	2	F-A-3007, C-AJ-3095, C-AJ-3334, F-A-3060		2	W-J-3036, C-AJ-3095, C-AJ-3180, W-J-3060, W-J-3167, W-J-3169
	3	F-A-3007, C-AJ-3095, C-AJ-3265		3	C-AJ-3095, C-AJ-3180, W-J-3167
CABLE TRAY	1	C-AJ-4034, C-AJ-4035	CABLE TRAY	1	W-J-4027, C-AJ-4034, C-AJ-4035
	2	C-AJ-4034, C-AJ-4035		2	W-J-4027, C-AJ-4034, C-AJ-4035
	3	C-AJ-4034, C-AJ-4035		3	C-AJ-4034, C-AJ-4035
SINGLE INSULATED PIPES	1	F-A-5015, F-A-5017, C-AJ-5090, C-AJ-5091, C-AJ-5090, C-AJ-5048	SINGLE INSULATED PIPES	1	C-AJ-5090, C-AJ-5091, C-AJ-5061, W-J-5042
	2	F-A-5015, F-A-5017, C-AJ-5090, C-AJ-5091, C-AJ-5090		2	C-AJ-5090, C-AJ-5091, C-AJ-5061, W-J-5042
	3	F-A-5016, C-AJ-5090, F-A-5018		3	C-AJ-5090, C-AJ-5061
ELECTRICAL BUSWAY	1	C-AJ-6006, C-AJ-6017, F-A-6002, C-AJ-6036	ELECTRICAL BUSWAY	1	C-AJ-6006, C-AJ-6017, C-AJ-6036
	2	C-AJ-6006, C-AJ-6017, F-A-6042, C-AJ-6036		2	C-AJ-6006, C-AJ-6017, C-AJ-6036
	3	C-AJ-6006, C-AJ-6017		3	C-AJ-6006, C-AJ-6017
MECHANICAL DUCTWORK WITHOUT DAMPERS NON-INSULATED	1	C-AJ-7046, C-AJ-7051, C-AJ-7084	MECHANICAL DUCTWORK WITHOUT DAMPERS NON-INSULATED	1	C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022
	2	C-AJ-7046, C-AJ-7051, C-AJ-7085		2	C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022
	3	C-AJ-7046, C-AJ-7051		3	C-AJ-7046, C-AJ-7051
MECHANICAL DUCTWORK WITHOUT DAMPERS INSULATED	N/A**	N/A**	MECHANICAL DUCTWORK WITHOUT DAMPERS INSULATED	1	W-J-7029, W-J-7124
	1	C-AJ-8099, C-AJ-8056, C-AJ-8143		2	W-J-7091, W-J-7112, W-J-7124
	2	C-AJ-8099, C-AJ-8056, C-AJ-8143		1	C-AJ-8099, C-AJ-8056, W-J-8007, C-AJ-8143
MIXED PENETRANTS	3	C-AJ-8099, C-AJ-8056	MIXED PENETRANTS	2	C-AJ-8099, C-AJ-8056, W-J-8007, C-AJ-8143
	4	C-AJ-8095		3	C-AJ-8041, C-AJ-8056, W-J-8007, C-AJ-8099
				4	C-AJ-8095, W-J-8007
WOOD FLOORS			GYPSUM WALLS		
TYPE OF PENETRANT	F- RATING (HR)	BASIS OF DESIGN UL SYSTEM	TYPE OF PENETRANT	F- RATING (HR)	BASIS OF DESIGN UL SYSTEM
METAL PIPES OR CONDUIT	1	F-C-1009, F-C-1059, F-C-1168	METAL PIPES OR CONDUIT	1	W-L-1054, W-L-1058, W-L-1164, W-L-1506
	2	F-C-1009, F-C-1059, F-C-1168		2	W-L-1054, W-L-1058, W-L-1164, W-L-1506
	4			4	W-L-1110, W-L-1111, W-L-1165
NON-METALLIC PIPE OR CONDUIT	1	F-C-2232, F-C-2030, F-C-2160, F-C-2389	NON-METALLIC PIPE OR CONDUIT	1	W-L-2078, W-L-2075, W-L-2128
	2	F-C-2029, F-C-2030, F-C-2126, F-C-2160		2	W-L-2078, W-L-2075, W-L-2128
	4			4	W-L-2184, W-L-2245
SINGLE OR BUNDLED CABLES	1	F-C-3012, F-C-3110, F-C-3044	SINGLE OR BUNDLED CABLES	1	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396
	2	F-C-3012, F-C-3110		2	W-L-3065, W-L-3111, W-L-3112, W-L-3334, W-L-3414, W-L-3396
	4			3	W-L-3385, W-L-3277
INSULATED PIPES	1	F-C-5004, F-C-5037, F-C-5036	CABLE TRAY	1	W-L-4011, W-L-4019, W-L-4081
	2	F-C-5004, F-C-5037		2	W-L-4011, W-L-4019, W-L-4081
	4			4	W-L-8014
NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	F-C-7013	NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	W-L-5028, W-L-5029, W-L-5047
	2	N/A**		2	W-L-5028, W-L-5029, W-L-5047
	4			4	W-L-5073
INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	N/A**	INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	W-L-7047, W-L-7040, W-L-7042, W-L-7155
	2	N/A**		2	W-L-7040, W-L-7042, W-L-7155
	4			1	W-L-7059, W-L-7153, W-L-7156, W-L-7151
MIXED PENETRANTS	1	F-C-8009, F-C-8014, F-C-826	MIXED PENETRANTS	2	W-L-7059, W-L-7153, W-L-7156, W-L-7151
	2			1	W-L-1095, W-L-8013
	4			2	W-L-1095, W-L-8013
				4	W-L-8014

END OF SECTION 078413

SECTION 078443 - JOINT FIRESTOPPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
  - 1. Joints in or between fire-resistance-rated constructions.
  - 2. Joints in smoke barriers.
- B. Related Sections:
  - 1. Section 078413 "Penetration Firestopping" for penetrations in fire-resistance-rated walls, horizontal assemblies, and smoke barriers and for wall identification.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site in conjunction with Penetration Firestopping.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product Schedule: For each joint firestopping system. Include location, illustration of firestopping system, and design designation of qualified testing agency.
  - 1. Engineering Judgments: Where Project conditions require modification to a qualified testing agency's illustration for a particular joint firestopping system condition, submit illustration, with modifications marked, approved by joint firestopping system manufacturer's fire-protection engineer as an engineering judgment or equivalent fire-resistance-rated assembly.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Installer Certificates: From Installer indicating fire-resistive joint systems have been installed in compliance with requirements and manufacturer's written recommendations.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for fire-resistive joint systems.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A firm that has been approved by FM Global according to FM Global 4991, "Approval of Firestop Contractors," or been evaluated by UL and found to comply with UL's "Qualified Firestop Contractor Program Requirements."

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install fire-resistive joint systems when ambient or substrate temperatures are outside limits permitted by fire-resistive joint system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.
- B. Install and cure fire-resistive joint systems per manufacturer's written instructions using natural means of ventilation or, where this is inadequate, forced-air circulation.

1.8 COORDINATION

- A. Coordinate construction of joints to ensure that fire-resistive joint systems are installed according to specified requirements.
- B. Coordinate sizing of joints to accommodate fire-resistive joint systems.
- C. Notify Owner's testing agency at least seven days in advance of fire-resistive joint system installations; confirm dates and times on day preceding each series of installations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics:
  - 1. Perform joint firestopping system tests by a qualified testing agency acceptable to authorities having jurisdiction.
  - 2. Test per testing standards referenced in "Joint Firestopping Systems" Article. Provide rated systems complying with the following requirements:
    - a. Joint firestopping systems shall bear classification marking of a qualified testing agency.
      - 1) UL in its "Fire Resistance Directory."
      - 2) Intertek Group in its "Directory of Listed Building Products."

2.2 JOINT FIRESTOPPING SYSTEMS

- A. Joint Firestopping Systems: Systems that resist spread of fire, passage of smoke and other gases, and maintain original fire-resistance rating of assemblies in or between which joint firestopping systems are installed. Joint firestopping systems shall accommodate building movements without impairing their ability to resist the passage of fire and hot gases.
- B. Joints in or between Fire-Resistance-Rated Construction: Provide joint firestopping systems with ratings determined per ASTM E 1966 or UL 2079.
  - 1. Fire-Resistance Rating: Equal to or exceeding the fire-resistance rating of the wall, floor, or roof in or between which it is installed.

2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - a. A/D Fire Protection Systems Inc.
  - b. Grace Construction Products.
  - c. Hilti, Inc.
  - d. Johns Manville.
  - e. Specified Technologies Inc.
  - f. 3M Fire Protection Products.
  - g. Tremco, Inc.; Tremco Fire Protection Systems Group.
  - h. USG Corporation.
- C. Joints in Smoke Barriers: Provide fire-resistive joint systems with ratings determined per UL 2079 based on testing at a positive pressure differential of 0.30-inch wg (74.7 Pa).
  1. L-Rating: Not exceeding 5.0 cfm/ft. (0.00775 cu. m/s x m) of joint at both ambient and elevated temperatures.
- D. Exposed Joint Firestopping Systems: Flame-spread and smoke-developed indexes of less than 25 and 450, respectively, as determined per ASTM E 84.
- E. Accessories: Provide components of fire-resistive joint systems, including primers and forming materials, that are needed to install elastomeric fill materials and to maintain ratings required. Use only components specified by joint firestopping system manufacturer and approved by the qualified testing agency for conditions indicated.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for joint configurations, substrates, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Surface Cleaning: Clean joints immediately before installing fire-resistive joint systems to comply with fire-resistive joint system manufacturer's written instructions and the following requirements:
  1. Remove from surfaces of joint substrates foreign materials that could interfere with adhesion of fill materials.
  2. Clean joint substrates to produce clean, sound surfaces capable of developing optimum bond with fill materials. Remove loose particles remaining from cleaning operation.
  3. Remove laitance and form-release agents from concrete.
- A. Prime substrates where recommended in writing by joint firestopping system manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

#### 3.3 INSTALLATION

- A. General: Install fire-resistive joint systems to comply with manufacturer's written installation instructions and published drawings for products and applications indicated.

- B. Install forming materials and other accessories of types required to support fill materials during their application and in position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.
  - 1. After installing fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not indicated as permanent components of fire-resistive joint system.
- C. Install elastomeric fill materials for fire-resistive joint systems by proven techniques to produce the following results:
  - 1. Elastomeric fill voids and cavities formed by joints and forming materials as required to achieve fire-resistance ratings indicated.
  - 2. Apply elastomeric fill materials so they contact and adhere to substrates formed by joints.
  - 3. For elastomeric fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

### 3.4 IDENTIFICATION

- A. Joint Identification: Identify joint firestopping systems with legible metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of joint edge so labels are visible to anyone seeking to remove or joint firestopping system. Use mechanical fasteners or self-adhering-type labels with adhesives capable of permanently bonding labels to surfaces on which labels are placed. Include the following information on labels:
  - 1. The words "Warning - Joint Firestopping - Do Not Disturb. Notify Building Management of Any Damage."
  - 2. Contractor's name, address, and phone number.
  - 3. Designation of applicable testing agency.
  - 4. Date of installation.
  - 5. Manufacturer's name.
  - 6. Installer's name.

### 3.5 FIELD QUALITY CONTROL

- A. Inspecting Agency: Owner will engage a qualified testing agency to perform tests and inspections according to ASTM E 2393.
- B. Where deficiencies are found or joint firestopping systems are damaged or removed due to testing, repair or replace joint firestopping systems so they comply with requirements.
- C. Proceed with enclosing joint firestopping systems with other construction only after inspection reports are issued and installations comply with requirements.

### 3.6 CLEANING AND PROTECTING

- A. Clean off excess elastomeric fill materials adjacent to joints as the Work progresses by methods and with cleaning materials that are approved in writing by joint firestopping system manufacturers and that do not damage materials in which joints occur.
- B. Provide final protection and maintain conditions during and after installation that ensure joint firestopping systems are without damage or deterioration at time of Substantial Completion. If damage or deterioration occurs despite such protection, cut out and remove damaged or deteriorated fire-resistive joint systems immediately and install new materials to produce fire-resistive joint systems complying with specified requirements.

### 3.7 FIRE-RESISTIVE JOINT SYSTEM SCHEDULE

- A. Where UL-classified systems are indicated, they refer to system numbers in UL's "Fire Resistance Directory" under product Category XHBN.

Joint Type	F-Rating (Hr)	Hilti Basis of Design UL System	
		Joint Width Less than or Equal to 2"	Joint Width Greater than 2" Less than or Equal to 6" *
Concrete (Floor to Floor)	1	FF-D-1012, FF-D-1013*	FF-D-1012, FF-D-1013
	2	FF-D-1012, FF-D-1013*	FF-D-1012, FF-D-1013
	3	FF-D-1011, FF-D-1026*	FF-D-1011, FF-D-1026
	4	FF-D-1047	FF-D-1125
Concrete (Edge of Floor Slab to Wall)	1	FW-D-1011, FW-D-1012, FW-D-1013	FW-D-1011, FW-D-1012, FW-D-1013, FW-D-1021
	2	FW-D-1011, FW-D-1012, FW-D-1013	FW-D-1011, FW-D-1012, FW-D-1013, FW-D-1021
	3	FW-D-1011	FW-D-1011, FW-D-1021
	4	FW-D-1047	FW-D-1092
Concrete or Block Wall to Flat Concrete Floor (Top-of-Wall)	1	N/A**	N/A**
	2	HW-D-0097*	HW-D-1009
	3	HW-D-1008*, HW-D-0268	HW-D-1008
	4	HW-D-1042	HW-D-1103
Concrete or Block Wall to Concrete Over Fluted Metal Deck (Top-of-Wall)	1	HW-D-0098	N/A**
	2	HW-D-0080, HW-D-0081, HW-D-0098	HW-D-1037
	3	N/A**	N/A**
	4	HW-D-0294	N/A**
Gypsum Wall to Flat Concrete Floor (Top-of-Wall)	1	HW-D-0757, HW-D-0082, HW-D-0083, HW-D-0106, HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
	2	HW-D-0757, HW-D-0082, HW-D-0083, HW-D-0106, HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
	3	HW-D-0119	HW-D-1011, HW-D-1012, HW-1020
Gypsum Shaft Wall to (Top- of-Wall)	2	HW-D-0342 (FLAT CONCRETE) HW-D-0541, HW-D-0542 (CONCRETE OVER METAL DECK)	N/A**
Gypsum Shaft Wall to Concrete Floor (Bottom-of- Wall)	1	BW-S-0023	N/A**
	2	BW-S-0023	N/A**
Gypsum Wall to Concrete Floor (Bottom-of-Wall)	1	BW-S-0001, BW-S-0002, BW-S-0039	N/A**
	2	BW-S-0001, BW-S-0002, BW-S-0039	N/A**
Gypsum Wall to Concrete Over Fluted Metal Deck (Top- of-Wall)	1	HW-D-0042*, HW-D-0049*, HW-D-0087*, HW-D-0089*, HW-D-0045, HW-D-0046*, HW-D-0076*, HW-D-0077*, HW-D-0154, HW-D-0184*, HW-D-0292, HW-D-0295, HW-D-0538*	HWD-1011, HWD-1012, HW-1020
	2	HW-D-0042*, HW-D-0049*, HW-D-0087*, HW-D-0089*, HW-D-0045, HW-D-0046*, HW-D-0076*, HW-D-0077*, HW-D-0154, HW-D-0184*, HW-D-292, HW-D-0295, HW-D-0538*	HWD-1011, HW-D-1012, HW-D-1020
	3	HW-D-0292, HW-D-0295	HWD-1011, HWD-1012, HW-1020
	4	HW-D-0292, HW-D-0295	N/A**
	2	WW-D-0017, WW-D-0082	WW-D-1080, WW-D-1084
Concrete (Wall to Wall)	3	WW-D-1011*, WW-D-0032	WW-D-1011
	4	WW-D-1047	WW-D-1128
Gypsum to Concrete (Wall to Wall)	1	WW-D-0040	N/A**
	2	WW-D-0040	N/A**

- B. Basis of Design: Hilti, Inc.

1. Contact the manufacturer for current UL classified system or Engineer Judgement Drawings (tel. 800-879-8000)

- C. NOTES:

1. Classified systems for 2" - 6" wide joints may be used for joints 2" wide and less.
2. Confirm that movement capabilities of the selected UL system meet or exceeds the specified movement range of the particular joint.
3. Systems marked with asterisk (\*) are suitable for top of wall joints where the fluted metal deck has spray-on Monokote MK-6/HY fireproofing.
4. Verify allowable joint width on specific UL System Drawing.

END OF SECTION 078443



SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
  - 1. Silicone joint sealants.
  - 2. Urethane joint sealants.
  - 3. Mildew-resistant joint sealants.
  - 4. Preformed joint sealants.
- B. Related Sections:
  - 1. Section 033000 "Cast-in-Place Concrete" for control and expansion joint fillers.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
  - 3. Joint-sealant formulation.
  - 4. Joint-sealant color.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- A. Product Test Reports: For each kind of joint sealant, for tests performed by manufacturer and witnessed by a qualified testing agency.
- A. Preconstruction Laboratory Test Reports: From sealant manufacturer, indicating the following:

1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  2. Interpretation of test results and written recommendations for primers and substrate preparation are needed for adhesion.
- B. Field-Adhesion-Test Reports: For each sealant application tested.
- C. Sample Warranties: For special warranties.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Company with minimum of three years experience specializing in work of this section, employing applicators trained for application of joint sealants required for this project, with record of successful completion of projects of similar scope, and approved by manufacturer.
- B. Product Testing: Test joint sealants using a qualified testing agency.
1. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.
- C. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.

#### 1.7 PRECONSTRUCTION TESTING

- A. Preconstruction Laboratory Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
1. Adhesion: Use ASTM C 719 and ASTM C 794 to determine requirements for joint preparation, including cleaning and priming.
  2. Compatibility: Use ASTM C 1087 to determine materials forming joints and adjacent materials do not adversely affect sealant materials and do not affect sealant color.
  3. Stain Testing: Use ASTM C 510, ASTM C 1248, or ASTM D 2203 to verify non-staining characteristics of proposed sealants on specified substrates.
  4. Submit manufacturer's recommended number of pieces of each type of material, including joint substrates, joint-sealant backings, and miscellaneous materials.
  5. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
  6. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures, including use of specially formulated primers.
  7. Testing will **NOT** be required if joint-sealant manufacturers submit data that are based on previous testing, not older than 24 months, of sealant products for adhesion to, staining of, and compatibility with joint substrates and other materials matching those submitted.
- B. Preconstruction Field-Adhesion Testing: Prior to installing joint sealants, field test adhesion to joint substrates using ASTM C 1193 Method A.
1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
  2. Conduct field tests for each kind of sealant and joint substrate.
  3. Notify Architect seven days in advance of dates and times when test joints will be erected.
  4. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
  5. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

## 1.8 FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
  - 2. When joint substrates are wet.
  - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.
- B. Coordination: Coordinate installation of joint sealants with cleaning of joint sealant substrates and other operations that may impact installation or finished joint sealant work.

## 1.9 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: **Two** years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: **Five** years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
  - 1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
  - 2. Disintegration of joint substrates from causes exceeding design specifications.
  - 3. Mechanical damage caused by individuals, tools, or other outside agents.
  - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: The performance requirements for the joint sealants is based upon the following:
  - 1. Products manufactured by Tremco, Inc., Commercial Sealants and Waterproofing Division, An RPM Company, Beachwood OH; (866) 321-6357; email: techresources@tremcoinc.com; www.tremcosealants.com.
- B. Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following subject to conformance with the performance requirements stated herein and as shown on the Drawings:
  - 1. GE Advanced Materials – Silicones
  - 2. Dow Corning Coporations
  - 3. Pecora Corporation
  - 4. Sika Corporation

## 2.2 JOINT SEALANTS, GENERAL

- A. Compatibility: Provide joint sealants and accessory materials that are compatible with one another, and with adjacent materials, as demonstrated by sealant manufacturer using ASTM C 1087 testing and related experience.
- B. Joint Sealant Standard: Comply with ASTM C 920 and other specified requirements for each joint sealant.
- C. Stain Test Characteristics: Where sealants are required to be nonstaining, provide sealants tested per ASTM C 1248 as non-staining on porous joint substrates specified.

