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| --- |
| Norwalk_2016_PublicSchool_Logo |
|  |
| ROWAYTON ELEMENETARY SCHOOL COURTYARD IMPROVEMENTS  REQUEST FOR PROPOSAL  May 8, 2020  Proposal Response Date:  May 20, 2020, 3:00 p.m. |
|  |

# Overview

Norwalk Public School System is the 6th largest school district in the state of Connecticut with more than 11,500 students in 19 schools (27.7 square miles). There are 12 elementary schools, four middle schools, two high schools, and one pre-school. Norwalk Public School administrative offices are located at: 125 East Avenue, Norwalk, CT 06852.

Proposals will be accepted until the date and time listed, at which time they will be opened. No proposal received after that time will be considered. The Proposer assumes the risk of any delay in the mail or in the handling of the mail by employees of the Norwalk Public Schools whether sent by mail or by means of personal delivery, the proposer assumes responsibility for having its proposal received by Norwalk Public Schools on time at the place specified.

All proposals must be sealed and must be submitted in a plain opaque envelope. All proposals must be addressed to:

Karen Bartron

Purchasing Agent

Norwalk Public Schools

125 East Avenue

Norwalk, CT 06852.

The proposal label must be clearly marked.

Telephone quotations or amendments will not be accepted at any time. All materials submitted will become property of the District.

The Norwalk Public Schools may make any investigation necessary to determine the ability of the Proposer to meet the needs of this proposal. The Proposer shall furnish any additional information that the District shall request in order to make a determination of a proposal award.

The Norwalk Public Schools reserves the right to consider cost, experience and service history in the award of this proposal. The Norwalk Public Schools reserves the right to waive technical defects in proposals, to reject any or all proposals, in whole or in part, and to make such awards in whole or in part, to re-advertise and invite new proposals; to modify proposals based upon negotiation with the proposer(s); that is in its judgment will be in the best interest of Norwalk Public Schools even if such proposal is not the least cost proposal. The Norwalk Public Schools also reserves the right to discuss the proposal with one or more proposers and to make such modifications as the Norwalk Public Schools, in its sole discretion, deems to be in its best interests.

# I. Request for Proposals

Instructions, Proposal Forms, and Specifications are enclosed within this packet.

Proposals must be submitted on the proposal response form included in this packet. Supplemental documentation is permissible. Quotation submissions should be in sealed envelopes that are clearly marked:

By submitting a proposal, the Proposer will be presumed to be thoroughly familiar with the Request for Proposal, Specifications, other documents, including all Addenda and to have inspected the sites so as to be fully informed of NORWALK PUBLIC SCHOOLS’s needs as they pertain to performance of this contract. The failure or omission of any Proposer to examine any site, form, instrument, or document shall in no way relieve the Proposer from any obligation with respect to its proposal. No proposal may be withdrawn for a period of sixty (60) calendar days after the scheduled closing for the receipt of proposals.

Proposers must sign up for additional addendums on either the DAS or City of Norwalk websites (see below). The failure or omission of any Proposer to examine any site, form, instrument, or document shall in no way relieve the Proposer from any obligation with respect to its proposal. No proposal may be withdrawn for a period of sixty (60) calendar days after the scheduled closing for the receipt of proposals.

**Posting Websites/Links for RFP’s and Bids:**

State Website (DAS)

Sign up for notifications for future rfp/bids for NPS and other districts: <http://das.ct.gov/cr1.aspx?page=372>

City of Norwalk:

<http://www.norwalkct.org/bids.aspx>

**1.01 Primary Contact**

All questions regarding this Request for Proposal shall be submitted via e-mail to:

Karen Bartron

Norwalk Public Schools  
125 East Avenue   
Norwalk, CT 06852.

bartronk@norwalkps.org

**1.02 Response Date**

A copy of the proposal must be received at the Business Office prior to May 20, 2020, 3:00p.m. Any proposal in route to this location or delivered to other locations in the School District will not be considered timely and will be returned unopened. Proposals received after the deadline will be late and ineligible for consideration.

**II. Consideration and Award**

The NORWALK PUBLIC SCHOOLS may award a contract based upon the initial proposals received without discussion of such proposals. Accordingly, each initial proposal should be submitted with the most favorable price and service standpoint. All proposals shall include completed forms as provided by the District. The Norwalk Public School District reserves the right to reject any or all proposals received or any parts thereof for any reason whatsoever, to waive any informality in any proposal or in any provision in the request for proposals, to require a modification of contract terms at any time, and to select the bidder who, in the opinion of the District, will meet the best interests of the District, provided that nothing herein shall be deemed to waive any requirement of federal, state or local law. Under no circumstances will the District be responsible for the cost of preparing any bid or proposal.

The awardee vendor must supply all new equipment; no refurbished equipment will be accepted. Award of the proposal will be based upon the following criteria:

* Flexibility of the vendor to work with the school district
* Pricing
* Availability (ability to provide all services in a timely manner).

**III Instructions to Proposers**

3.01 Discrimination Prohibited

1. That in the hiring of employees for performance of work under this contract, or any subcontract hereunder, no such contractor or subcontractor shall, by reason of race, creed or color, discriminate against a anyone who is qualified and available to perform the work to which the employment relates.
2. That no contractor, subcontractor, nor any person on his behalf shall in any manner discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, creed or color.
3. That this contract may be canceled or terminated by Norwalk Public Schools and all money due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this portion of the contract.

3.02 Insurance

Prior to the commencement of any work on the project and no later than ten (10) days after notice of award of the contract, the successful Contractor shall submit to Owner evidence of insurance demonstrating that the contractor has coverage for Workmen’s Compensation Insurance, Liability, Property Damage, and Automobile/Truck insurance with the minimum limits of liability set forth herein. Certificates of insurance shall contain a provision that such policies shall not be cancelled or permitted to expire until at least thirty (30) days prior written notice has been provided to Owner. Further, owner shall be named as an additional insured. Insurance shall be provided only by companies licensed to do so in Connecticut and shall have a current A.M. Best Rating of “B+” or greater. **Insurance policy certification must accompany the proposal.**

1. **Worker's Compensation Insurance** shall not be written for less than the statutory limits and shall include Employer's Liability Insurance at a limit of not less than Five Hundred Thousand Dollars ($500,000);
2. **General Liability Insurance** shall be insured at a limit of not less than One Million Dollars ($1,000,000) for each occurrence and Two Million Dollars ($2,000,000) for total aggregate liability; additionally, shall be insured with an umbrella coverage not less than One Million Dollars ($1,000,000).
3. **Property Damage Insurance** shall be written at a limit of not less than One Million Dollars ($1,000,000) for each occurrence and One Million Dollars ($1,000,000) for each aggregate liability; and
4. **Comprehensive Automobile** **Liability Insurance** shall be maintained throughout the term of any ensuing contract to cover owned automobiles; leased, hired or rented automobiles; employers' non-ownership liability; medical payments and uninsured motorists. This same coverage is understood to extend to all trucks and motorized equipment. The limits of liability shall be no less than:
   1. One Million Dollars ($1,000,000) for each person and One Million Dollars ($1,000,000) for each occurrence for personal injury and bodily injury; and.
   2. One Million Dollars ($1,000,000) for each occurrence of property damage.
   3. Umbrella insurance of additional One Million Dollars ($1,000,000).

3.03 Invoices

Invoices received and approved Norwalk Public Schools, by the first of the month, will be paid with forty-five (45) days. The owner reserves a ten- (10) day period for project inspection and invoice approval.

3.04 Contractor’s Responsibilities

1. **Licenses:** Contractor shall maintain in current status all federal, state, and local licenses and