## 2.3 SILICONE JOINT SEALANTS

- A. Single-Component, Nonsag, Non-Staining, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100/50, Use NT; SWRI validated.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Spectrem 1.
  - 2. Volatile Organic Compound (VOC) Content: 1 g/L maximum.
  - 3. Volatile Organic Emissions (VOE): Not greater than Greenguard Children & Schools Certification emissions levels.
  - 4. Staining, ASTM C 1248: None on concrete, marble, granite, limestone, and brick.
  - 5. Color: As selected by Architect from manufacturer's standard line of not less than 12 colors.
- B. Single-Component, Nonsag, Non-Staining, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 50, Use NT; SWRI validated.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Spectrem 2.
  - 2. Volatile Organic Compound (VOC) Content: 50 g/L maximum.
  - 3. Volatile Organic Emissions (VOE): Not greater than Greenguard Children & Schools Certification emissions levels.
  - 4. Staining, ASTM C 1248: None on concrete, marble, granite, limestone, and brick.
  - 5. Color: As selected by Architect from manufacturer's standard line of not less than 10 colors.
- C. Mildew-Resistant, Single-Component, Acid-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, Use NT.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Tremsil 200 Sanitary.
  - 2. Volatile Organic Compound (VOC) Content: 1 g/L maximum.
  - 3. Volatile Organic Emissions (VOE): Not greater than Greenguard Children & Schools Certification emissions levels.
  - 4. Color: White and Clear.

## 2.4 URETHANE JOINT SEALANTS

- A. Single-Component, Nonsag, Moisture-Cure, Polyurethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 50, Use NT; Greenguard certified.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Dymonic 100.

2. Physical Characteristics:
  - a. Volatile Organic Compound (VOC) Content: 40 g/L maximum.
  - b. Volatile Organic Emissions (VOE): Not greater than Greenguard Children & Schools Certification emissions levels.
  - c. Tensile Strength ASTM D412: 350 to 450 psi
  - d. Percent Elongation ASTM D412: 800 to 900%
  - e. Modulus at 100% ASTM D412: 75 to 85 psi
  - f. Tear Strength ASTM D412: 65 to 75 psi
  - g. Smoke Development ASTM E84: 5
  - h. Color: As selected by Architect from manufacturer's standard line of not less than 20 colors.
- B. Single-Component, Nonsag, Moisture-Cure, Polyurethane Hybrid Joint Sealant: ASTM C 920, Type S, Grade NS, Class 35, Use NT; Greenguard certified.
  1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Dymonic FC.
  2. Physical Characteristics:
    - a. Extrusion Rate ASTM C1183: 93.1 mL/min
    - b. Weight Loss ASTM C1246: Pass
    - c. Tack Free Time ASTM C679: 3 to 4 hr
    - d. Volatile Organic Compound (VOC) Content: 10 g/L maximum.
    - e. Volatile Organic Emissions (VOE): Not greater than Greenguard Children & Schools Certification emissions levels.
    - f. Color: As selected by Architect from manufacturer's standard line of not less than 15 colors.
- C. Single-Component, Nonsag, Polyurethane Joint Sealant: ASTM C920, Type S, Grade NS, Class 25, Use NT.
  1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Vulkem 116.
  2. Physical Characteristics:
    - a. Volatile Organic Compound (VOC) Content: 60 g/L maximum.
    - b. Color: As selected by Architect from manufacturer's standard line of not less than 15 colors.
- D. Immersible, Single-Component, Pourable, Traffic Grade Polyurethane Joint Sealant: ASTM C 920, Type S, Grade P, Class 50, Use T and I.
  1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Vulkem 45 SSL.
  2. Physical Characteristics:
    - a. Volatile Organic Compound (VOC) Content: 110 g/L maximum.
    - b. Volatile Organic Emissions (VOE): Not greater than Greenguard Children & Schools Certification emissions levels.
    - c. Color: As selected by Architect from manufacturer's standard line of not less than 5 colors.
- E. Multi-Component, Non-sag, Polyurethane Joint Sealant: ASTM C 920, Type M, Grade NS, Class 50, Use I.
  1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Dymeric 240 FC.
  2. Physical Characteristics:
    - a. Volatile Organic Compound (VOC) Content: 0 g/L maximum.

- b. Volatile Organic Emissions (VOE): Not greater than Greenguard Children & Schools Certification emissions levels.
- c. Color: As selected by Architect from manufacturer's standard line of not less than 70 colors.

## 2.5 LATEX JOINT SEALANTS

- A. Latex Joint Sealant: Siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Tremflex 834.
  - 2. Physical Characteristics:
    - a. Volatile Organic Compound (VOC) Content: 35 g/L maximum.
    - b. Volatile Organic Emissions (VOE): Not greater than Greenguard Children & Schools Certification emissions levels.
    - c. Color: White, paintable.

## 2.6 SOLVENT-RELEASE-CURING JOINT SEALANTS

- A. Butyl-Rubber-Based Joint Sealant: ASTM C 1311.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Tremco, Inc., Tremco Butyl Sealant.
  - 2. Physical Characteristics:
    - a. Volatile Organic Compound (VOC) Content: 250 g/L maximum.
    - b. Color: As selected by Architect from manufacturer's standard colors.

## 2.7 JOINT SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type O (open-cell material), Type B (bicellular material with a surface skin), or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

## 2.8 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

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

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Concrete.
    - b. Masonry.
    - c. Unglazed surfaces of ceramic tile.
    - d. Exterior insulation and finish systems.
  - 3. Remove laitance and form-release agents from concrete.
  - 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
    - a. Metal.
    - b. Glass.
    - c. Glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

- B. Sealant and Primer Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Joint Backing: Select joint backing materials recommended by sealant manufacturer as compatible with sealant and adjacent materials. Install backing material at depth required to produce profile of joint sealant allowing optimal sealant movement.
  - 1. Joints up to 1/2 inch wide: 1:1 width to depth ratio.
  - 2. Joints greater than 1/2 inch wide: 2:1 width to depth ratio; maximum 1/2 inch joint depth.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Masking: Mask adjacent surfaces to prevent staining or damage by contact with sealant or primer.
- F. Joint Priming: Prime joint substrates when recommended by sealant manufacturer or when indicated by preconstruction testing or experience. Apply recommended primer using sealant manufacturer's recommended application techniques.
- G. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- H. Liquid Sealant Application: Install sealants using methods recommended by sealant manufacturer, in depths recommended for application. Apply in continuous operation from bottom to top of joint vertically and horizontally in a single direction. Apply using adequate pressure to fill and seal joint width.
  - 1. Tool sealants immediately with appropriately shaped tool to force sealants against joint backing and joint substrates, eliminating voids and ensuring full contact.
  - 2. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
  - 3. Tool exposed joint surface concave using tooling agents approved by sealant manufacturer for application.
- I. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealant from surfaces adjacent to joints.
  - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  - 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
  - 4. Provide flush joint profile where indicated per Figure 8B in ASTM C 1193.
  - 5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C 1193.

### 3.4 INSTALLATION OF ACOUSTICAL JOINT SEALANTS

- A. Comply with acoustical joint-sealant manufacturer's written installation instructions unless more stringent requirements apply.
- B. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical joint sealant. Install acoustical joint sealants at both faces of partitions, at perimeters, and through penetrations.



1. Comply with ASTM C 919, ASTM C 1193, and manufacturer's written recommendations for closing off sound-flanking paths around or through assemblies, including sealing partitions to underside of floor slabs above acoustical ceilings.
- C. Acoustical Ceiling Areas: Apply acoustical joint sealant at perimeter edge moldings of acoustical ceiling areas in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.

### 3.5 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
  1. Extent of Testing: Test completed and cured sealant joints as follows:
    - a. Perform tests for each kind of sealant and joint substrate.
  2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
    - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
  3. Inspect tested joints and report on the following:
    - a. Whether sealants filled joint cavities and are free of voids.
    - b. Whether sealant dimensions and configurations comply with specified requirements.
    - c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
  4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
  5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory.
  1. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

### 3.6 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.7 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

### 3.8 EXTERIOR JOINT-SEALANT SCHEDULE

- A. Exterior concealed transition joints in air barrier.
  - 1. Joint Sealant: Single-component neutral-curing low-modulus silicone sealant.
  - 2. Compatibility: Compatible with air barrier components specified in Division 13 pre-engineered building system section.
- B. Exterior construction joints in cast-in-place concrete.
  - 1. Joint Sealant: Single-component neutral-curing non-staining silicone sealant.
  - 2. Joint Sealant: Multi-component neutral-curing non-staining field tintable silicone sealant.
  - 3. Joint Sealant: Single-component non-sag urethane sealant.
  - 4. Joint-Sealant Color: As selected by Architect from manufacturer's standard colors.
- C. Exterior movement joints in brick masonry.
  - 1. Joint Sealant: Single-component neutral-curing non-staining silicone sealant.
  - 2. Joint Sealant: Multi-component neutral-curing non-staining field tintable silicone sealant.
  - 3. Joint Sealant: Single-component non-sag urethane sealant.
  - 4. Joint-Sealant Color, Vertical Joints: As selected by Architect from manufacturer's standard colors.
  - 5. Joint-Sealant Color, Horizontal Joints: As selected by Architect from manufacturer's full range.
- D. Exterior exposed joints in metal panel cladding systems.
  - 1. Joint Sealant: Single-component neutral-curing non-staining silicone sealant.
  - 2. Joint Sealant: Multi-component neutral-curing non-staining field tintable silicone sealant.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's standard colors.
- E. Exterior concealed watertight joints in cladding systems
  - 1. Joint Sealant: Single-component neutral-curing silicone sealant.
  - 2. Joint Sealant: Single-component non-sag urethane sealant.
- F. Exterior joints between different materials listed above.
  - 1. Joint Sealant: Single-component neutral-curing non-staining silicone sealant.
  - 2. Joint Sealant: Multi-component neutral-curing non-staining field tintable silicone sealant.
  - 3. Joint Sealant: Single-component non-sag urethane sealant.
  - 4. Joint-Sealant Color: As selected by Architect from manufacturer's standard colors.
- G. Exterior perimeter joints at frames of doors, windows, storefront frames, curtain wall frames, and louvers.
  - 1. Joint Sealant: Single-component neutral-curing non-staining silicone sealant.
  - 2. Joint Sealant: Multi-component neutral-curing non-staining field tintable silicone sealant.
  - 3. Joint Sealant: Single-component non-sag urethane sealant.
  - 4. Joint-Sealant Color: As selected by Architect from manufacturer's standard colors.
- H. All other exterior non-traffic joints.
  - 1. Joint Sealant: Single-component neutral-curing non-staining silicone sealant.
  - 2. Joint Sealant: Multi-component neutral-curing non-staining field tintable silicone sealant.
  - 3. Joint Sealant: Single-component non-sag urethane sealant.
  - 4. Joint-Sealant Color: As selected by Architect from manufacturer's standard colors.
- I. Exterior horizontal traffic and traffic isolation joints: Refer to Division 32 Section "Concrete Paving Joint Sealants".

### 3.9 INTERIOR JOINT-SEALANT SCHEDULE

- A. Interior perimeter joints of interior frames.
  - 1. Joint Sealant: Single-component non-sag urethane sealant.

2. Joint Sealant: Siliconized acrylic latex.
  3. Joint-Sealant Color: Paintable.
- B. Interior sanitary joints between plumbing fixtures, food preparation fixtures, and casework and adjacent walls, floors, and counters.
1. Joint Sealant: Mildew-Resistant, Single-Component, nonsag, acid-curing silicone joint sealant.
  2. Joint-Sealant Color: As selected by Architect from manufacturer's full range; multiple colors required.
- C. Interior traffic joints in floor and between floor and wall construction.
1. Joint Sealant: Single-component pourable urethane sealant.
  2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- D. Interior non-moving joints between interior painted surfaces and adjacent materials.
1. Joint Sealant: Siliconized acrylic latex.
  2. Joint-Sealant Color: Paintable.
- E. Interior concealed sealants at thresholds and sills.
1. Joint Sealant: Butyl-rubber-based joint sealant.
- F. Interior exposed and non-exposed acoustical applications:
1. Joint Sealant: Acoustical joint sealant

END OF SECTION 079200



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**Electrical**

## SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Copper building wire.
2. Metal-clad cable, Type MC.
3. Fire-alarm wire and cable.
4. Connectors and splices.

#### 1.2 ACTION SUBMITTALS

A. Product Data:

1. Copper building wire.
2. Metal-clad cable, Type MC.
3. Fire-alarm wire and cable.
4. Connectors and splices.

#### 1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

### PART 2 - PRODUCTS

#### 2.1 COPPER BUILDING WIRE

- A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Alpha Wire; brand of Belden, Inc.
  2. Cerro Wire LLC.
  3. General Cable; Prysmian Group North America.
  4. Southwire Company, LLC.
- C. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
  2. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- D. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.
- E. Conductor Insulation:
1. Type RHH and Type RHW-2. Comply with UL 44.
  2. Type THHN and Type THWN-2. Comply with UL 83.
  3. Type THW and Type THW-2. Comply with NEMA WC-70/ICEA S-95-658 and UL 83.
  4. Type XHHW-2. Comply with UL 44.

## 2.2 METAL-CLAD CABLE, TYPE MC

- A. Description: A factory assembly of one or more current-carrying insulated conductors in an overall metallic sheath.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. AFC Cable Systems; Atkore International.
  2. General Cable; Prysmian Group North America.
  3. Southwire Company, LLC.
- C. Standards:
1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
  2. Comply with UL 1569.
  3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- D. Circuits:
1. Single circuit.
  2. Power-Limited Fire-Alarm Circuits: Comply with UL 1424.
- E. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.
- F. Ground Conductor: Insulated.
- G. Conductor Insulation:
1. Type TFN/THHN/THWN-2. Comply with UL 83.
  2. Type XHHW-2. Comply with UL 44.
- H. Armor: Aluminum, interlocked.

## 2.3 FIRE-ALARM WIRE AND CABLE

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Genesis Cable Products; Honeywell International, Inc.
  2. PYROTENAX; brand of nVent Electrical plc.
  3. West Penn Wire; brand of Belden, Inc.
- B. General Wire and Cable Requirements: NRTL listed and labeled as complying with NFPA 70, Article 760.
- C. Signaling Line Circuits: Twisted, shielded pair, size as recommended by system manufacturer.
1. Circuit Integrity Cable: Twisted shielded pair, NFPA 70, Article 760, Classification CI, for power-limited fire-alarm signal service Type FPL. NRTL listed and labeled as complying with UL 1424 and UL 2196 for a two-hour rating.
- D. Non-Power-Limited Circuits: Solid-copper conductors with 600 V rated, 75 deg C, color-coded insulation, and complying with requirements in UL 2196 for a two-hour rating.
1. Low-Voltage Circuits: No. 16 AWG, minimum, in pathway.
  2. Line-Voltage Circuits: No. 12 AWG, minimum, in pathway.

## 2.4 CONNECTORS AND SPLICES

- A. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. 3M Electrical Products.
  2. ABB, Electrification Business.
  3. AFC Cable Systems; Atkore International.
  4. Hubbell Utility Solutions; Hubbell Incorporated.
  5. ILSCO.
  6. Ideal Industries, Inc.
  7. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
- C. Jacketed Cable Connectors: For steel and aluminum jacketed cables, zinc die-cast with set screws, designed to connect conductors specified in this Section.
- D. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.
1. Material: Copper.
  2. Type: One hole with standard barrels.
  3. Termination: Compression.

## PART 3 - EXECUTION

## 3.1 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders:
  - 1. Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- B. Branch Circuits:
  - 1. Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- C. ASD Output Circuits Cable: Extra-flexible stranded for all sizes.
- D. Power-Limited Fire Alarm and Control: Solid for No. 12 AWG and smaller.

## 3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Exposed Feeders: Type THHN/THWN-2, single conductors in raceway.
- B. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspace: Type THHN/THWN-2, single conductors in raceway.
- C. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN/THWN-2, single conductors in raceway or Type XHHW-2, single conductors in raceway.
- D. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless steel, wire-mesh, strain relief device at terminations to suit application.

## 3.3 INSTALLATION, GENERAL

- A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.
- B. Complete raceway installation between conductor and cable termination points in accordance with Section 260533.13 "Conduits for Electrical Systems" prior to pulling conductors and cables.
- C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.



- F. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

### 3.4 INSTALLATION OF FIRE-ALARM WIRE AND CABLE

- A. Comply with NFPA 72.
- B. Wiring Method: Install wiring in metal pathway according to Section 270528.29 "Hangers and Supports for Communications Systems."
  - 1. Install plenum cable in environmental airspaces, including plenum ceilings.
  - 2. Fire-alarm circuits and equipment control wiring associated with fire-alarm system must be installed in a dedicated pathway system.
    - a. Cables and pathways used for fire-alarm circuits, and equipment control wiring associated with fire-alarm system, may not contain any other wire or cable.
  - 3. Fire-Rated Cables: Use of two-hour, fire-rated fire-alarm cables, NFPA 70, Types MI and CI, is not permitted.
  - 4. Signaling Line Circuits: Power-limited fire-alarm cables may be installed in the same cable or pathway as signaling line circuits.
- C. Wiring within Enclosures: Separate power-limited and non-power-limited conductors as recommended by manufacturer. Install conductors parallel with or at right angles to sides and back of the enclosure. Bundle, lace, and train conductors to terminal points with no excess. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with fire-alarm system to terminal blocks. Mark each terminal according to system's wiring diagrams. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.
- D. Cable Taps: Use numbered terminal strips in junction, pull, and outlet boxes; cabinets; or equipment enclosures where circuit connections are made.
- E. Color-Coding: Color-code fire-alarm conductors differently from the normal building power wiring. Use one color-code for alarm circuit wiring and another for supervisory circuits. Color-code audible alarm-indicating circuits differently from alarm-initiating circuits. Use different colors for visible alarm-indicating devices. Paint fire-alarm system junction boxes and covers red.

### 3.5 CONNECTIONS

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
- B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inch of slack.

## 3.6 IDENTIFICATION

- A. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems."
- B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

## 3.7 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

## 3.8 FIRESTOPPING

- A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly according to Section 078413 "Penetration Firestopping."

## 3.9 FIELD QUALITY CONTROL

- A. Tests and Inspections:
  - 1. Perform each of the following visual and electrical tests:
    - a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
    - b. Test bolted connections for high resistance using one of the following:
      - 1) A low-resistance ohmmeter.
      - 2) Calibrated torque wrench.
      - 3) Thermographic survey.
    - c. Inspect compression-applied connectors for correct cable match and indentation.
    - d. Inspect for correct identification.
    - e. Inspect cable jacket and condition.
    - f. Insulation-resistance test on each conductor for ground and adjacent conductors. Apply a potential of 500 V(dc) for 300 V rated cable and 1000 V(dc) for 600 V rated cable for a one-minute duration.
    - g. Continuity test on each conductor and cable.
    - h. Uniform resistance of parallel conductors.
- B. Cables will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports to record the following:
  - 1. Procedures used.

2. Results that comply with requirements.
3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION 260519

## SECTION 260523 - CONTROL-VOLTAGE ELECTRICAL POWER CABLES

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Category 6 balanced twisted pair cable.
  - 2. Balanced twisted pair cable hardware.
  - 3. Control cable.
  - 4. Control-circuit conductors.
  - 5. Fire-alarm wire and cable.

#### 1.2 ACTION SUBMITTALS

- A. Product Data:
  - 1. Category 6 balanced twisted pair cable.
  - 2. Balanced twisted pair cable hardware.
  - 3. Control cable.
  - 4. Control-circuit conductors.
  - 5. Fire-alarm wire and cable.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Flame Travel and Smoke Density in Plenums: As determined by testing identical products according to NFPA 262, by a qualified testing agency. Identify products for installation in plenums with appropriate markings of applicable testing agency.
  - 1. Flame Travel Distance: 60 inch or less.
  - 2. Peak Optical Smoke Density: 0.5 or less.
  - 3. Average Optical Smoke Density: 0.15 or less.
- C. Flame Travel and Smoke Density for Riser Cables in Non-Plenum Building Spaces: As determined by testing identical products according to UL 1666.
- D. Flame Travel and Smoke Density for Cables in Non-Riser Applications and Non-Plenum Building Spaces: As determined by testing identical products according to UL 1685.

## 2.2 CATEGORY 6 BALANCED TWISTED PAIR CABLE

- A. Description: Four-pair, balanced-twisted pair cable, with internal spline, certified to meet transmission characteristics of Category 6 cable at frequencies up to 250 MHz.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Berk-Tek, a Leviton Company.
  - 2. CommScope, Inc.
  - 3. Superior Essex Inc.; subsidiary of LS Corp.
- C. Standard: Comply with NEMA WC 66/ICEA S-116-732 and TIA-568-C.2 for Category 6 cables.
- D. Conductors: 100 ohm, No. 23 AWG solid copper.
- E. Shielding/Screening: Unshielded twisted pairs (UTP).
- F. Cable Rating: Riser.
- G. Jacket: White thermoplastic.

## 2.3 BALANCED TWISTED PAIR CABLE HARDWARE

- A. Description: Hardware designed to connect, splice, and terminate balanced twisted pair copper communications cable.
- B. General Requirements for Balanced Twisted Pair Cable Hardware:
  - 1. Comply with the performance requirements of Category 6.
  - 2. Comply with TIA-568-C.2, IDC type, with modules designed for punch-down caps or tools.
  - 3. Cables must be terminated with connecting hardware of same category or higher.
- C. Source Limitations: Obtain balanced twisted pair cable hardware from same manufacturer as balanced twisted pair cable, from single source.
- D. Plugs and Plug Assemblies:
  - 1. Male; eight position; color-coded modular telecommunications connector designed for termination of a single four-pair 100 ohm unshielded or shielded balanced twisted pair cable.
  - 2. Comply with IEC 60603-7-1, IEC 60603-7-2, IEC 60603-7-3, IEC 60603-7-4, and IEC 60603-7.5.
  - 3. Marked to indicate transmission performance.
- E. Jacks and Jack Assemblies:

1. Female; eight position; modular; fixed telecommunications connector designed for termination of a single four-pair 100 ohm unshielded or shielded balanced twisted pair cable.
2. Designed to snap-in to a patch panel or faceplate.
3. Standards:
  - a. Category 6, unshielded balanced twisted pair cable must comply with IEC 60603-7-4.
  - b. Category 6, shielded balanced twisted pair cable must comply with IEC 60603-7.5.
4. Marked to indicate transmission performance.

F. Faceplate:

1. Two port, vertical single-gang faceplates designed to mount to single-gang wall boxes.
2. Plastic Faceplate: High-impact plastic. Coordinate color with Section 260533.16 "Boxes and Covers for Electrical Systems."
3. For use with snap-in jacks accommodating any combination of balanced twisted pair, optical fiber, and coaxial work area cords.
  - a. Flush mounting jacks, positioning the cord at a 45-degree angle.

G. Legend:

1. Machine printed, in the field, using adhesive-tape label.
2. Snap-in, clear-label covers and machine-printed paper inserts.

## 2.4 CONTROL CABLE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Belden
2. General Cable; Prysmian Group North America.
3. Honeywell

B. Paired Cable: NFPA 70, Type CMG.

1. One pair, twisted, No. 18 AWG, stranded (19x30) tinned-copper conductors.
2. PVC insulation.
3. PVC jacket.
4. Flame Resistance: Comply with UL 1685.
5. Provide shielded type where called for.

## 2.5 CONTROL-CIRCUIT CONDUCTORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Encore Wire Corporation.
2. General Cable; Prysmian Group North America.

3. Southwire Company, LLC.
4. Belden

- B. Class 1 Control Circuits: Stranded copper, Type THHN/THWN-2, complying with UL 83 in raceway.
- C. Class 2 Control Circuits: Stranded copper, Type THHN/THWN-2, complying with UL 83 in raceway.
- D. Class 3 Remote-Control and Signal Circuits: Stranded copper, Type THHN/THWN-2, complying with UL 83 in raceway.

## 2.6 SOURCE QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to evaluate cables.
- B. Factory test twisted pair cables according to TIA-568-C.2.
- C. Cable will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Test cables on receipt at Project site.
  1. Test each pair of twisted pair cable for open and short circuits.

### 3.2 INSTALLATION OF RACEWAYS AND BOXES

- A. Comply with requirements in Section 260533.13 "Conduits for Electrical Systems" for raceway selection and installation requirements for conduits as supplemented or modified in this Section.
- B. Comply with requirements in Section 260533.16 "Boxes and Covers for Electrical Systems" for raceway selection and installation requirements for boxes as supplemented or modified in this Section.
  1. Outlet boxes must be no smaller than 2 inch wide, 3 inch high, and 2-1/2 inch deep.
  2. Outlet boxes for cables must be no smaller than 4 inch square by 2-1/8 inch deep with extension ring sized to bring edge of ring to within 1/8 inch of the finished wall surface.
  3. Flexible metal conduit must not be used.
- C. Comply with TIA-569-D for pull-box sizing and length of conduit and number of bends between pull points.
- D. Install manufactured conduit sweeps and long-radius elbows if possible.

## E. Raceway Installation in Equipment Rooms:

1. Position conduit ends adjacent to a corner on backboard if a single piece of plywood is installed, or in the corner of the room if multiple sheets of plywood are installed around perimeter walls of the room.
2. Install cable trays to route cables if conduits cannot be located in these positions.
3. Secure conduits to backboard if entering the room from overhead.
4. Extend conduits 3 inch above finished floor.
5. Install metal conduits with grounding bushings and connect with grounding conductor to grounding system.

## F. Backboards: Install backboards with 96 inch dimension vertical. Butt adjacent sheets tightly and form smooth gap-free corners and joints.

## 3.3 INSTALLATION OF CONDUCTORS AND CABLES

## A. Comply with NECA 1.

## B. General Requirements for Cabling:

1. Comply with TIA-568-C Series of standards.
2. Comply with BICSI ITSIMM, Ch. 5, "Copper Structured Cabling Systems."
3. Terminate all conductors; cable must not contain unterminated elements. Make terminations only at indicated outlets, terminals, and cross-connect and patch panels.
4. Cables may not be spliced and must be continuous from terminal to terminal. Do not splice cable between termination, tap, or junction points.
5. Cables serving a common system may be grouped in a common raceway. Install network cabling and control wiring and cable in separate raceway from power wiring. Do not group conductors from different systems or different voltages.
6. Secure and support cables at intervals not exceeding 30 inch and not more than 6 inch from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
7. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIMM, Ch. 5, "Copper Structured Cabling Systems." Install lacing bars and distribution spools.
8. Do not install bruised, kinked, scored, deformed, or abraded cable. Remove and discard cable if damaged during installation and replace it with new cable.
9. Cold-Weather Installation: Bring cable to room temperature before dereeling. Do not use heat lamps for heating.
10. Pulling Cable: Comply with BICSI ITSIMM, Ch. 5, "Copper Structured Cabling Systems." Monitor cable pull tensions.
11. Support: Do not allow cables to lie on removable ceiling tiles.
12. Secure: Fasten securely in place with hardware specifically designed and installed so as to not damage cables.
13. Provide strain relief.
14. Keep runs short. Allow extra length for connecting to terminals. Do not bend cables in a radius less than 10 times the cable OD. Use sleeves or grommets to protect cables from vibration at points where they pass around sharp corners and through penetrations.
15. Ground wire must be copper, and grounding methods must comply with IEEE C2. Demonstrate ground resistance.



## C. Balanced Twisted Pair Cable Installation:

1. Comply with TIA-568-C.2.
2. Install termination hardware as specified in Section 271513 "Communications Copper Horizontal Cabling" unless otherwise indicated.
3. Do not untwist balanced twisted pair cables more than 1/2 inch at the point of termination to maintain cable geometry.

## D. Installation of Control-Circuit Conductors:

1. Install wiring in raceways.
2. Use insulated spade lugs for wire and cable connection to screw terminals.

## E. Open-Cable Installation:

1. Install cabling with horizontal and vertical cable guides in telecommunications spaces with terminating hardware and interconnection equipment.
2. Suspend copper cable not in a wireway or pathway a minimum of 8 inch above ceilings by cable supports not more than 30 inch apart.
3. Cable must not be run through or on structural members or in contact with pipes, ducts, or other potentially damaging items. Do not run cables between structural members and corrugated panels.

## F. Separation from EMI Sources:

1. Comply with BICSI TDMM and TIA-569-D recommendations for separating unshielded copper voice and data communications cable from potential EMI sources including electrical power lines and equipment.
2. Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment must be as follows:
  - a. Electrical Equipment or Circuit Rating Less Than 2 kVA: A minimum of 5 inch.
  - b. Electrical Equipment or Circuit Rating between 2 and 5 kVA: A minimum of 12 inch.
  - c. Electrical Equipment or Circuit Rating More Than 5 kVA: A minimum of 24 inch.
3. Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment must be as follows:
  - a. Electrical Equipment or Circuit Rating Less Than 2 kVA: A minimum of 2-1/2 inch.
  - b. Electrical Equipment or Circuit Rating between 2 and 5 kVA: A minimum of 6 inch.
  - c. Electrical Equipment or Circuit Rating More Than 5 kVA: A minimum of 12 inch.
4. Separation between communications cables in grounded metallic raceways and power lines and electrical equipment located in grounded metallic conduits or enclosures must be as follows:
  - a. Electrical Equipment or Circuit Rating Less Than 2 kVA: No requirement.

- b. Electrical Equipment or Circuit Rating between 2 and 5 kVA: A minimum of 3 inch.
  - c. Electrical Equipment or Circuit Rating More Than 5 kVA: A minimum of 6 inch.
- 5. Separation between Communications Cables and Electrical Motors and Transformers, 5 kVA or 5 HP and Larger: A minimum of 48 inch.
  - 6. Separation between Communications Cables and Fluorescent Fixtures: A minimum of 5 inch.

### 3.4 REMOVAL OF CONDUCTORS AND CABLES

- A. Remove abandoned conductors and cables. Abandoned conductors and cables are those installed that are not terminated at equipment and are not identified with a tag for future use.

### 3.5 CONTROL-CIRCUIT CONDUCTORS

- A. Minimum Conductor Sizes:
  - 1. Class 1 remote-control and signal circuits; No 14 AWG.
  - 2. Class 2 low-energy, remote-control, and signal circuits; No. 16 AWG.
  - 3. Class 3 low-energy, remote-control, alarm, and signal circuits; No 12 AWG.

### 3.6 FIRESTOPPING

- A. Comply with TIA-569-D, Annex A, "Firestopping."
- B. Comply with BICSI TDMM, "Firestopping" Chapter.

### 3.7 GROUNDING

- A. For data communication wiring, comply with TIA-607-B and with BICSI TDMM, "Bonding and Grounding (Earthing)" Chapter.
- B. For control-voltage wiring and cabling, comply with requirements in Section 260526 "Grounding and Bonding for Electrical Systems."

### 3.8 IDENTIFICATION

- A. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
- B. Identify data and communications system components, wiring, and cabling according to TIA-606-B; label printers must use label stocks, laminating adhesives, and inks complying with UL 969.
- C. Identify each wire on each end and at each terminal with a number-coded identification tag. Each wire must have a unique tag.

## 3.9 FIELD QUALITY CONTROL

## A. Tests and Inspections:

1. Visually inspect cable jacket materials for UL or third-party certification markings. Inspect cabling terminations to confirm color-coding for pin assignments, and inspect cabling connections to confirm compliance with TIA-568-C.1.
  2. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.
  3. Test cabling for direct-current loop resistance, shorts, opens, intermittent faults, and polarity between conductors. Test operation of shorting bars in connection blocks. Test cables after termination, but not after cross-connection.
    - a. Test instruments must meet or exceed applicable requirements in TIA-568-C.2. Perform tests with a tester that complies with performance requirements in its "Test Instruments (Normative)" Annex, complying with measurement accuracy specified in its "Measurement Accuracy (Informative)" Annex. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
- B. Document data for each measurement. Print data for submittals in a summary report that is formatted using Table 10.1 in BICSI TDMM as a guide, or transfer the data from the instrument to the computer, save as text files, print, and submit.
- C. End-to-end cabling will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

END OF SECTION 260523

## SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Grounding and bonding conductors.
2. Grounding and bonding bushings.
3. Grounding and bonding connectors.

##### B. Related Requirements:

1. Section 260010 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
2. Section 260011 "Facility Performance Requirements for Electrical" for seismic-load, wind-load, acoustical, and other field conditions applicable to Work specified in this Section.

#### 1.2 ACTION SUBMITTALS

##### A. Product Data:

1. For each type of product indicated.

### PART 2 - PRODUCTS

#### 2.1 GROUNDING AND BONDING CONDUCTORS

##### A. Equipment Grounding Conductor:

1. General Characteristics: 600 V, THHN/THWN-2, copper wire or cable, green color, in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

#### 2.2 GROUNDING AND BONDING BUSHINGS

- ##### A. Description:
- Bonding bushings connect conduit fittings, tubing fittings, threaded metal conduit, and unthreaded metal conduit to metal boxes and equipment enclosures, and have one or more bonding screws intended to provide electrical continuity between bushing and enclosure. Grounding bushings have provision for connection of bonding or grounding conductor and may or may not also have bonding screws.

- B. Source Limitations: Obtain products from single manufacturer.
- C. Performance Criteria:
  - 1. Regulatory Requirements:
    - a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
  - 2. Listing Criteria:
    - a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.
- D. UL KDER - Bonding Bushing:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. ABB, Electrification Business.
    - b. Arlington Industries, Inc.
    - c. Crouse-Hinds; brand of Eaton, Electrical Sector.
    - d. Killark; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
    - e. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
    - f. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
  - 2. General Characteristics: Threaded bushing with insulated throat.
- E. UL KDER - Grounding Bushing:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. ABB, Electrification Business.
    - b. Arlington Industries, Inc.
    - c. Crouse-Hinds; brand of Eaton, Electrical Sector.
    - d. Killark; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
    - e. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
    - f. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
  - 2. General Characteristics: Threaded bushing with insulated throat and mechanical-type wire terminal.

## PART 3 - EXECUTION

## 3.1 SELECTION OF CONNECTORS

## A. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.

## 3.2 INSTALLATION

## A. Comply with manufacturer's published instructions.

## B. Reference Standards:

1. Ground Bonding Common with Lightning Protection System: Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system. Bond electrical power system ground directly to lightning protection system grounding conductor at closest point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor, and install in conduit.
2. Consult Architect for resolution of conflicting requirements.

## C. Special Techniques:

## 1. Conductors:

- a. Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

2. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.

- a. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
- b. Make connections with clean, bare metal at points of contact.
- c. Make aluminum-to-steel connections with stainless steel separators and mechanical clamps.
- d. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
- e. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
- f. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

- 1) Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate adjacent parts.

- 2) Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
    - 3) Use exothermic-welded connectors for outdoor locations; if disconnect-type connection is required, use bolted clamp.
  - g. Bonding Interior Metal Ducts: Bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install bonding jumper to bond across flexible duct connections to achieve continuity.
  - h. Grounding for Steel Building Structure: Install driven ground rod at base of each corner column and at intermediate exterior columns at distances not more than 60 ft apart.
3. Equipment Grounding:
- a. Install insulated equipment grounding conductors with feeders and branch circuits.
  - b. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
    - 1) Feeders and branch circuits.
    - 2) Lighting circuits.
    - 3) Receptacle circuits.
    - 4) Single-phase motor and appliance branch circuits.
    - 5) Three-phase motor and appliance branch circuits.
    - 6) Flexible raceway runs.
    - 7) Armored and metal-clad cable runs.
  - c. Air-Duct Equipment Circuits: Install insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air cleaners, heaters, dampers, humidifiers, and other duct electrical equipment. Bond conductor to each unit and to air duct and connected metallic piping.
  - d. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install separate insulated equipment grounding conductor to each electric water heater and heat-tracing cable. Bond conductor to heater units, piping, connected equipment, and components.

### 3.3 FIELD QUALITY CONTROL

#### A. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with calibrated torque wrench in accordance with manufacturer's published instructions.

#### B. Nonconforming Work:

1. Grounding system will be considered defective if it does not pass tests and inspections.

2. Remove and replace defective components and retest.

#### 3.4 PROTECTION

- A. After installation, protect grounding and bonding cables and equipment from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 260526



## SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Support, anchorage, and attachment components.
2. Fabricated metal equipment support assemblies.

B. Related Requirements:

1. Section 260010 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
2. Section 260011 "Facility Performance Requirements for Electrical" for seismic-load, wind-load, acoustical, and other field conditions applicable to Work specified in this Section.

#### 1.2 ACTION SUBMITTALS

A. Product Data:

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:
  - a. Slotted support systems, hardware, and accessories.
  - b. Clamps.
  - c. Hangers.
  - d. Sockets.
  - e. Eye nuts.
  - f. Fasteners.
  - g. Anchors.
  - h. Saddles.
  - i. Brackets.
2. Include rated capacities and furnished specialties and accessories.

## PART 2 - PRODUCTS

## 2.1 PERFORMANCE REQUIREMENTS

## 2.2 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Preformed steel channels and angles with minimum 13/32 inch diameter holes at a maximum of 8 inch on center in at least one surface.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Allied Tube & Conduit; Atkore International.
    - b. Cooper B-line; brand of Eaton, Electrical Sector.
    - c. Flex-Strut Inc.
    - d. Unistrut; Atkore International.
  2. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.
  3. Material for Channel, Fittings, and Accessories: Galvanized steel.
  4. Channel Width: 1-5/8 inch.
  5. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
  6. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
  7. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
  8. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- C. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for nonarmored electrical conductors or cables in riser conduits. Plugs must have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body must be made of malleable iron.
- D. Structural Steel for Fabricated Supports and Restraints: ASTM A36/A36M steel plates, shapes, and bars; black and galvanized.
- E. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1) Hilti, Inc.
  - 2) ITW Ramset/Red Head; Illinois Tool Works, Inc.
2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
  - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - 1) Cooper B-line; brand of Eaton, Electrical Sector.
    - 2) Empire Industries, Inc.
    - 3) Hilti, Inc.
  3. Concrete Inserts: Steel or malleable-iron, slotted support system units are similar to MSS Type 18 units and comply with MFMA-4 or MSS SP-58.
  4. Clamps for Attachment to Steel Structural Elements: MSS SP-58 units are suitable for attached structural element.
  5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM F3125/F3125M, Grade A325.
  6. Toggle Bolts: All steel springhead type.
  7. Hanger Rods: Threaded steel.

## 2.3 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- A. Description: Welded or bolted structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.
- B. Materials: Comply with requirements in Section 055000 "Metal Fabrications" for steel shapes and plates.

## PART 3 - EXECUTION

### 3.1 SELECTION

- A. Comply with the following standards for selection and installation of hangers and supports, except where requirements on Drawings or in this Section are stricter:
  1. NECA NEIS 101
  2. NECA NEIS 102.
  3. NECA NEIS 105.
  4. NECA NEIS 111.
- B. Comply with requirements for raceways specified in Section 260533.13 "Conduits for Electrical Systems."

- C. Comply with requirements for boxes specified in Section 260533.16 "Boxes and Covers for Electrical Systems."
- D. Maximum Support Spacing and Minimum Hanger Rod Size for Raceways: Space supports for EMT, IMC, and ERMIC as required by scheduled in NECA NEIS 1, where its Table 1 lists maximum spacings that are less than those stated in NFPA 70. Minimum rod size must be 1/4 inch in diameter.
- E. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted or other support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
  - 1. Secure raceways and cables to these supports with two-bolt conduit clamps.
- F. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2 inch and smaller raceways serving branch circuits and communication systems above suspended ceilings, and for fastening raceways to trapeze supports.

### 3.2 INSTALLATION OF SUPPORTS

- A. Comply with NECA NEIS 101 for installation requirements except as specified in this article.
- B. Raceway Support Methods: In addition to methods described in NECA NEIS 1, EMT and ERMIC may be supported by openings through structure members, in accordance with NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination must be weight of supported components plus 200 lb.
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
  - 1. To Wood: Fasten with lag screws or through bolts.
  - 2. To New Concrete: Bolt to concrete inserts.
  - 3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
  - 4. To Existing Concrete: Expansion anchor fasteners.
  - 5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inch thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inch thick.
  - 6. To Steel: Welded threaded studs complying with AWS D1.1/D1.1M, with lock washers and nuts or beam clamps (MSS SP-58, Type 19, 21, 23, 25, or 27), complying with MSS SP-69.
  - 7. To Light Steel: Sheet metal screws.

8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.
- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid the need for reinforcing bars.

### 3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Comply with installation requirements in Section 055000 "Metal Fabrications" for site-fabricated metal supports.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- C. Field Welding: Comply with AWS D1.1/D1.1M. Submit welding certificates.

### 3.4 CONCRETE BASES

- A. Construct concrete bases of dimensions indicated, but not less than 4 inch larger in both directions than supported unit, and so anchors will be a minimum of 10 bolt diameters from edge of the base.
- B. Use 3000 psi, 28-day compressive-strength concrete. Concrete materials, reinforcement, and placement requirements are specified in Section 033000 "Cast-in-Place Concrete."
- C. Anchor equipment to concrete base as follows:
  1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
  2. Install anchor bolts to elevations required for proper attachment to supported equipment.
  3. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

### 3.5 PAINTING

- A. Touchup:
  1. Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
    - a. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.
- B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A780.

END OF SECTION 260529

NOVEMBER 2022

## SECTION 260533.13 - CONDUITS FOR ELECTRICAL SYSTEMS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Type EMT-S duct raceways and elbows.
  - 2. Type ERMC-S duct raceways, elbows, couplings, and nipples.
  - 3. Type FMC-S duct raceways.
  - 4. Type FMT duct raceways.
  - 5. Type LFMC duct raceways.
  - 6. Type LFNC duct raceways.
  - 7. Fittings for conduit, tubing, and cable.
- B. Products Installed, but Not Furnished, under This Section:
  - 1. See Section 260553 "Identification for Electrical Systems" for electrical equipment labels.
- C. Related Requirements:
  - 1. Section 260519 "Low-Voltage for Electrical Power Conductors and Cables" for nonmetallic underground conduit with conductors (Type NUCC).

#### 1.2 DEFINITIONS

- A. Conduit: A structure containing one or more duct raceways.
- B. Duct Raceway: A single enclosed raceway for conductors or cable.
- C. Duct Bank: An arrangement of conduit providing one or more continuous duct raceways between two points.

#### 1.3 ACTION SUBMITTALS

- A. Product Data:
  - 1. Type EMT-S duct raceways and elbows.
  - 2. Type ERMC-S duct raceways, elbows, couplings, and nipples.
  - 3. Type FMC-S duct raceways.
  - 4. Type FMT duct raceways.
  - 5. Type LFMC duct raceways.
  - 6. Type LFNC duct raceways.
  - 7. Fittings for conduit, tubing, and cable.

## PART 2 - PRODUCTS

## 2.1 TYPE EMT-S DUCT RACEWAYS AND ELBOWS

## A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN FJMX; including UL 797.

## B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

## C. UL FJMX - Steel Electrical Metal Tubing (EMT-S) and Elbows:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Allied Tube & Conduit; Atkore International.
  - b. Republic Conduit; Nucor Corporation, Nucor Tubular Products.
  - c. Wheatland Tube; Zekelman Industries.
2. Material: Steel.
3. Options:
  - a. Exterior Coating: Zinc.
  - b. Interior Coating: Zinc.
  - c. Minimum Trade Size: Metric designator 21 (trade size 3/4).
  - d. Colors: As indicated on Drawings.

## 2.2 TYPE ERM-C-S DUCT RACEWAYS, ELBOWS, COUPLINGS, AND NIPPLES

## A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN DYIX; including UL 6.

## B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

## C. UL DYIX - Galvanized-Steel Electrical Rigid Metal Conduit (ERM-C-S-G), Elbows, Couplings, and Nipples:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Allied Tube & Conduit; Atkore International.
  - b. Republic Conduit; Nucor Corporation, Nucor Tubular Products.
  - c. Wheatland Tube; Zekelman Industries.
2. Exterior Coating: Zinc.
3. Options:
  - a. Interior Coating: Zinc.
  - b. Minimum Trade Size: Metric designator 21 (trade size 3/4).
  - c. Colors: As indicated on Drawings.

## 2.3 TYPE FMC-S AND TYPE FMC-A DUCT RACEWAYS

### A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN DXUZ; including UL 1.

### B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

### C. UL DXUZ - Steel Flexible Metal Conduit (FMC-S):

1. Material: Steel.
2. Options:
  - a. Minimum Trade Size: Metric designator 21 (trade size 3/4).
  - b. Colors: As indicated on Drawings.

### D. UL DXUZ - Aluminum Flexible Metal Conduit (FMC-A):

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. ABB, Electrification Business.
  - b. Anaconda Sealtite; Anamet Electrical, Inc.
  - c. Electri-Flex Company.
  - d. Topaz Lighting & Electric.
2. Options:
  - a. Minimum Trade Size: Metric designator 21 (trade size 3/4).
  - b. Colors: As indicated on Drawings.



## 2.4 TYPE FMT DUCT RACEWAYS

## A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN ILJW; including UL Subject 1652.

## B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

## C. UL ILJW - Steel Flexible Metallic Tubing (FMT):

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Electri-Flex Company.
  - b. International Metal Hose Co.
  - c. Liquid Tight Connector Co.
  - d. Southwire Company, LLC.
2. Options:
  - a. Minimum Trade Size: Metric designator 21 (trade size 3/4).
  - b. Colors: As indicated on Drawings.

## 2.5 TYPE LFMC DUCT RACEWAYS

## A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN DXHR; including UL 360.

## B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

## C. UL DXHR - Steel Liquidtight Flexible Metal Conduit (LFMC-S):

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. ABB, Electrification Business.
  - b. Anaconda Sealite; Anamet Electrical, Inc.
  - c. Electri-Flex Company.

- d. International Metal Hose Co.
- 2. Material: Steel.
- 3. Options:
  - a. Minimum Trade Size: Metric designator 21 (trade size 3/4).
  - b. Colors: As indicated on Drawings.

## 2.6 FITTINGS FOR CONDUIT, TUBING, AND CABLE

### A. Performance Criteria:

- 1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

### B. Source Quality Control:

- 1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

### C. UL DWTT - Fittings for Type ERM, Type IMC, Type PVC, Type HDPE, Type EPEC, and Type RTRC Duct Raceways:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Konkore Fittings; Atkore International.
  - b. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
  - c. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
- 2. Listing Criteria: UL CCN DWTT; including UL 514B.
- 3. Options:
  - a. Material: Steel.
  - b. Coupling Method: Setscrew coupling. Setscrew couplings with only single screw per conduit are unacceptable.
  - c. Expansion and Deflection Fittings: UL 651 with flexible bonding jumper.

### D. UL FKAV - Fittings for Type EMT Duct Raceways:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Crouse-Hinds; brand of Eaton, Electrical Sector.
  - b. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
  - c. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
- 2. Listing Criteria: UL CCN FKAV; including UL 514B.
- 3. Options:

- a. Material: Steel.
  - b. Coupling Method: Setscrew coupling. Setscrew couplings with only single screw per conduit are unacceptable.
  - c. Expansion and Deflection Fittings: UL 651 with flexible bonding jumper.
- E. UL ILNR - Fittings for Type FMC Duct Raceways:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. American Fittings Corp. (AMFICO).
    - b. Liquid Tight Connector Co.
    - c. Southwire Company, LLC.
  - 2. Listing Criteria: UL CCN ILNR; including UL 514B.
- F. UL DXAS - Fittings for Type LFMC and Type LFNC Duct Raceways:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Arlington Industries, Inc.
    - b. Liquid Tight Connector Co.
  - 2. Listing Criteria: UL CCN DXAS; including UL 514B.

## PART 3 - EXECUTION

### 3.1 SELECTION OF CONDUITS FOR ELECTRICAL SYSTEMS

- A. Unless more stringent requirements are specified in Contract Documents or manufacturers' published instructions, comply with NFPA 70 for selection of duct raceways. Consult Architect for resolution of conflicting requirements.
- B. Outdoors:
  - 1. Exposed and Subject to Severe Physical Damage: ERM C.
  - 2. Exposed and Subject to Physical Damage: ERM C.
    - a. Locations less than 2.5 m (8 ft) above finished floor.
  - 3. Exposed and Not Subject to Physical Damage: ERM C.
  - 4. Concealed Aboveground: ERM C.
  - 5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
- C. Indoors:
  - 1. Hazardous Classified Locations: ERM C.
  - 2. Exposed and Subject to Severe Physical Damage: ERM C. Locations include the following:

- a. Loading docks.
    - b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
    - c. Mechanical rooms.
    - d. Gymnasiums.
  3. Exposed and Subject to Physical Damage: ERM. Locations include the following:
    - a. Locations less than 2.5 m (8 ft) above finished floor.
    - b. Stub-ups to above suspended ceilings.
  4. Exposed and Not Subject to Physical Damage: EMT.
  5. Concealed in Ceilings and Interior Walls and Partitions: EMT.
  6. Damp or Wet Locations: ERM.
  7. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFM .
- D. Duct Fittings: Select fittings in accordance with NEMA FB 2.10 guidelines.
1. ERM and IM: Provide threaded-type fittings unless otherwise indicated.
- 3.2 INSTALLATION OF CONDUITS FOR ELECTRICAL SYSTEMS
- A. Comply with manufacturer's published instructions.
- B. Reference Standards for Installation: Unless more stringent installation requirements are specified in Contract Documents or manufacturers' published instructions, comply with the following:
1. Type EMT-A: Article 358 of NFPA 70 and NECA NEIS 102.
  2. Type EMT-SS: Article 358 of NFPA 70 and NECA NEIS 101.
  3. Type EMT-S: Article 358 of NFPA 70 and NECA NEIS 101.
  4. Type ENT: Article 362 of NFPA 70 and NECA NEIS 102.
  5. Type HDPE and Type EPEC: Article 353 of NFPA 70 and NECA NEIS 111.
  6. Type ERM-A: Article 344 of NFPA 70 and NECA NEIS 102.
  7. Type ERM-SS: Article 344 of NFPA 70 and NECA NEIS 101.
  8. Type ERM-S: Article 344 of NFPA 70 and NECA NEIS 101.
  9. Type FMC-S: Article 348 of NFPA 70 and NECA NEIS 101.
  10. Type FMC-A: Article 348 of NFPA 70 and NECA NEIS 102.
  11. Type FMT: Article 360 of NFPA 70 and NECA NEIS 101.
  12. Type IM: Article 342 of NFPA 70 and NECA NEIS 101.
  13. Type LFM: Article 350 of NFPA 70 and NECA NEIS 101.
  14. Type LFNC: Article 342 of NFPA 70 and NECA NEIS 111.
  15. Type PVC: Article 356 of NFPA 70 and NECA NEIS 111.
  16. Type RTRC: Article 355 of NFPA 70 and NECA NEIS 111.
  17. Expansion Fittings: NEMA FB 2.40.
  18. Consult Architect for resolution of conflicting requirements.
- C. Special Installation Techniques:
1. General Requirements for Installation of Duct Raceways:

- a. Complete duct raceway installation before starting conductor installation.
- b. Provide stub-ups through floors with coupling threaded inside for plugs, set flush with finished floor. Plug coupling until conduit is extended above floor to final destination or a minimum of 2 ft above finished floor.
- c. Install no more than equivalent of three 90-degree bends in conduit run. Support within 12 inch of changes in direction.
- d. Make bends in duct raceway using large-radius preformed ells except for parallel bends. Field bending must be in accordance with NFPA 70 minimum radii requirements. Provide only equipment specifically designed for material and size involved.
- e. Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- f. Support conduit within 12 inch of enclosures to which attached.
- g. Install duct sealing fittings at accessible locations in accordance with NFPA 70 and fill them with listed sealing compound. For concealed duct raceways, install fitting in flush steel box with blank cover plate having finish similar to that of adjacent plates or surfaces. Install duct sealing fittings in accordance with NFPA 70.
- h. Install devices to seal duct raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal interior of duct raceways at the following points:
  - 1) Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
  - 2) Where an underground service duct raceway enters a building or structure.
  - 3) Conduit extending from interior to exterior of building.
  - 4) Conduit extending into pressurized duct raceway and equipment.
  - 5) Conduit extending into pressurized zones that are automatically controlled to maintain different pressure set points.
  - 6) Where otherwise required by NFPA 70.
- i. Do not install duct raceways or electrical items on "explosion-relief" walls or rotating equipment.
- j. Do not install conduits within 2 inch of the bottom side of a metal deck roof.
- k. Keep duct raceways at least 6 inch away from parallel runs of flues and steam or hot-water pipes. Install horizontal duct raceway runs above water and steam piping.
- l. Cut conduit perpendicular to the length. For conduits metric designator 53 (trade size 2) and larger, use roll cutter or a guide to make cut straight and perpendicular to the length. Ream inside of conduit to remove burrs.
- m. Install pull wires in empty duct raceways. Provide polypropylene or monofilament plastic line with not less than 200 lb tensile strength. Leave at least 12 inch of slack at both ends of pull wire. Cap underground duct raceways designated as spare above grade alongside duct raceways in use.
- n. Install duct raceways square to the enclosure and terminate at enclosures without hubs with locknuts on both sides of enclosure wall. Install locknuts hand tight, plus one-quarter turn more.
  - 1) Termination fittings with shoulders do not require two locknuts.
- o. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to metric

designator 35 (trade size 1-1/4) and insulated throat metal bushings on metric designator 41 (trade size 1-1/2) and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

2. Types EMT-A, ERMCA, and FMC-A: Do not install aluminum duct raceways or fittings in contact with concrete or earth.
3. Types ERMCA and IMC:
  - a. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound that maintains electrical conductivity to threads of duct raceway and fittings before making up joints. Follow compound manufacturer's published instructions.
4. Type ERMCA-S-PVC:
  - a. Follow manufacturer's installation instructions for clamping, cutting, threading, bending, and assembly.
  - b. Provide PVC-coated sealing locknut for exposed male threads transitioning into female NPT threads that do not have sealing sleeves, including transitions from PVC couplings/female adapters to Type ERMCA-S-PVC elbows in direct-burial applications. PVC-coated sealing locknuts must not be used in place of conduit hub. PVC-coated sealing locknut must cover exposed threads on Type ERMCA-S-PVC duct raceway.
  - c. Coat field-cut threads on PVC-coated duct raceway with manufacturer-approved corrosion-preventing conductive compound prior to assembly.
5. Types FMC, LFMC, and LFNC:
  - a. Provide a maximum of 72 inch of flexible conduit for recessed and semirecessed luminaires, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
6. Types PVC, HDPE, and EPEC:
  - a. Do not install Type PVC, Type HDPE, or Type EPEC conduit where ambient temperature exceeds 122 deg F. Conductor ratings must be limited to 75 deg C except where installed in a trench outside buildings with concrete encasement, where 90 deg C conductors are permitted.
  - b. Comply with manufacturer's published instructions for solvent welding and fittings.
7. Type RTRC: Do not install Type RTRC conduit where ambient temperature exceeds 230 deg F.
8. Stub-ups to Above Recessed Ceilings:
  - a. Provide EMT, IMC, or ERMCA for duct raceways.
  - b. Provide a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.
9. Duct Raceway Terminations at Locations Subject to Moisture or Vibration:

- a. Provide insulating bushings to protect conductors, including conductors smaller than 4 AWG. Install insulated throat metal grounding bushings on service conduits.
10. Duct Fittings: Install fittings in accordance with NEMA FB 2.10 guidelines.
- a. ERM-C-S-PVC: Provide only fittings listed for use with this type of conduit. Patch and seal joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Provide sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.
  - b. EMT: Provide setscrew, steel fittings. Comply with NEMA FB 2.10.
  - c. Flexible Conduit: Provide only fittings listed for use with flexible conduit type. Comply with NEMA FB 2.20.
11. Expansion-Joint Fittings:
- a. Install in runs of aboveground PVC that are located where environmental temperature change may exceed 30 deg F and that have straight-run length that exceeds 25 ft. Install in runs of aboveground ERM-C and EMT conduit that are located where environmental temperature change may exceed 100 deg F and that have straight-run length that exceeds 100 ft.
  - b. Install type and quantity of fittings that accommodate temperature change listed for the following locations:
    - 1) Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F temperature change.
    - 2) Outdoor Locations Exposed to Direct Sunlight: 155 deg F temperature change.
    - 3) Indoor Spaces Connected with Outdoors without Physical Separation: 125 deg F temperature change.
    - 4) Attics: 135 deg F temperature change.
  - c. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F of temperature change for PVC conduits. Install fitting(s) that provide expansion and contraction for at least 0.000078 inch per foot of length of straight run per deg F of temperature change for metal conduits.
  - d. Install expansion fittings at locations where conduits cross building or structure expansion joints.
  - e. Install expansion-joint fitting with position, mounting, and piston setting selected in accordance with manufacturer's published instructions for conditions at specific location at time of installation. Install conduit supports to allow for expansion movement.
12. Duct Raceways Penetrating Rooms or Walls with Acoustical Requirements: Seal duct raceway openings on both sides of rooms or walls with acoustically rated putty or firestopping.
13. Identification: Provide labels for conduit assemblies, duct raceways, and associated electrical equipment.
- a. Provide warning signs.

D. Interfaces with Other Work:

1. Coordinate installation of new products for with existing conditions.
2. Coordinate with Section 260529 "Hangers and Supports for Electrical Systems" for installation of conduit hangers and supports.

3.3 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION 260533.13



## SECTION 260533.16 - BOXES AND COVERS FOR ELECTRICAL SYSTEMS

## PART 1 - GENERAL

## 1.1 SUMMARY

## A. Section Includes:

1. Metallic outlet boxes, device boxes, rings, and covers.
2. Nonmetallic outlet boxes, device boxes, rings, and covers.
3. Junction boxes and pull boxes.
4. Cover plates for device boxes.
5. Hoods for outlet boxes.

## B. Products Installed, but Not Furnished, under This Section:

1. See Section 260553 "Identification for Electrical Systems" for electrical equipment labels.

## C. Related Requirements:

## 1.2 ACTION SUBMITTALS

## A. Product Data:

1. Metallic outlet boxes, device boxes, rings, and covers.
2. Nonmetallic outlet boxes, device boxes, rings, and covers.
3. Junction boxes and pull boxes.
4. Cover plates for device boxes.
5. Hoods for outlet boxes.

## PART 2 - PRODUCTS

## 2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. ABB, Electrification Business.
2. Cantex.
3. Crouse-Hinds; brand of Eaton, Electrical Sector.
4. Killark; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
5. MonoSystems, Inc.
6. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
7. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.

8. Wiremold; Legrand North America, LLC.

## 2.2 METALLIC OUTLET BOXES, DEVICE BOXES, RINGS, AND COVERS

## A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN QCIT; including UL 514A.

## B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

## C. UL QCIT - Metallic Outlet Boxes and Covers:

1. Description: Box having pryout openings, knockouts, threaded entries, or hubs in either the sides of the back, or both, for entrance of conduit, conduit or cable fittings, or cables, with provisions for mounting outlet box cover, but without provisions for mounting wiring device directly to box.
2. Options:
  - a. Material: Sheet steel, Cast metal.
  - b. Sheet Metal Dimensions: 4 inches square by 2-1/8 inches deep.
  - c. Cast-Metal Dimensions: 4 inches square by 2-1/8 inches deep.
  - d. Luminaire Outlet Boxes and Covers: Nonadjustable, listed and labeled for attachment of luminaire weighing up to 50 lb or more than 50 lb and marked with maximum allowable weight.
  - e. Paddle Fan Outlet Boxes and Covers: Nonadjustable, designed for attachment of paddle fan weighing up to 70 lb.

## D. UL QCIT - Metallic Conduit Bodies:

1. Description: Means for providing access to interior of conduit or tubing system through one or more removable covers at junction or terminal point. In the United States, conduit bodies are listed in accordance with outlet box requirements.

## E. UL QCIT - Metallic Device Boxes:

1. Description: Box with provisions for mounting wiring device directly to box.
2. Options:
  - a. Material: Sheet steel, Cast metal.
  - a. Sheet Metal Dimensions: 4 inches square by 2-1/8 inches deep.
  - b. Cast-Metal Dimensions: 4 inches square by 2-1/8 inches deep.

## F. UL QCIT - Metallic Extension Rings:

1. Description: Ring intended to extend sides of outlet box or device box to increase box depth, volume, or both.

## 2.3 NONMETALLIC OUTLET BOXES, DEVICE BOXES, RINGS, AND COVERS

### A. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

### B. UL QCMZ - Nonmetallic Outlet Boxes and Covers:

1. Description: Box having pryout openings, knockouts, threaded entries, or hubs in either the sides or the back, or both, for entrance of conduit, conduit or cable fittings, or cables, with provisions for mounting outlet box cover, but without provisions for mounting wiring device directly to box.

### C. UL QCMZ - Nonmetallic Conduit Bodies:

1. Description: Means for providing access to interior of conduit or tubing system through one or more removable covers at junction or terminal point. In the United States, conduit bodies are listed in accordance with outlet box requirements.

### D. UL QCMZ - Nonmetallic Device Boxes:

1. Description: Box with provisions for mounting wiring device directly to box.

### E. UL QCMZ - Nonmetallic Extension Rings:

1. Description: Ring intended to extend sides of outlet box or device box to increase box depth, volume, or both.

## 2.4 JUNCTION BOXES AND PULL BOXES

### A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. Listing Criteria: UL CCN BGUZ; including UL 50 and UL 50E.

### B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

### C. UL BGUZ - Indoor Sheet Metal Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

## D. UL BGUZ - Indoor Cast-Metal Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

## E. UL BGUZ - Indoor Polymeric Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

## F. UL BGUZ - Outdoor Sheet Metal Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

## G. UL BGUZ - Outdoor Cast-Metal Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

## H. UL BGUZ - Outdoor Polymeric Junction and Pull Boxes:

1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

## 2.5 COVER PLATES FOR DEVICES BOXES

## A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. Listing Criteria: UL CCN QCIT or UL CCN QCMZ; including UL 514D.
3. Wallplate-Securing Screws: Metal with head color to match wallplate finish.

## B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

## C. UL QCIT or QCMZ - Metallic Cover Plates for Device Boxes:

1. Options:
  - a. Damp and Wet Locations: Listed, labeled, and marked for location and use. Provide gaskets and accessories necessary for compliance with listing.
  - b. Wallplate Material: 0.032 inch thick, Type 302/304 non-magnetic stainless steel with brushed finish.

## D. UL QCIT or QCMZ - Nonmetallic Cover Plates for Device Boxes:

1. Options:

- a. Damp and Wet Locations: Listed, labeled, and marked for location and use. Provide gaskets and accessories necessary for compliance with listing.
  - b. Wallplate Material: 0.060 inch thick, high-impact thermoplastic (nylon) with smooth finish.
  - c. Color: Standard color that shall be coordinated with Architect during shop drawing review.
- E. UL QCIT or QCMZ - Illuminating Cover Plates for Device Boxes:
- 1. Options:
    - a. Damp and Wet Locations: Listed, labeled, and marked for location and use. Provide gaskets and accessories necessary for compliance with listing.
    - b. Wallplate Material: 0.060 inch thick, high-impact thermoplastic (nylon) with smooth finish.
    - a. Color: Standard color that shall be coordinated with Architect during shop drawing review.

## 2.6 HOODS FOR OUTLET BOXES

- A. Performance Criteria:
- 1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
  - 2. Listing Criteria:
    - a. UL CCN QCIT or UL CCN QCMZ; including UL 514D.
    - b. Receptacle, Hood, Cover Plate, Gaskets, and Seals: UL 498 Supplement SA when mated with box or enclosure complying with UL 514A, UL 514C, or UL 50E.
  - 3. Mounts to box using fasteners different from wiring device.
- B. Source Quality Control:
- 1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.
- C. UL QCIT or QCMZ - Extra-Duty, While-in-Use Hoods for Outlet Boxes:
- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Intermatic, Inc.
    - b. Leviton Manufacturing Co., Inc.
    - c. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
  - 2. Additional Characteristics: Marked "Extra-Duty" in accordance with UL 514D.
  - 3. Options:
    - a. Provides gray, cast-metal, weatherproof, "while-in-use" cover.

- b. Manufacturer may combine nonmetallic device box with hood as extra-duty rated assembly.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Shop Drawings: Prepare and submit the following:

- 1. Shop Drawings for Floor Boxes: Show that floor boxes are located to avoid interferences and are structurally allowable. Indicate floor thickness [**at location**] where boxes are embedded in concrete floors and underfloor clearances where boxes are installed in raised floors.

#### 3.2 SELECTION OF BOXES AND COVERS FOR ELECTRICAL SYSTEMS

- A. Unless more stringent requirements are specified in Contract Documents or manufacturers' published instructions, comply with NFPA 70 for selection of boxes and enclosures. Consult Architect for resolution of conflicting requirements.

- B. Degree of Protection:

- 1. Outdoors:

- a. Type 3R unless otherwise indicated.
- b. Locations Exposed to Hosedown: Type 4.
- c. Locations Subject to Potential Flooding: Type 6P.
- d. Locations Aboveground Where Mechanism Must Operate When Ice Covered: Type 3S.
- e. Locations in-Ground or Exposed to Corrosive Agents: Type 3RX.
- f. Locations in-Ground or Exposed to Corrosive Agents Where Mechanism Must Operate When Ice Covered: Type 3SX.

- 2. Indoors:

- a. Type 1 unless otherwise indicated.
- b. Damp or Dusty Locations: Type 3R.
- c. Surface Mounted in Kitchens and Other Locations Exposed to Oil or Coolants: Type 12.
- d. Flush Mounted in Kitchens and Other Locations Exposed to Oil or Coolants: Type 12.
- e. Locations Exposed to Airborne Dust, Lint, Fibers, or Flyings: Type 4.
- f. Locations Exposed to Hosedown: Type 4.
- g. Locations Exposed to Brief Submersion: Type 6.
- h. Locations Exposed to Prolonged Submersion: Type 6P.
- i. Locations Exposed to Corrosive Agents: Type 4X.
- j. Locations Exposed to Spraying Oil or Coolants: Type 13.

## C. Exposed Boxes Installed Less Than 2.5 m (8 ft) Above Floor:

1. Provide cast-metal boxes.
2. Provide exposed cover. Flat covers with angled mounting slots or knockouts are prohibited.

## 3.3 INSTALLATION OF BOXES AND COVERS FOR ELECTRICAL SYSTEMS

## A. Comply with manufacturer's published instructions.

## B. Reference Standards for Installation: Unless more stringent installation requirements are specified in Contract Documents or manufacturers' published instructions, comply with the following:

1. Outlet, Device, Pull, and Junction Boxes: Article 314 of NFPA 70.
2. Consult Architect for resolution of conflicting requirements.

## C. Special Installation Techniques:

1. Provide boxes in wiring and raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures.
2. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.
3. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box, whether installed indoors or outdoors.
4. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.
5. Locate boxes so that cover or plate will not span different building finishes.
6. Support boxes in recessed ceilings independent of ceiling tiles and ceiling grid.
7. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for purpose.
8. Fasten junction and pull boxes to, or support from, building structure. Do not support boxes by conduits.
9. Set metal floor boxes level and flush with finished floor surface.
10. Set nonmetallic floor boxes level. Trim after installation to fit flush with finished floor surface.
11. Do not install aluminum boxes, enclosures, or fittings in contact with concrete or earth.
12. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to ensure a continuous ground path.
13. Boxes and Enclosures in Areas or Walls with Acoustical Requirements:
  - a. Seal openings and knockouts in back and sides of boxes and enclosures with acoustically rated putty.
  - b. Provide gaskets for wallplates and covers.

14. Identification: Provide labels for boxes and associated electrical equipment.
  - a. Identify field-installed conductors, interconnecting wiring, and components.
  - b. Provide warning signs.
  - c. Label each box with engraved metal or laminated-plastic nameplate.

D. Interfaces with Other Work:

1. Coordinate installation of new products for with existing conditions.

3.4 CLEANING

- A. Remove construction dust and debris from boxes before installing wallplates, covers, and hoods.

3.5 PROTECTION

- A. After installation, protect boxes from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 260533.16



## SECTION 260543 - UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Type PVC raceways and fittings.
  - 2. Solvent cements.
  - 3. Duct sealing.
- B. Related Requirements:
  - 1. Section 260519 "Low-Voltage for Electrical Power Conductors and Cables" for nonmetallic underground conduit with conductors (Type NUCC).

#### 1.2 DEFINITIONS

- A. Duct: A single raceway or multiple raceways, installed singly or as components of a duct bank.
- B. Duct Bank: Two or more ducts installed in parallel, direct buried or with additional casing materials such as concrete.
- C. Handhole: An underground chamber containing electrical cables, sized such that personnel are not required to enter in order to access the cables.
- D. Manhole: An underground chamber containing electrical cables and equipment, sized to provide access with working space clearances.
- E. Trafficways: Locations where vehicular or pedestrian traffic is a normal course of events.

#### 1.3 ACTION SUBMITTALS

- A. Product Data:
  - 1. Type PVC raceways and fittings.
  - 2. Solvent cements.
  - 3. Duct sealing.

### PART 2 - PRODUCTS

#### 2.1 TYPE PVC RACEWAYS AND FITTINGS

- A. Performance Criteria:
  - 1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

2. General Characteristics: UL 651 and UL CCN DZYR.

B. Schedule 40 Rigid PVC Conduit (PVC-40) and Fittings:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
  - a. ABB, Electrification Business.
  - b. Calconduit; Atkore International.
  - c. JM Eagle.
2. Dimensional Specifications: Schedule 40.
3. Options:
  - a. Minimum Trade Size: Metric designator 21 (trade size 3/4).
  - b. Markings: For use with maximum 90 deg C wire.

C. Schedule 80 Rigid PVC Conduit (PVC-80) and Fittings:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
  - a. ABB, Electrification Business.
  - b. Calconduit; Atkore International.
  - c. JM Eagle.
2. Dimensional Specifications: Schedule 80.
3. Options:
  - a. Minimum Trade Size: Metric designator 21 (trade size 3/4).
  - b. Markings: For use with maximum 90 deg C wire.

## 2.2 SOLVENT CEMENTS

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
2. General Characteristics: As recommended by conduit manufacturer in accordance with UL 514B and UL CCN DWTT.

## 2.3 DUCT ACCESSORIES

- A. Duct Spacers: Factory-fabricated, rigid, PVC interlocking spacers; sized for type and size of duct with which used, and selected to provide minimum duct spacing indicated while supporting duct during concreting or backfilling.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

- a. ABB, Electrification Business.
- b. Allied Tube & Conduit; Atkore International.
- c. Cantex Inc.

- B. Underground-Line Warning Tape: In accordance with Section 260553 "Identification for Electrical Systems."

- C. Concrete Warning Planks: Nominal 12 by 24 by 3 inch in size, manufactured from 6000 psi concrete.

1. Color: Red dye added to concrete during batching.
2. Mark each plank with "ELECTRIC" in 2 inch high, 3/8 inch deep letters.

## 2.4 DUCT SEALING

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. ABB, Electrification Business.
2. American Polywater Corporation.
3. Gardner Bender.

- B. Duct-Sealing Compound: Nonhardening, safe for contact with human skin, not deleterious to cable insulation, and workable at temperatures as low as 35 deg F. Compound must be capable of withstanding temperature of 300 deg F without slump and adhering to clean surfaces of plastic ducts, metallic conduit, conduit and duct coatings, concrete, masonry, lead, cable sheaths, cable jackets, insulation materials, and common metals. Duct sealing compound must be removable without damaging ducts or cables.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Coordinate layout and installation of duct, duct bank, manholes, handholes, and boxes with final arrangement of other utilities, site grading, and surface features as determined in field. Notify Engineer if there is conflict between areas of excavation and existing structures or archaeological sites to remain.
- B. Coordinate elevations of duct and duct-bank entrances into manholes, handholes, and boxes with final locations and profiles of duct and duct banks, as determined by coordination with other utilities, underground obstructions, and surface features. Revise locations and elevations as required to suit field conditions and to ensure that duct and duct bank will drain to manholes and handholes, and as approved by Engineer.
- C. Clear and grub vegetation to be removed, and protect vegetation to remain.

### 3.2 SELECTION OF UNDERGROUND DUCTS

- A. Duct for Electrical Cables More Than 600 V: PVC-40, concrete encased unless otherwise indicated.
- B. Duct for Electrical Feeders 600 V and Less: PVC-40, direct buried unless otherwise indicated.
- C. Duct for Electrical Branch Circuits: PVC-40, direct buried unless otherwise indicated.
- D. Underground Ducts Crossing Paved Paths Walks and Driveways: PVC-80 direct buried.
- E. Underground Ducts Crossing Roadways and Railroads: PVC-40, encased in reinforced concrete.
- F. Stub-ups: PVC-80.

### 3.3 EARTHWORK

- A. Excavation and Backfill: Do not use heavy-duty, hydraulic-operated, compaction equipment.
- B. Restoration: Restore area after construction vehicle traffic in immediate area is complete.
- C. Restore surface features at areas disturbed by excavation, and re-establish original grades unless otherwise indicated. Replace removed sod immediately after backfilling is completed.
- D. Restore areas disturbed by trenching, storing of dirt, cable laying, and other work. Restore vegetation and include necessary topsoiling, fertilizing, liming, seeding, sodding, sprigging, and mulching.
- E. Cut and patch existing pavement in path of underground duct, duct bank, and underground structures.

### 3.4 INSTALLATION OF DUCTS AND DUCT BANKS

- A. Reference Standards:
  - 1. Unless more stringent requirements are specified in Contract Documents or manufacturers' published instructions, comply with NEMA TCB 2 for installation of underground ducts and duct banks.
  - 2. Consult Architect for resolution of conflicting requirements.
- B. Special Techniques:
  - 1. Where indicated on Drawings, install duct, spacers, and accessories into duct-bank configuration shown. Duct installation requirements in this Section also apply to duct bank.
  - 2. Steel raceway, bends, and fittings in single duct run or duct bank must be of same type.
  - 3. Slope: Pitch duct minimum slope of 1:300 down toward manholes and handholes and away from buildings and equipment. Slope duct from high point between two manholes to drain in both directions.

4. Expansion and Deflection Fittings: Install expansion and deflection fitting in each duct in area of disturbed earth adjacent to manhole or handhole.
5. Install expansion fitting near center of straight line duct with calculated expansion of more than 3/4 inch.
6. Curves and Bends:
  - a. Use 5-degree angle couplings for small changes in direction. Use manufactured long sweep bends with minimum radius of 48 inch, both horizontally and vertically, at other locations unless otherwise indicated.
  - b. Field bending must be in accordance with NFPA 70 minimum radii requirements, except bends over 45 degrees must be made with minimum radius of 48 inch. Use only equipment specifically designed for material and size involved. Use PVC heating bender for bending PVC conduit.
  - c. Duct must have maximum of 180 degrees of bends between pull points.
7. Joints: Use solvent-cemented joints in nonmetallic duct and fittings and make watertight in accordance with manufacturer's published instructions. Stagger couplings so those of adjacent duct do not lie in same plane. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with minimum 3 inch of concrete for minimum of 12 inch on each side of coupling.
  - a. Install insulated grounding bushings on steel raceway terminations that are less than 12 inch below grade or floor level and do not terminate in hubs.
8. Building Wall Penetrations: Make transition from underground duct to steel raceway at least 10 ft outside building wall, without reducing duct line slope away from building and without forming trap in line. Use fittings manufactured for transition to steel raceway type installed. Install steel raceway penetrations of building walls as specified in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."
9. Install manufactured steel raceway elbows for stub-ups at poles unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
  - a. Couple steel elbows to ducts with adapters designed for this purpose, and encase coupling with minimum 3 inch of concrete for minimum of 12 inch on each side of coupling.
10. Sealing: Provide temporary closure at terminations of duct with pulled cables. Seal spare duct at terminations. Use sealing compound and plugs to withstand at least 15 psig hydrostatic pressure.
11. Pulling Cord: Install 200 lbf test nylon cord in empty ducts.
12. Concrete-Encased Ducts and Duct Bank:
  - a. Excavate trench bottom to provide firm and uniform support for duct. Prepare trench bottoms as for pipes 6 inch or less in nominal diameter.
  - b. Width: Excavate trench 12 inch wider than duct on each side.
  - c. Depth: Install so top of duct envelope is at least 24 inch below finished grade in areas not subject to deliberate traffic, and at least 30 inch below finished grade in deliberate traffic paths for vehicles unless otherwise indicated. Install so top of duct envelope is below local frost line.
  - d. Support duct on duct spacers coordinated with duct size, duct spacing, and outdoor temperature.

- e. Spacer Installation: Place spacers close enough to prevent sagging and deforming of duct, with not less than five spacers per 20 ft of duct. Place spacers within 24 inch of duct ends. Stagger spacers approximately 6 inch between tiers. Secure spacers to earth and to duct to prevent floating during concreting. Tie entire assembly together using fabric straps; do not use tie wires or reinforcing steel that may form conductive or magnetic loops around ducts or duct groups.
- f. Minimum Space between Ducts: 3 inch between edge of duct and exterior envelope wall, 2 inch between ducts for like services, and 4 inch between power and communications ducts.
- g. Elbows:
  - 1) Use manufactured steel elbows for stub-ups, at building entrances, and at changes of direction in duct run.
- h. Stub-ups to Outdoor Equipment: Extend concrete-encased steel raceway horizontally minimum of 60 inch from edge of equipment base.
  - 1) Stub-ups must be minimum 4 inch above finished floor and minimum 3 inch from conduit side to edge of slab.
- i. Stub-ups to Indoor Equipment: Extend concrete-encased steel raceway horizontally minimum of 60 inch from edge of wall. Install insulated grounding bushings on terminations at equipment.
  - 1) Stub-ups must be minimum 4 inch above finished floor and no less than 3 inch from conduit side to edge of slab.
- j. Reinforcement: Reinforce concrete-encased duct where crossing disturbed earth and where indicated. Arrange reinforcing rods and ties without forming conductive or magnetic loops around ducts or duct groups.
- k. Forms: Use walls of trench to form side walls of duct bank where soil is self-supporting and concrete envelope can be poured without soil inclusions; otherwise, use forms.
- l. Concrete Cover: Install minimum of 3 inch of concrete cover between edge of duct to exterior envelope wall, 2 inch between duct of like services, and 4 inch between power and communications ducts.
- m. Place minimum 6 inch of engineered fill above concrete encasement of duct.
- n. Concreting Sequence: Pour each run of envelope between manholes or other terminations in one continuous operation.
  - 1) Start at one end and finish at other, allowing for expansion and contraction of duct as its temperature changes during and after pour. Use expansion fittings installed in accordance with manufacturer's published instructions, or use other specific measures to prevent expansion-contraction damage.
  - 2) If more than one pour is necessary, terminate each pour in vertical plane and install 3/4 inch reinforcing-rod dowels extending minimum of 18 inch into concrete on both sides of joint near corners of envelope.
- o. Pouring Concrete: Place concrete carefully during pours to prevent voids under and between duct and at exterior surface of envelope. Do not allow heavy mass of concrete to fall directly onto ducts. Allow concrete to flow around duct and rise up

in middle, uniformly filling open spaces. Do not use power-driven agitating equipment unless specifically designed for duct-installation application.

13. Direct-Buried Duct and Duct Bank:

- a. Excavate trench bottom to provide firm and uniform support for duct. Comply with requirements in Section 312000 "Earth Moving" for preparation of trench bottoms for pipes less than 6 inch in nominal diameter.
- b. Width: Excavate trench 3 inch wider than duct on each side.
- c. Depth: Install top of duct at least 36 inch below finished grade unless otherwise indicated.
- d. Set elevation of top of duct bank below frost line.
- e. Place minimum 3 inch of sand as bed for duct. Place sand to minimum of 6 inch above top level of duct.
- f. Support ducts on duct spacers coordinated with duct size, duct spacing, and outdoor temperature.
- g. Spacer Installation: Place spacers close enough to prevent sagging and deforming of duct, with not less than five spacers per 20 ft of duct. Place spacers within 24 inch of duct ends. Stagger spacers approximately 6 inch between tiers. Secure spacers to earth and to ducts to prevent floating during concreting. Tie entire assembly together using fabric straps; do not use tie wires or reinforcing steel that may form conductive or magnetic loops around ducts or duct groups.
- h. Install duct with minimum of 3 inch between ducts for like services and 6 inch between power and communications duct.
- i. Install manufactured duct elbows for stub-ups, at building entrances, and at changes of direction in duct direction unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
- j. Install manufactured steel elbows for stub-ups, at building entrances, and at changes of direction in duct.
  - 1) Couple RNC duct to steel raceway with adapters designed for this purpose, and encase coupling with minimum 3 inch of concrete.
  - 2) Stub-ups to Outdoor Equipment: Extend concrete-encased steel raceway horizontally minimum of 60 inch from edge of base. Install insulated grounding bushings on terminations at equipment.
    - a) Stub-ups must be minimum 4 inch above finished base and minimum 3 inch from conduit side to edge of base.
  - 3) Stub-ups to Indoor Equipment: Extend concrete-encased steel raceway horizontally on exterior of wall minimum of 60 inch from edge of wall. Install insulated grounding bushings on terminations at equipment.
  - 4) Stub-ups through interior floors must be minimum 4 inch above finished floor and no less than 3 inch from conduit side to edge of equipment pad or floor slab.
- k. After installing first tier of duct, backfill and compact. Start at tie-in point and work toward end of duct run, leaving ducts at end of run free to move with expansion and contraction as temperature changes during this process. Repeat procedure after placing each tier. After placing last tier, hand place backfill to 4 inch over duct and hand tamp. Firmly tamp backfill around ducts to provide

maximum supporting strength. Use hand tamper only. After placing controlled backfill over final tier, make final duct connections at end of run and complete backfilling with normal compaction. Comply with requirements in Section 312000 "Earth Moving" for installation of backfill materials.

14. Warning Planks: Bury warning planks approximately 12 inch above direct-buried duct, placing them 36 inch o.c. Align planks along width and along centerline of duct or duct bank. Provide additional plank for each 12 inch increment of duct-bank width over nominal 18 inch. Space additional planks 12 inch apart, horizontally across width of ducts.
15. Underground-Line Warning Tape: Bury conducting underground line specified in Section 260553 "Identification for Electrical Systems" no less than 12 inch above concrete-encased duct and duct banks and approximately 12 inch below grade. Align tape parallel to and within 3 inch of centerline of duct bank. Provide additional warning tape for each 12 inch increment of duct-bank width over nominal 18 inch. Space additional tapes 12 inch apart, horizontally across width of ducts.
16. Ground ducts and duct banks in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."

C. Interfaces with Other Work:

1. Coordinate installation of new products for with existing conditions.

### 3.5 FIELD QUALITY CONTROL

- A. Field tests and inspections must be witnessed by authorities having jurisdiction, if required by Local Codes.
- B. Tests and Inspections:
  1. Demonstrate capability and compliance with requirements on completion of installation of underground duct, duct bank, and utility structures.
  2. Pull solid aluminum or wood test mandrel through duct to prove joint integrity and adequate bend radii, and test for out-of-round duct. Provide minimum 12 inch long mandrel equal to duct size minus 1/4 inch. If obstructions are indicated, remove obstructions and retest.
- C. Nonconforming Work:
  1. Underground ducts, raceways, and structures will be considered defective if they do not pass tests and inspections.
  2. Correct deficiencies and retest as specified above to demonstrate compliance.

### 3.6 CLEANING

- A. Pull leather-washer-type duct cleaner, with graduated washer sizes, through full length of duct until duct cleaner indicates that duct is clear of dirt and debris. Follow with rubber duct swab for final cleaning and to assist in spreading lubricant throughout ducts.



END OF SECTION 260543

## SECTION 260544 - SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Round sleeves.
2. Sleeve-seal systems.
3. Sleeve-seal fittings.
4. Grout.
5. Pourable sealants.
6. Foam sealants.

B. Related Requirements:

1. Section 260010 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
2. Section 260011 "Facility Performance Requirements for Electrical" for seismic-load, wind-load, acoustical, and other field conditions applicable to Work specified in this Section.
3. Section 078413 "Penetration Firestopping" for penetration firestopping installed in fire-resistance-rated walls, horizontal assemblies, and smoke barriers, with and without penetrating items.

#### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

### PART 2 - PRODUCTS

#### 2.1 ROUND SLEEVES

A. Steel Wall Sleeves:

1. General Characteristics: ASTM A53/A53M, Type E, Grade B, Schedule 40, zinc coated, plain ends and integral waterstop.

B. Cast-Iron Wall Sleeves:

1. General Characteristics: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop.

## 2.2 SLEEVE-SEAL SYSTEMS

- A. General Characteristics: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable or between raceway and cable.
- B. Options:
  - 1. Sealing Elements: EPDM rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
  - 2. Pressure Plates: Composite.
  - 3. Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating, of length required to secure pressure plates to sealing elements.

## 2.3 SLEEVE-SEAL FITTINGS

- A. General Characteristics: Manufactured plastic, sleeve-type, waterstop assembly made for embedding in concrete slab or wall. Unit must have plastic or rubber waterstop collar with center opening to match piping OD.

## 2.4 GROUT

- A. General Characteristics: Nonshrink; recommended for interior and exterior sealing openings in non-fire-rated walls or floors.
  - 1. Standard: ASTM C1107/C1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
  - 2. Design Mix: 5000 psi, 28-day compressive strength.
  - 3. Packaging: Premixed and factory packaged.

## 2.5 POURABLE SEALANTS

- A. Performance Criteria:
  - 1. General Characteristics: Single-component, neutral-curing elastomeric sealants of grade indicated below.
    - a. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces that are not fire rated.

## 2.6 FOAM SEALANTS

- A. Performance Criteria:
  - 1. General Characteristics: Multicomponent, liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam. Foam expansion must not damage cables or crack penetrated structure.

## PART 3 - EXECUTION

## 3.1 INSTALLATION OF SLEEVES FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS

- A. Sleeves for Conduits Penetrating Above-Grade, Non-Fire-Rated, Concrete and Masonry-Unit Floors and Walls:
  - 1. Interior Penetrations of Non-Fire-Rated Walls and Floors:
    - a. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall or floor so no voids remain. Tool exposed surfaces smooth; protect material while curing.
    - b. Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Section 079200 "Joint Sealants."
  - 2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
  - 3. Size pipe sleeves to provide 1/4 inch annular clear space between sleeve and raceway or cable, unless sleeve-seal system is to be installed.
  - 4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.
  - 5. Install sleeves for floor penetrations. Extend sleeves installed in floors 2 inch above finished floor level. Install sleeves during erection of floors.
- B. Sleeves for Conduits Penetrating Non-Fire-Rated Wall Assemblies:
  - 1. Sleeves are not required for conduits penetrating interior non-fire rated wall assemblies, however space around conduit must be sealed with approved joint compound for wall assemblies.
- C. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.
- D. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel or cast-iron pipe sleeves and mechanical sleeve-seal systems. Size sleeves to allow for 1 inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- E. Underground, Exterior-Wall and Floor Penetrations:
  - 1. Install steel or cast-iron pipe sleeves with integral waterstops. Size sleeves to allow for 1 inch annular clear space between raceway or cable and sleeve for installing sleeve-seal system. Install sleeve during construction of floor or wall.
  - 2. Install steel pipe sleeves. Size sleeves to allow for 1 inch annular clear space between raceway or cable and sleeve for installing sleeve-seal system. Grout sleeve into wall or floor opening.

### 3.2 INSTALLATION OF RECTANGULAR SLEEVES AND SLEEVE SEALS

- A. Install sleeves in existing walls without compromising structural integrity of walls. Do not cut structural elements without reinforcing the wall to maintain the designed weight bearing and wall stiffness.
- B. Install conduits and cable with no crossings within the sleeve.
- C. Fill opening around conduits and cables with expanding foam without leaving voids.
- D. Provide metal sheet covering at both wall surfaces and finish to match surrounding surfaces. Metal sheet must be same material as sleeve.

### 3.3 INSTALLATION OF SLEEVE-SEAL SYSTEMS

- A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at raceway entries into building.
- B. Install type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

END OF SECTION 260544

## SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Labels.
2. Bands and tubes.
3. Tapes and stencils.
4. Tags.
5. Signs.
6. Cable ties.
7. Miscellaneous identification products.

B. Related Requirements:

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

A. Comply with ASME A13.1.

B. Comply with 29 CFR 1910.144 for color identification of hazards; 29 CFR 1910.145 for danger, caution, warning, and safety instruction signs and tags; and the following:

C. Signs, labels, and tags required for personnel safety must comply with the following standards:

1. Safety Colors: NEMA Z535.1.
2. Facility Safety Signs: NEMA Z535.2.
3. Safety Symbols: NEMA Z535.3.
4. Product Safety Signs and Labels: NEMA Z535.4.
5. Safety Tags and Barricade Tapes for Temporary Hazards: NEMA Z535.5.

D. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, must comply with UL 969.

E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

## 2.2 COLOR AND LEGEND REQUIREMENTS

- A. Raceways and Cables Carrying Circuits at 1000 V or Less:
  - 1. Black letters on orange field.
  - 2. Legend: Indicate voltage.
- B. Color-Coding for Phase- and Voltage-Level Identification, 1000 V or Less: Use colors listed below for ungrounded service feeder and branch-circuit conductors.
  - 1. Color must be factory applied or field applied for sizes larger than 8 AWG if authorities having jurisdiction permit.
  - 2. Colors for 208Y/120 V Circuits:
    - a. Phase A: Black.
    - b. Phase B: Red.
    - c. Phase C: Blue.
  - 3. Colors for 480Y/277 V Circuits:
    - a. Phase A: Brown.
    - b. Phase B: Orange.
    - c. Phase C: Yellow.
  - 4. Color for Neutral: White (208Y/120V), Gray (480Y/277V).
  - 5. Color for Equipment Grounds: Green.
  - 6. Colors for Isolated Grounds: Green with two or more yellow stripes.
- C. Warning Label Colors:
  - 1. Identify system voltage with black letters on orange background.
- D. Warning labels and signs must include, but are not limited to, the following legends:
  - 1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
  - 2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 3 FEET MINIMUM."
- E. Equipment Identification Labels:
  - 1. Black letters on white field.

## 2.3 LABELS

- A. Vinyl Wraparound Labels: Preprinted, flexible labels laminated with clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Brady Corporation.
  - b. Panduit Corp.
  - c. Seton Identification Products; a Brady Corporation company.
- B. Self-Adhesive Wraparound Labels: Preprinted, 3 mil thick, vinyl flexible label with acrylic pressure-sensitive adhesive.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Brady Corporation.
    - b. Ideal Industries, Inc.
    - c. Panduit Corp.
    - d. Seton Identification Products; a Brady Corporation company.
  2. Self-Lamination: Clear; UV-, weather- and chemical-resistant; self-laminating, protective shield over legend. Labels sized such that clear shield overlaps entire printed legend.
  3. Marker for Labels:
    - a. Machine-printed, permanent, waterproof, black ink recommended by printer manufacturer.
- C. Self-Adhesive Labels: Vinyl, thermal, transfer-printed, 3 mil thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Brady Corporation.
    - b. Ideal Industries, Inc.
    - c. Panduit Corp.
  2. Minimum Nominal Size:
    - a. 1-1/2 by 6 inch for raceway and conductors.
    - b. 3-1/2 by 5 inch for equipment.
    - c. As required by authorities having jurisdiction.

## 2.4 BANDS AND TUBES

- A. Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeves, 2 inch long, with diameters sized to suit diameters and that stay in place by gripping action.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Brady Corporation.
    - b. Marking Services Inc.
    - c. Panduit Corp.



- B. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tubes with machine-printed identification labels, sized to suit diameter and shrunk to fit firmly. Full shrink recovery occurs at maximum of 200 deg F. Comply with UL 224.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Brady Corporation.
  - b. Panduit Corp.

## 2.5 TAPES AND STENCILS

- A. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Ideal Industries, Inc.
  - b. Marking Services Inc.
  - c. Panduit Corp.

- B. Self-Adhesive Vinyl Tape: Colored, heavy duty, waterproof, fade resistant; not less than 3 mil thick by 1 to 2 inch wide; compounded for outdoor use.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Brady Corporation.
  - b. Carlton Industries, LP.
  - c. Marking Services Inc.

- C. Tape and Stencil: 4 inch wide black stripes on 10 inch centers placed diagonally over orange background and are 12 inch wide. Stop stripes at legends.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. LEM Products Inc.
  - b. Marking Services Inc.
  - c. Seton Identification Products; a Brady Corporation company.

- D. Floor Marking Tape: 2 inch wide, 5 mil pressure-sensitive vinyl tape, with yellow and black stripes and clear vinyl overlay.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Brady Corporation.
  - b. Carlton Industries, LP.
  - c. Seton Identification Products; a Brady Corporation company.

## E. Underground-Line Warning Tape:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Brady Corporation.
  - b. Brady Corporation.
  - c. Ideal Industries, Inc.
  - d. Marking Services Inc.
  - e. Seton Identification Products; a Brady Corporation company.
2. Tape:
  - a. Recommended by manufacturer for method of installation and suitable to identify and locate underground electrical and communications utility lines.
  - b. Printing on tape must be permanent and may not be damaged by burial operations.
  - c. Tape material and ink must be chemically inert and not be subject to degradation when exposed to acids, alkalis, and other destructive substances commonly found in soils.
3. Color and Printing:
  - a. Comply with APWA Uniform Color Code using NEMA Z535.1 safety colors.
  - b. Inscriptions for Red Tapes: "CAUTION BURIED ELECTRIC LINE BELOW".
  - c. Inscriptions for Orange Tapes: "CAUTION BURIED CATV LINE BELOW", "CAUTION BURIED TELEPHONE LINE BELOW", "CAUTION BURIED FIBER OPTIC LINE BELOW", or "CAUTION BURIED COMMUNICATION LINE BELOW".
4. Tape:
  - a. Pigmented polyolefin, bright colored, continuous-printed on one side with inscription of utility, compounded for direct-burial service.
  - b. Width: 3 inch.
  - c. Thickness: 4 mil.
  - d. Weight: 18.5 lb/1000 sq. ft.
  - e. Tensile in accordance with ASTM D882: 30 lbf and 2500 psi.

- F. Stenciled Legend: In nonfading, waterproof, black ink or paint. Minimum letter height must be 1 inch.

## 2.6 TAGS

- A. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Brady Corporation.

- b. Carlton Industries, LP.
- c. Marking Services Inc.
- d. Seton Identification Products; a Brady Corporation company.

## 2.7 SIGNS

### A. Baked-Enamel Signs:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Brady Corporation.
  - b. Carlton Industries, LP.
  - c. Champion America.
  - d. Marking Services Inc.
  - e. emedco.
- 2. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
- 3. 1/4 inch grommets in corners for mounting.
- 4. Nominal Size: 7 by 10 inch.

### B. Metal-Backed Butyrate Signs:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Brady Corporation.
  - b. Champion America.
  - c. Marking Services Inc.
  - d. emedco.
- 2. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs, with 0.0396 inch galvanized-steel backing, punched and drilled for fasteners, and with colors, legend, and size required for application.
- 3. 1/4 inch grommets in corners for mounting.
- 4. Nominal Size: 10 by 14 inch.

### C. Laminated Acrylic or Melamine Plastic Signs:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Brady Corporation.
  - b. Carlton Industries, LP.
  - c. Marking Services Inc.
  - d. emedco.
- 2. Engraved legend.
- 3. Thickness:

- a. For signs up to 20 sq. inch, minimum 1/16 inch thick.
- b. For signs larger than 20 sq. inch, 1/8 inch thick.
- c. Engraved legend with black letters on white face.
- d. Self-adhesive.
- e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

## 2.8 CABLE TIES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Ideal Industries, Inc.
  2. Marking Services Inc.
  3. Panduit Corp.
- B. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.
1. Minimum Width: 3/16 inch.
  2. Tensile Strength at 73 deg F in accordance with ASTM D638: 12,000 psi.
  3. Temperature Range: Minus 40 to plus 185 deg F.
  4. Color: Black, except where used for color-coding.
- C. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.
1. Minimum Width: 3/16 inch.
  2. Tensile Strength at 73 deg F in accordance with ASTM D638: 12,000 psi.
  3. Temperature Range: Minus 40 to plus 185 deg F.
  4. Color: Black.
- D. Plenum-Rated Cable Ties: Self-extinguishing, UV stabilized, one piece, and self-locking.
1. Minimum Width: 3/16 inch.
  2. Tensile Strength at 73 deg F in accordance with ASTM D638: 7000 psi.
  3. UL 94 Flame Rating: 94V-0.
  4. Temperature Range: Minus 50 to plus 284 deg F.
  5. Color: Black.

## 2.9 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Retain paint system applicable for surface material and location (exterior or interior).
- B. Fasteners for Labels and Signs: Self-tapping, stainless steel screws or stainless steel machine screws with nuts and flat and lock washers.

## PART 3 - EXECUTION

## 3.1 PREPARATION

- A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

## 3.2 INSTALLATION

- A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.
- B. Install identifying devices before installing acoustical ceilings and similar concealment.
- C. Verify identity of item before installing identification products.
- D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.
- E. Apply identification devices to surfaces that require finish after completing finish work.
- F. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.
- G. System Identification for Raceways and Cables under 1000 V: Identification must completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.
  - 1. Secure tight to surface of conductor, cable, or raceway.
- H. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.
- I. Emergency Operating Instruction Signs: Install instruction signs with white legend on red background with minimum 3/8 inch high letters for emergency instructions at equipment used for power transfer and load shedding.
- J. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from floor.
- K. Accessible Fittings for Raceways: Identify cover of junction and pull box of the following systems with wiring system legend and system voltage. System legends must be as follows:
  - 1. "EMERGENCY POWER."
  - 2. "POWER."
  - 3. "UPS."

- L. Vinyl Wraparound Labels:
  - 1. Secure tight to surface of raceway or cable at location with high visibility and accessibility.
  - 2. Attach labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to location and substrate.
- M. Self-Adhesive Wraparound Labels: Secure tight to surface at location with high visibility and accessibility.
- N. Self-Adhesive Labels:
  - 1. Install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.
  - 2. Unless otherwise indicated, provide single line of text with 1/2 inch high letters on 1-1/2 inch high label; where two lines of text are required, use labels 2 inch high.
- O. Snap-Around Color-Coding Bands: Secure tight to surface at location with high visibility and accessibility.
- P. Heat-Shrink, Preprinted Tubes: Secure tight to surface at location with high visibility and accessibility.
- Q. Marker Tapes: Secure tight to surface at location with high visibility and accessibility.
- R. Self-Adhesive Vinyl Tape: Secure tight to surface at location with high visibility and accessibility.
  - 1. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for minimum distance of 6 inch where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding.
- S. Tape and Stencil: Comply with requirements in painting Sections for surface preparation and paint application.
- T. Floor Marking Tape: Apply stripes to finished surfaces following manufacturer's instructions.
- U. Underground Line Warning Tape:
  - 1. During backfilling of trenches, install continuous underground-line warning tape directly above cable or raceway at 6 to 8 inch below finished grade. Use multiple tapes where width of multiple lines installed in common trench [**or concrete envelope**] exceeds 16 inch overall.
  - 2. Install underground-line warning tape for direct-buried cables and cables in raceways.
- V. Metal Tags:
  - 1. Place in location with high visibility and accessibility.
- W. Nonmetallic Preprinted Tags:

1. Place in location with high visibility and accessibility.

X. Write-on Tags:

1. Place in location with high visibility and accessibility.

Y. Baked-Enamel Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to location and substrate.
2. Unless otherwise indicated, provide single line of text with 1/2 inch high letters on minimum 1-1/2 inch high sign; where two lines of text are required, use signs minimum 2 inch high.

Z. Metal-Backed Butyrate Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to location and substrate.
2. Unless otherwise indicated, provide single line of text with 1/2 inch high letters on 1-1/2 inch high sign; where two lines of text are required, use labels 2 inch high.

AA. Laminated Acrylic or Melamine Plastic Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to location and substrate.
2. Unless otherwise indicated, provide single line of text with 1/2 inch high letters on 1-1/2 inch high sign; where two lines of text are required, use labels 2 inch high.

BB. Cable Ties: General purpose, for attaching tags, except as listed below:

1. Outdoors: UV-stabilized nylon.
2. In Spaces Handling Environmental Air: Plenum rated.

### 3.3 IDENTIFICATION SCHEDULE

- A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.
- B. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.
- C. Accessible Raceways and Metal-Clad Cables, 1000 V or Less, for Service, Feeder, and Branch Circuits, More Than 30A and 120V to Ground: Identify with self-adhesive raceway labels.
  1. Locate identification at changes in direction, at penetrations of walls and floors, at 50 ft maximum intervals in straight runs, and at 25 ft maximum intervals in congested areas.

- D. Accessible Fittings for Raceways and Cables within Buildings: Identify cover of junction and pull box of the following systems with self-adhesive labels containing wiring system legend and system voltage. System legends must be as follows:
  - 1. "EMERGENCY POWER."
  - 2. "POWER."
  - 3. "UPS."
- E. Power-Circuit Conductor Identification, 1000 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use self-adhesive vinyl tape to identify phase.
  - 1. Locate identification at changes in direction, at penetrations of walls and floors, at 50 ft maximum intervals in straight runs, and at 25 ft maximum intervals in congested areas.
- F. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive labels with conductor or cable designation, origin, and destination.
- G. Control-Circuit Conductor Termination Identification: For identification at terminations, provide heat-shrink preprinted tubes with conductor designation.
- H. Conductors to Be Extended in Future: Attach write-on tags to conductors and list source.
- I. Auxiliary Electrical Systems Conductor Identification: Self-adhesive vinyl tape that is uniform and consistent with system used by manufacturer for factory-installed connections.
  - 1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
- J. Locations of Underground Lines: Underground-line warning tape for power, lighting, communication, and control wiring and optical-fiber cable.
- K. Concealed Raceways and Duct Banks, More Than 1000 V, within Buildings: Apply floor marking tape to the following finished surfaces:
  - 1. Floor surface directly above conduits running beneath and within 12 inch of floor that is in contact with earth or is framed above unexcavated space.
  - 2. Wall surfaces directly external to raceways concealed within wall.
  - 3. Accessible surfaces of concrete envelope around raceways in vertical shafts, exposed in building, or concealed above suspended ceilings.
- L. Workspace Indication: Apply floor marking tape to finished surfaces. Show working clearances in direction of access to live parts. Workspace must comply with NFPA 70 and 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.
- M. Instructional Signs: Self-adhesive labels, including color code for grounded and ungrounded conductors.
- N. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Self-adhesive labels.



1. Apply to exterior of door, cover, or other access.
  2. For equipment with multiple power or control sources, apply to door or cover of equipment, including, but not limited to, the following:
    - a. Power-transfer switches.
    - b. Controls with external control power connections.
- O. Arc Flash Warning Labeling: Self-adhesive labels.
- P. Operating Instruction Signs: Self-adhesive labels.
- Q. Emergency Operating Instruction Signs: Self-adhesive labels with white legend on red background with minimum 3/8 inch high letters for emergency instructions at equipment used for power transfer.
- R. Equipment Identification Labels:
1. Indoor Equipment: Laminated acrylic or melamine plastic sign.
  2. Outdoor Equipment: Laminated acrylic or melamine sign.
  3. Equipment to Be Labeled:
    - a. Panelboards: Typewritten directory of circuits in location provided by panelboard manufacturer. Panelboard identification must be in form of self-adhesive, engraved, engraved, laminated acrylic or melamine label.
    - b. Enclosures and electrical cabinets.
    - c. Access doors and panels for concealed electrical items.
    - d. Switchgear.
    - e. Switchboards.
    - f. Transformers: Label that includes tag designation indicated on Drawings for transformer, feeder, and panelboards or equipment supplied by secondary.
    - g. Substations.
    - h. Emergency system boxes and enclosures.
    - i. Motor-control centers.
    - j. Enclosed switches.
    - k. Enclosed circuit breakers.
    - l. Enclosed controllers.
    - m. Variable-speed controllers.
    - n. Push-button stations.
    - o. Power-transfer equipment.
    - p. Contactors.
    - q. Remote-controlled switches, dimmer modules, and control devices.
    - r. Battery-inverter units.
    - s. Battery racks.
    - t. Power-generating units.
    - u. Monitoring and control equipment.
    - v. UPS equipment.

END OF SECTION 260553

## SECTION 262416 - PANELBOARDS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Power panelboards.
2. Disconnecting and overcurrent protective devices.

#### 1.2 DEFINITIONS

- A. GFEP: Ground-fault equipment protection.
- B. MCCB: Molded-case circuit breaker.
- C. VPR: Voltage protection rating.

#### 1.3 ACTION SUBMITTALS

A. Product Data:

1. Power panelboards.
2. Disconnecting and overcurrent protective devices.
3. Include materials, switching and overcurrent protective devices, SPDs, accessories, and components indicated.
4. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

B. Shop Drawings: For each panelboard and related equipment.

1. Include dimensioned plans, elevations, sections, and details.
2. Show tabulations of installed devices with nameplates, conductor termination sizes, equipment features, and ratings.
3. Detail enclosure types including mounting and anchorage, environmental protection, knockouts, corner treatments, covers and doors, gaskets, hinges, and locks.
4. Detail bus configuration, current, and voltage ratings.
5. Short-circuit current rating of panelboards and overcurrent protective devices.
6. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
7. Include wiring diagrams for power, signal, and control wiring.
8. Include time-current coordination curves for each type and rating of overcurrent protective device included in panelboards. Include Internet link for electronic access to downloadable PDF of coordination curves.

## 1.4 CLOSEOUT SUBMITTALS

- A. Warranty documentation.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Remove loose packing and flammable materials from inside panelboards; install temporary electric heating (250 W per panelboard) to prevent condensation.
- B. Handle and prepare panelboards for installation in accordance with NEMA PB 1.

## PART 2 - PRODUCTS

## 2.1 PANELBOARDS AND LOAD CENTERS COMMON REQUIREMENTS

- A. Product Selection for Restricted Space: Drawings indicate maximum dimensions for panelboards including clearances between panelboards and adjacent surfaces and other items. Comply with indicated maximum dimensions.
- B. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with NFPA 70, by qualified electrical testing agency recognized by authorities having jurisdiction, and marked for intended location and application.
- C. Comply with NEMA PB 1.
- D. Comply with NFPA 70.
- E. Enclosures: Surface-mounted, dead-front cabinets.
  - 1. Rated for environmental conditions at installed location.
    - a. Indoor Dry and Clean Locations: UL 50E, Type 1.
    - b. Outdoor Locations: UL 50E, Type 3R.
  - 2. Height: 7 ft maximum.
  - 3. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box. Trims must cover live parts and may have no exposed hardware.
  - 4. Finishes:
    - a. Panels and Trim: Steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
    - b. Back Boxes: Same finish as panels and trim.
- F. Incoming Mains:
  - 1. Location: Top.

## G. Phase, Neutral, and Ground Buses:

1. Material: Hard-drawn copper, 98 percent conductivity.
  - a. Plating must run entire length of bus.
  - b. Bus must be fully rated for entire length.
2. Interiors must be factory assembled into unit. Replacing switching and protective devices may not disturb adjacent units or require removing main bus connectors.
3. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

## H. Conductor Connectors: Suitable for use with conductor material and sizes.

1. Material: Hard-drawn copper, 98 percent conductivity.
2. Terminations must allow use of 75 deg C rated conductors without derating.
3. Size: Lugs suitable for indicated conductor sizes, with additional gutter space, if required, for larger conductors.
4. Main and Neutral Lugs: Mechanical type, with lug on neutral bar for each pole in panelboard.
5. Ground Lugs and Bus-Configured Terminators: Mechanical type, with lug on bar for each pole in panelboard.

## I. Quality-Control Label: Panelboards or load centers must be labeled, by qualified electrical testing laboratory recognized by authorities having jurisdiction, for use as service equipment with one or more main service disconnecting and overcurrent protective devices. Panelboards or load centers must have meter enclosures, wiring, connections, and other provisions for utility metering. Coordinate with utility company for exact requirements.

## J. Future Devices: Panelboards or load centers must have mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices as indicated on Drawings.

## K. Panelboard Short-Circuit Current Rating:

1. Fully rated to interrupt symmetrical short-circuit current available at terminals. Assembly listed, by qualified electrical testing laboratory recognized by authorities having jurisdiction, for 100 percent interrupting capacity.
  - a. Panelboards and overcurrent protective devices rated 240 V or less must have short-circuit ratings as shown on Drawings, but not less than 10 000 A(rms) symmetrical.
  - b. Panelboards and overcurrent protective devices rated above 240 V and less than 600 V must have short-circuit ratings as shown on Drawings, but not less than 14 000 A(rms) symmetrical.

## 2.2 POWER PANELBOARDS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. ABB, Electrification Business.
2. Eaton.
3. Siemens Industry, Inc., Energy Management Division.
4. Square D; Schneider Electric USA.

- B. Listing Criteria: NEMA PB 1, distribution type.
- C. Mains: Lugs only.
- D. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes 125 A and Smaller: Plug-in circuit breakers where individual positive-locking device requires mechanical release for removal.
- E. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes Larger Than 125 A: Plug-in circuit breakers where individual positive-locking device requires mechanical release for removal.

### 2.3 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. MCCB: Comply with UL 489, with interrupting capacity to meet available fault currents.
1. Thermal-Magnetic Circuit Breakers:
    - a. Inverse time-current element for low-level overloads.
    - b. Instantaneous magnetic trip element for short circuits.
    - c. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
  2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
  3. Electronic Trip Circuit Breakers:
    - a. RMS sensing.
    - b. Field-replaceable rating plug or electronic trip.
    - c. Digital display of settings, trip targets, and indicated metering displays.
    - d. Multi-button keypad to access programmable functions and monitored data.
    - e. Ten-event, trip-history log. Each trip event must be recorded with type, phase, and magnitude of fault that caused trip.
    - f. Integral test jack for connection to portable test set or laptop computer.
    - g. Field-Adjustable Settings:
      - 1) Instantaneous trip.
      - 2) Long- and short-time pickup levels.
      - 3) Long and short time adjustments.
  4. GFCI Circuit Breakers: Single- and double-pole configurations with Class A ground-fault protection (6 mA trip).
  5. GFEP Circuit Breakers: Class B ground-fault protection (30 mA trip).
  6. Arc-Fault Circuit Interrupter Circuit Breakers: Comply with UL 1699; 120/240 V, single-pole configuration.
  7. Subfeed Circuit Breakers: Vertically mounted.
  8. MCCB Features and Accessories:

- a. Standard frame sizes, trip ratings, and number of poles.
- b. Breaker handle indicates tripped status.
- c. UL listed for reverse connection without restrictive line or load ratings.
- d. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
- e. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and HID lighting circuits.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify actual conditions with field measurements prior to ordering panelboards to verify that equipment fits in allocated space in, and comply with, minimum required clearances specified in NFPA 70.
- B. Receive, inspect, handle, and store panelboards in accordance with NEMA PB 1.1.
- C. Examine panelboards before installation. Reject panelboards that are damaged, rusted, or have been subjected to water saturation.
- D. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Comply with manufacturer's published instructions.
- B. Reference Standards:
  - 1. Panelboards: Unless more stringent requirements are specified in Contract Documents or manufacturers' published instructions, comply with NEMA PB 1.1.
  - 2. Consult Architect for resolution of conflicting requirements.
- C. Special Techniques:
  - 1. Equipment Mounting:
    - a. Attach panelboard to vertical finished or structural surface behind panelboard.
    - b. Mount surface-mounted panelboards to steel slotted supports 5/8 inch in depth. Orient steel slotted supports vertically.
  - 2. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from panelboards.
  - 3. Mount top of trim 7.5 ft above finished floor unless otherwise indicated.
  - 4. Mount panelboard cabinet plumb and rigid without distortion of box.
  - 5. Install overcurrent protective devices and controllers not already factory installed.

- a. Set field-adjustable, circuit-breaker trip ranges.
    - b. Tighten bolted connections and circuit breaker connections using calibrated torque wrench or torque screwdriver in accordance with manufacturer's published instructions.
  6. Make grounding connections and bond neutral for services and separately derived systems to ground. Make connections to grounding electrodes, separate grounds for isolated ground bars, and connections to separate ground bars.
  7. Install filler plates in unused spaces.
  8. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.
  9. Mount spare fuse cabinet in accessible location.
- D. Interfaces with Other Work:
1. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

### 3.3 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems."
- B. Panelboard Nameplates: Label each panelboard with nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
- C. Device Nameplates: Label each branch circuit device in power panelboards with nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
- D. Install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems" identifying source of remote circuit.
- E. Panelboard Label: Manufacturer's name and trademark, voltage, amperage, number of phases, and number of poles must be located on interior of panelboard door.
- F. Breaker Labels: Faceplate must list current rating, UL and IEC certification standards, and AIC rating.
- G. Circuit Directory:
  1. Provide directory card inside panelboard door, mounted in transparent card holder.
    - a. Circuit directory must identify specific purpose with detail sufficient to distinguish it from other circuits.

2. Provide computer-generated circuit directory mounted inside panelboard door with transparent plastic protective cover.
  - a. Circuit directory must identify specific purpose with detail sufficient to distinguish it from other circuits.

### 3.4 FIELD QUALITY CONTROL

- A. Acceptance Testing Preparation:
  1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
  2. Test continuity of each circuit.
- B. Field tests and inspections must be witnessed by authorities having jurisdiction if required by Local Cods.
- C. Tests and Inspections:
- D. Nonconforming Work:
  1. Panelboards will be considered defective if they do not pass tests and inspections.
  2. Remove and replace defective units and retest.
- E. Collect, assemble, and submit test and inspection reports, including certified report that identifies panelboards included and that describes scanning results, with comparisons of two scans. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

### 3.5 ADJUSTING

- A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.
- B. Set field-adjustable circuit-breaker trip ranges as directed by Engineer.

### 3.6 PROTECTION

- A. Temporary Heating: Prior to energizing panelboards, apply temporary heat to maintain temperature in accordance with manufacturer's published instructions.

END OF SECTION 262416



## SECTION 262713 - ELECTRICITY METERING

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Meter Sockets.
2. Work to accommodate utility company revenue meters.

#### 1.2 DEFINITIONS

- A. KY or KYZ Pulse: Term used by metering industry to describe method of measuring consumption of electricity (kWh) that is based on relay opening and closing in response to rotation of disk in meter. Electronic meters generate pulses electronically.

#### 1.3 COORDINATION

A. Electrical Service Connections:

1. Coordinate with utility companies and utility-furnished components.
  - a. Comply with requirements of utility providing electrical power services.
  - b. Coordinate installation and connection of utilities and services, including provision for electricity-metering components.

#### 1.4 ACTION SUBMITTALS

A. Product Data:

1. Meter Sockets.

B. Shop Drawings: For electricity-metering equipment.

1. Include elevation views of front panels of control and indicating devices and control stations.

#### 1.5 CLOSEOUT SUBMITTALS

A. Warranty documentation.

## PART 2 - PRODUCTS

### 2.1 SYSTEM DESCRIPTION

- A. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
- B. Comply with UL 916.

### 2.2 UTILITY METERING INFRASTRUCTURE

- A. Install metering accessories furnished by utility company, complying with its requirements.
- B. Meter Sockets:
  - 1. Comply with requirements of electrical-power utility company.
  - 2. Steady-state and short-circuit current ratings must meet indicated circuit ratings.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Comply with manufacturer's published instructions.
- B. Special Techniques:
  - 1. Install meters furnished by utility company. Install raceways and equipment according to utility company's published instructions. Provide empty conduits for metering leads and extend grounding connections as required by utility company.
  - 2. Wiring Methods:
    - a. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" and Section 260533.13 "Conduits for Electrical Systems."
    - b. Minimum conduit size is metric designator 16 (trade size 3/4).

### 3.2 IDENTIFICATION

- A. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
  - 1. Equipment Identification Labels: Self-adhesive labels with clear protective overlay.

### 3.3 FIELD QUALITY CONTROL

- A. Field tests and inspections must be witnessed by authorities having jurisdiction and Utility as required.

B. Nonconforming Work:

1. Electricity metering will be considered defective if it does not pass tests and inspections.
2. Remove and replace defective units and retest.

3.4 PROTECTION

- A. After installation, protect metering equipment from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 262713

## SECTION 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Molded-case circuit breakers (MCCBs).
  - 2. Enclosures.

#### 1.2 DEFINITIONS

- A. GFEP: Ground-fault circuit-interrupter for equipment protection.
- B. GFLS: Ground-fault circuit-interrupter for life safety.
- C. SPDT: Single pole, double throw.

#### 1.3 ACTION SUBMITTALS

- A. Product Data:
  - 1. For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include nameplate ratings, dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.
  - 2. Enclosure types and details for types other than UL 50E, Type 1.
  - 3. Current and voltage ratings.
  - 4. Short-circuit current ratings (interrupting and withstand, as appropriate).
  - 5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.
  - 6. Include time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device. Provide in PDF electronic format.
- B. Shop Drawings: For enclosed switches and circuit breakers.
  - 1. Include plans, elevations, sections, details, and attachments to other work.
  - 2. Include wiring diagrams for power, signal, and control wiring.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Sample warranties.

## 1.5 CLOSEOUT SUBMITTALS

- A. Warranty documentation.

## PART 2 - PRODUCTS

## 2.1 GENERAL REQUIREMENTS

- A. Source Limitations: Obtain products from single manufacturer.
- B. Product Selection for Restricted Space: Drawings indicate maximum dimensions for enclosed switches and circuit breakers, including clearances between enclosures, and adjacent surfaces and other items. Comply with indicated maximum dimensions.
- C. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

## 2.2 MOLDED-CASE CIRCUIT BREAKERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. ABB, Electrification Business.
  - 2. Eaton.
  - 3. Siemens Industry, Inc., Energy Management Division.
  - 4. Square D; Schneider Electric USA.
- B. Circuit breakers must be constructed using glass-reinforced insulating material. Current carrying components must be completely isolated from handle and accessory mounting area.
- C. Circuit breakers must have toggle operating mechanism with common tripping of all poles, which provides quick-make, quick-break contact action. Circuit-breaker handle must be over center, be trip free, and reside in tripped position between on and off to provide local trip indication. Circuit-breaker escutcheon must be clearly marked on and off in addition to providing international I/O markings. Equip circuit breaker with push-to-trip button, located on face of circuit breaker to mechanically operate circuit-breaker tripping mechanism for maintenance and testing purposes.
- D. Maximum ampere rating and UL, IEC, or other certification standards with applicable voltage systems and corresponding interrupting ratings must be clearly marked on face of circuit breaker. Circuit breakers must be 100 percent rated.
- E. Lugs must be suitable for 90 deg C rated wire, sized in accordance with 75 deg C temperature rating in NFPA 70.
- F. Standard: Comply with UL 489 with required interrupting capacity for available fault currents.

- G. Electronic Trip Circuit Breakers: Field-replaceable rating plug, RMS sensing, with the following field-adjustable settings:
  - 1. Instantaneous trip.
  - 2. Long- and short-time pickup levels.
  - 3. Long- and short-time time adjustments.
- H. Features and Accessories:
  - 1. Standard frame sizes, trip ratings, and number of poles.
  - 2. Lugs: Mechanical type, suitable for number, size, trip ratings, and conductor material.

## 2.3 ENCLOSURES

- A. Enclosed Switches and Circuit Breakers: UL 489, NEMA KS 1, UL 50E, and UL 50, to comply with environmental conditions at installed location.
- B. Enclosure Finish: Enclosure must be finished with gray baked enamel paint, electrodeposited on cleaned, phosphatized steel (UL 50E Type 1).
- C. Operating Mechanism: Circuit-breaker operating handle must be externally operable with operating mechanism being integral part of box, not cover. Cover interlock mechanism must have externally operated override. Override may not permanently disable interlock mechanism, which must return to locked position once override is released. Tool used to override cover interlock mechanism must not be required to enter enclosure in order to override interlock.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine elements and surfaces to receive enclosed switches and circuit breakers for compliance with installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
  - 1. Commencement of work will indicate Installer's acceptance of areas and conditions as satisfactory.

### 3.2 SELECTION OF ENCLOSURES

- A. Indoor, Dry and Clean Locations: UL 50E, Type 1.

### 3.3 INSTALLATION

- A. Comply with manufacturer's published instructions.
- B. Special Techniques:

1. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.
2. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.
3. Temporary Lifting Provisions: Remove temporary lifting of eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.

### 3.4 IDENTIFICATION

#### A. Comply with requirements in Section 260553 "Identification for Electrical Systems."

1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
2. Label each enclosure with engraved metal or laminated-plastic nameplate.

### 3.5 FIELD QUALITY CONTROL

#### A. Field tests and inspections must be witnessed by authorities having jurisdiction if required by Local Codes.

#### B. Tests and Inspections for Molded-Case Circuit Breakers:

1. Visual and Mechanical Inspection:
  - a. Verify that equipment nameplate data are as described in the Specifications and shown on Drawings.
  - b. Inspect physical and mechanical condition.
  - c. Inspect anchorage, alignment, grounding, and clearances.
  - d. Verify that unit is clean.
  - e. Operate circuit breaker to ensure smooth operation.
  - f. Inspect bolted electrical connections for high resistance using one of the following methods:
    - 1) Use low-resistance ohmmeter.
      - a) Compare bolted connection resistance values to values of similar connections. Investigate values that deviate from those of similar bolted connections by more than 50 percent of lowest value.
    - 2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 100.12.
      - a) Bolt-torque levels must be in accordance with manufacturer's published data. In absence of manufacturer's published data, use NETA ATS Table 100.12.
  - g. Inspect operating mechanism, contacts, and chutes in unsealed units.

2. Test and adjust controls, remote monitoring, and safeties.

C. Nonconforming Work:

1. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.
2. Remove and replace defective units and retest.

3.6 ADJUSTING

- A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.
- B. Set field-adjustable circuit-breaker trip ranges to values given to Contractor by Engineer.

3.7 PROTECTION

- A. After installation, protect enclosed switches and circuit breakers from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 262816



## SECTION 263213.13 - DIESEL-ENGINE-DRIVEN GENERATOR SETS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Installation of packaged diesel-engine driven generator set and associated components and accessories.
- B. Related Requirements:
  - 1. Section 263600 "Transfer Switches" for transfer switches including sensors and relays to initiate automatic-starting and -stopping signals for engine generators.

#### 1.3 DEFINITIONS

- A. EPS: Emergency power supply.
- B. EPSS: Emergency power supply system.
- C. Operational Bandwidth: The total variation from the lowest to highest value of a parameter over the range of conditions indicated, expressed as a percentage of the nominal value of the parameter.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Record actual locations of system components, installed circuiting arrangements, duct bank routing and final equipment settings.

#### 1.5 WARRANTY

- A. Warranty Period for Installation Only: One (1) year from date of final testing of generator.

#### 1.6 DELIVERY, STORAGE AND HANDLING

- A. Contractor shall assume generator will delivered to construction site and stored by Owner on the premises.

- B. Contractor shall be responsible for rigging the generator into final position on concrete pad.
- C. Contractor shall adhere to all manufacturer's rigging instructions to avoid damage to the generator set components, enclosure and finish.

#### 1.7 FIELD CONDITIONS

- A. Maintain field conditions within manufacturer's required service conditions during and after installation.

#### 1.8 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment or other potential obstructions within the spaces dedicated for engine generator system.
- B. Coordinate arrangement of equipment with the dimensions and clearance requirements of the actual equipment to be installed.
- C. Coordinate the work to provide electrical circuits suitable for the power requirements of the actual auxiliary equipment and accessories to be installed.
- D. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

#### 1.9 QUALITY ASSURANCE

- A. Comply with the following:
  - 1. NFPA 70 (National Electric Code)
  - 2. NFPA 110 (Standard for Emergency and Standby Power Systems)
  - 3. NFPA 37 (Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines)
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years document experience with engine generator systems of similar size, type and complexity; manufacturers authorized installer.

### PART 2 - PRODUCTS

#### 2.1 PACKAGED ENGINE GENERATOR

- A. Generator and associated accessories shall be furnished by Owner and installed by Electrical Contractor. Final cutsheets, shop drawings and installation manuals for purchased generator shall be provided to Electrical Contractor once they become available.
- B. General Generator Characteristics:
  - 1. Power Rating: 400 kW, Standby
  - 2. Service Load: 500 kVA.

3. Power Factor: 0.8, lagging.
4. Frequency: 60 Hz.
5. Voltage: 480Y/277V.
6. Phase: Three-phase, four wire, wye.
7. Fuel: Diesel
  - a. 72-hour sub-base tank (approx. 2,000 gallons)
8. Weather Protected Enclosure
9. Factory Mounted Radiator
10. Accessories:
  - a. Factory Mounted Load Center
  - b. Factory Mounted Battery Charger
  - c. Factory Mounted GFI Receptacle
  - d. Remote EPO Pushbutton
  - e. Remote Annunciator Panel

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine areas, equipment bases, and conditions, with Installer present, for compliance with requirements for installation and other conditions affecting packaged engine generator performance.
- B. Examine roughing-in for piping systems and electrical connections. Verify actual locations of connections before packaged engine generator installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electrical service according to requirements indicated:
  1. Notify Owner no fewer than seven (7) working days in advance of proposed interruption of electrical service.
  2. Do not proceed with interruption of electrical service without Owner's written permission.

#### 3.3 INSTALLATION

- A. Comply with NECA 1 and NECA 404.
- B. Comply with packaged engine generator manufacturers' written installation and alignment instructions and with NFPA 110.
- C. Equipment Mounting:

1. Install packaged engine generator on cast-in-place concrete equipment base.
- D. Install packaged engine generator to provide access, without removing connections or accessories, for periodic maintenance. Provide minimum clearances around generator as indicated on drawings and per manufacturer's instructions.
- E. Install electrical devices furnished by equipment manufacturers but not specified to be factory mounted.
- F. Record hour meter readings (date, start reading, stop reading) each time engine is run. Note whether engine is run for testing, maintenance or for emergency. Submit log of hour meter readings.
- G. Use manufacturer's recommended oil and coolant, suitable for the worst case ambient temperatures.

### 3.4 CONNECTIONS

- A. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables." Provide a minimum of one 90-degree bend in flexible conduit routed to the engine generator from a stationary element.
- C. Balance single-phase loads to obtain a maximum of 10 percent unbalance between any two phases.

### 3.5 IDENTIFICATION

- A. Identify system components according to Section 260553 "Identification for Electrical Systems."
- B. Install a sign indicating the generator neutral is bonded to the main service neutral at the main service location.

### 3.6 FIELD QUALITY CONTROL

- A. Coordinate services of a manufacturer's authorized representative to prepare and start systems and perform inspection and testing. Owner will provide manufacturer's detailed testing procedures and field reports to Contractor. Start-up has been purchased by the Owner as part of the generator purchase. Contractor shall work with Owner to coordinate the proper time for this work.
- B. Notify Owner and Engineer at least two (2) weeks prior to scheduled inspections and tests.
- C. Notify Authorities Having Jurisdiction (AHJ) and comply with their requirements and scheduling inspections and tests and for observation by their personnel.

- D. Contractor shall provide all equipment, tools and supplies required to accomplish inspections and testing, including fuel.
- E. Generator Tests & Inspections:
1. Perform all tests required and recommended by manufacturer including the tests and inspections described in the subparagraphs below:
    - a. Visual and Mechanical Inspection:
      - 1) Inspect physical and mechanical condition.
      - 2) Inspect anchorage, alignment, and grounding.
      - 3) Verify that the unit is clean.
    - b. Electrical and Mechanical Tests:
      - 1) Perform insulation-resistance tests according to IEEE 43.
        - a) Machines Larger Than 200 hp (150 kW): Test duration shall be 10 minutes. Calculate polarization index.
      - 2) Verify phase rotation, phasing, and synchronized operation as required by the application.
      - 3) Functionally test engine shutdown for low oil pressure, overtemperature, overspeed, and other protection features as applicable.
      - 4) Perform vibration test for each main bearing cap.
      - 5) Verify correct functioning of the governor and regulator.
    - c. NFPA 110 Acceptance Tests: Perform tests required by NFPA 110 that are additional to those specified here, including, but not limited to, single-step full-load pickup test. Provide full size load bank for tests.
    - d. Battery Tests: Equalize charging of battery cells according to manufacturer's written instructions. Record individual cell voltages.
      - 1) Measure charging voltage and voltages between available battery terminals for full-charging and float-charging conditions. Check electrolyte level and specific gravity under both conditions.
      - 2) Test for contact integrity of all connectors. Perform an integrity load test and a capacity load test for the battery.
      - 3) Verify acceptance of charge for each element of the battery after discharge.
      - 4) Verify that measurements are within manufacturer's specifications.
    - e. Battery-Charger Tests: Verify specified rates of charge for both equalizing and float-charging conditions.
    - f. System Integrity Tests: Methodically verify proper installation, connection, and integrity of each element of engine generator system before and during system operation. Check for air, exhaust, and fluid leaks.
    - g. Exhaust Emissions Test: Comply with applicable government test criteria.
    - h. Voltage and Frequency Transient Stability Tests: Use recording oscilloscope to measure voltage and frequency transients for 50 and 100 percent step-load increases and decreases, and verify that performance is as specified.
    - i. Harmonic-Content Tests: Measure harmonic content of output voltage at 25 percent and 100 percent of rated linear load. Verify that harmonic content is within specified limits.
    - j. Coordinate tests with tests for transfer switch and run them concurrently.
    - k. Test instruments shall have been calibrated within the past 12 months, traceable to NIST Calibration Services, and adequate for making positive observation of test results. Make calibration records available for examination on request.
    - l. Leak Test: After installation, charge exhaust, coolant, and fuel systems and test for leaks. Repair leaks and retest until no leaks exist.

- m. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation for generator and associated equipment.
- n. Test and adjust controls and safeties. Coordinate with Owner for replacing damaged and malfunctioning controls and equipment.
- o. Remove and replace malfunctioning units and retest as specified above.
  - 1) Retest: Correct deficiencies identified by tests and observations, and retest until specified requirements are met.
- p. Test each ATS to verify that upon loss of normal power to the ATS, a start signal is sent to the generator system to start the generators.
- q. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation resistances, time delays, and other values and observations. Attach a label or tag to each tested component, indicating satisfactory completion of tests.

### 3.7 CLOSEOUT ACTIVITIES

- A. Demonstrate proper operation of system to Owner and correct deficiencies or make adjustments as directed.
- B. After success acceptance test, and just prior to Substantial Completion, replace air, oil and fuel filters.

END OF SECTION 263213.13

## SECTION 263600 - TRANSFER SWITCHES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Installation of contactor-type automatic transfer switch and associated components and accessories.
- B. Related Requirements:
  - 1. Section 263213.13 "Diesel-Engine-Driven Generator Sets".

#### 1.3 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For each type of product to include in emergency, operation, and maintenance manuals.
  - 1. Include the following:
    - a. Features and operating sequences, both automatic and manual.
    - b. List of all factory settings of relays; provide relay-setting and calibration instructions, including software, where applicable.

#### 1.4 QUALITY ASSURANCE

- A. Comply with the following:
  - 1. NFPA 70 (National Electric Code)
  - 2. NFPA 110 (Standard for Emergency and Standby Power Systems)
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years document experience with engine generator systems of similar size, type and complexity; manufacturers authorized installer.

#### 1.5 FIELD CONDITIONS

- A. Maintain field conditions within manufacturer's required service conditions during and after installation.

## 1.6 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment or other potential obstructions within the spaces dedicated for engine generator system.
- B. Coordinate arrangement of equipment with the dimensions and clearance requirements of the actual equipment to be installed.
- C. Coordinate the work to provide electrical circuits suitable for the power requirements of the actual auxiliary equipment and accessories to be installed.
- D. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

## 1.7 WARRANTY

- A. Warranty Period for Installation Only: One (1) year from date of final testing.

## 1.8 DELIVERY, STORAGE AND HANDLING

- A. Contractor shall assume automatic transfer switch will delivered to construction site and stored by Owner on the premises.
- B. Contractor shall be responsible for rigging the automatic transfer switch into final position on concrete pad.
- C. Contractor shall adhere to all manufacturer's rigging instructions to avoid damage to the transfer switch components, enclosure and finish.

## PART 2 - PRODUCTS

## 2.1 CONTACTOR-TYPE AUTOMATIC TRANSFER SWITCHES

- A. Automatic transfer switch and associated accessories shall be furnished by Owner and installed by Electrical Contractor. Final cutsheets, shop drawings and installation manuals for purchased automatic transfer switch shall be provided to Electrical Contractor once they become available.
- B. General Automatic Transfer Switch Characteristics:
  - 1. Rating: 800A
  - 2. Voltage: 480Y/277V
  - 3. Open Transition.
  - 4. Contactor-Type
  - 5. Non-service Entrance Rated
  - 6. Floor Mounted.



## PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. Floor-Mounting Switch: Anchor to floor by bolting.
  - 1. Install transfer switch on cast-in-place concrete equipment base.
  - 2. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases.
  - 3. Provide workspace and clearances required by NFPA 70.
- B. Identify components according to Section 260553 "Identification for Electrical Systems."
- C. Set field-adjustable intervals and delays, relays, and engine exerciser clock.
- D. Comply with NECA 1.

## 3.2 CONNECTIONS

- A. Wiring Method: Install cables in raceways and cable trays except within electrical enclosures. Conceal raceway and cables except in unfinished spaces.
  - 1. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."
- B. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii.
- C. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."
- D. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
- E. Connect twisted pair cable according to Section 260523 "Control-Voltage Electrical Power Cables."
- F. Route and brace conductors according to manufacturer's written instructions, and Section 260529 "Hangers and Supports for Electrical Systems." Do not obscure manufacturer's markings and labels.

## 3.3 FIELD QUALITY CONTROL

- A. Administrant for Tests and Inspections:
  - 1. Coordinate services of a manufacturer's authorized representative to prepare and start systems and perform inspection and testing. Owner will provide manufacturer's detailed testing procedures and field reports to Contractor. Start-up has been purchased by the Owner as part of the ATS purchase. Contractor shall work with Owner to coordinate the proper time for this work.

2. Contractor shall notify Owner and Engineer at least two (2) weeks prior to scheduled inspections and tests.
3. Contractor shall notify Authorities Having Jurisdiction (AHJ) and comply with their requirements and scheduling inspections and tests and for observation by their personnel.
4. Contractor shall provide all equipment, tools and supplies required to accomplish inspections and testing.

B. Tests and Inspections:

1. After installing equipment, test for compliance with requirements according to NETA ATS.
2. Visual and Mechanical Inspection:
  - a. Compare equipment nameplate data with Drawings and Specifications.
  - b. Inspect physical and mechanical condition.
  - c. Inspect anchorage, alignment, grounding, and required clearances.
  - d. Verify that the unit is clean.
  - e. Verify appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
  - f. Verify that manual transfer warnings are attached and visible.
  - g. Verify tightness of all control connections.
  - h. Inspect bolted electrical connections for high resistance using one of the following methods, or both:
    - 1) Use of low-resistance ohmmeter.
    - 2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method according to manufacturer's published data.
  - i. Perform manual transfer operation.
  - j. Verify positive mechanical interlocking between normal and alternate sources.
  - k. Perform visual and mechanical inspection of surge arresters.
  - l. Inspect control power transformers.
    - 1) Inspect for physical damage, cracked insulation, broken leads, tightness of connections, defective wiring, and overall general condition.
    - 2) Verify that primary and secondary fuse or circuit-breaker ratings match Drawings.
    - 3) Verify correct functioning of drawout disconnecting contacts, grounding contacts, and interlocks.
3. Electrical Tests:
  - a. Perform insulation-resistance tests on all control wiring with respect to ground.
  - b. Perform a contact/pole-resistance test. Compare measured values with manufacturer's acceptable values.
  - c. Verify settings and operation of control devices.
  - d. Calibrate and set all relays and timers.
  - e. Verify phase rotation, phasing, and synchronized operation.
  - f. Perform automatic transfer tests.
  - g. Verify correct operation and timing of the following functions:

- 1) Normal source voltage-sensing and frequency-sensing relays.
  - 2) Engine start sequence.
  - 3) Time delay on transfer.
  - 4) Alternative source voltage-sensing and frequency-sensing relays.
  - 5) Automatic transfer operation.
  - 6) Interlocks and limit switch function.
  - 7) Time delay and retransfer on normal power restoration.
  - 8) Engine cool-down and shutdown feature.
4. Measure insulation resistance phase-to-phase and phase-to-ground with insulation-resistance tester. Include external annunciation and control circuits. Use test voltages and procedure recommended by manufacturer. Comply with manufacturer's specified minimum resistance.
- a. Check for electrical continuity of circuits and for short circuits.
  - b. Inspect for physical damage, proper installation and connection, and integrity of barriers, covers, and safety features.
  - c. Verify that manual transfer warnings are properly placed.
  - d. Perform manual transfer operation.
5. After energizing circuits, perform each electrical test for transfer switches stated in NETA ATS and demonstrate interlocking sequence and operational function for each switch at least three times.
- a. Simulate power failures of normal source to automatic transfer switches and retransfer from emergency source with normal source available.
  - b. Verify proper sequence and correct timing of automatic engine starting, transfer time delay, retransfer time delay on restoration of normal power, and engine cool-down and shutdown.
- C. Coordinate tests with tests of generator and run them concurrently.
- D. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation and contact resistances and time delays. Attach a label or tag to each tested component indicating satisfactory completion of tests.
- E. Transfer switches will be considered defective if they do not pass tests and inspections.
- F. Coordinate with Owner the removal and replacement of malfunctioning units and retest as specified above.
- G. Prepare test and inspection reports.

### 3.4 CLOSEOUT ACTIVITIES

- A. Demonstrate proper operation of system to Owner and correct deficiencies or make adjustments as directed.

END OF SECTION 263600

## SECTION 264313 - SURGE PROTECTIVE DEVICES FOR LOW-VOLTAGE ELECTRICAL POWER CIRCUITS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes:
  - 1. Type 2 surge protective devices.
  - 2. Enclosures.
  - 3. Conductors and cables.

## 1.2 DEFINITIONS

- A.  $I_n$ : Nominal discharge current.
- B. Maximum Continuous Operating Voltage (MCOV): The maximum designated RMS value of the power frequency voltage that may be continuously applied to the mode of protection of an SPD.
- C. Metal-Oxide Varistor (MOV): An electronic component with a significant bidirectional, nonlinear current-voltage characteristic.
- D. Mode(s), Modes of Protection, or Protection Modes: Electrical paths where the SPD offers defense against transient overvoltages. Examples include: line to neutral (L-N), line to ground (L-G), line to line (L-L), and neutral to ground (N-G).
- E. SCCR: Short-circuit current rating.
- F. Type 1 SPDs: Permanently connected SPDs intended for installation between the secondary of the service transformer and the line side of the service disconnect overcurrent device.
- G. Type 2 SPDs: Permanently connected SPDs intended for installation on the load side of the service disconnect overcurrent device, including SPDs located at the branch panel.
- H. Type 3 SPDs: Point of utilization SPDs.
- I. Type 4 SPDs: Component SPDs, including discrete components, as well as assemblies.
- J. Type 5 SPDs: Discrete component surge suppressors, such as MOVs that may be mounted on a printed wiring board, connected by its leads or provided within an enclosure with mounting means and wiring terminations.
- K. Voltage Protection Rating (VPR): A rating selected from UL 1449 list of preferred values assigned to each mode of protection.

## 1.3 ACTION SUBMITTALS

## A. Product Data:

1. For each type of product.
  - a. Include electrical characteristics, specialties, and accessories for SPDs.
  - b. Certification of compliance with UL 1449 by qualified electrical testing laboratory recognized by authorities having jurisdiction including the following information:
    - 1) Tested values for VPRs.
    - 2)  $I_n$  ratings.
    - 3) MCOV, type designations.
    - 4) OCPD requirements.
    - 5) Manufacturer's model number.
    - 6) System voltage.
    - 7) Modes of protection.

## 1.4 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For manufacturer's special warranty.

## PART 2 - PRODUCTS

## 2.1 TYPE 2 SURGE PROTECTIVE DEVICES (SPDs)

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ABB, Electrification Business.
  2. Eaton.
  3. Schneider Electric USA, Inc.
  4. Siemens Industry, Inc., Energy Management Division.
- B. Source Limitations: Obtain devices from single source from single manufacturer.
- C. General Characteristics:
1. Reference Standards: UL 1449, Type 2.
  2. MCOV: Not less than 125 percent of nominal system voltage for 208Y/120 V and 120/240 V power systems, and not less than 115 percent of nominal system voltage for 480Y/277 V power systems.
  3. Peak Surge Current Rating: Minimum single-pulse surge current withstand rating per phase must not be less than 200 kA. Peak surge current rating must be arithmetic sum of the ratings of individual MOVs in a given mode.
  4. Protection modes and UL 1449 VPR for grounded wye circuits with 480Y/277 V, three-phase, four-wire circuits must not exceed the following:
    - a. Line to Neutral: 1200 V for 480Y/277 V.

- b. Line to Ground: 1200 V for 480Y/277 V.
  - c. Neutral to Ground: 1200 V for 480Y/277 V.
  - d. Line to Line: 2000 V for 480Y/277 V.
- 5. SCCR: Equal or exceed 200 kA.
  - 6.  $I_n$  Rating: 20 kA.

D. Options:

- 1. Include LED indicator lights for power and protection status.
- 2. Include internal thermal protection that disconnects the SPD before damaging internal suppressor components.
- 3. Include surge counter.

## 2.2 ENCLOSURES

- A. Indoor Enclosures: Type 1.

## 2.3 CONDUCTORS AND CABLES

- A. Power Wiring: Same size as SPD leads, complying with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

# PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. Provide OCPD and disconnect for installation of SPD in accordance with UL 1449 and manufacturer's instructions.
- B. Install leads between disconnects and SPDs short, straight, twisted, and in accordance with manufacturer's instructions. Comply with wiring methods in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
  - 1. Do not splice and extend SPD leads unless specifically permitted by manufacturer.
  - 2. Do not exceed manufacturer's recommended lead length.
  - 3. Do not bond neutral and ground.
- C. Use crimped connectors and splices only. Wire nuts are unacceptable.

## 3.2 FIELD QUALITY CONTROL

- A. Field tests and inspections must be witnessed by authorities having jurisdiction where required by Local Codes.
- B. Tests and Inspections:

1. Compare equipment nameplate data for compliance with Drawings and the Specifications.
2. Inspect anchorage, alignment, grounding, and clearances.
3. Verify that electrical wiring installation complies with manufacturer's installation requirements.

C. Nonconforming Work:

1. SPDs that do not pass tests and inspections will be considered defective.
2. Remove and replace defective units and retest.

3.3 STARTUP SERVICE

- A. Complete startup checks in accordance with manufacturer's instructions.
- B. Do not perform insulation-resistance tests of the distribution wiring equipment with SPDs installed. Disconnect SPDs before conducting insulation-resistance tests; reconnect them immediately after the testing is over.
- C. Energize SPDs after power system has been energized, stabilized, and tested.

END OF SECTION 264313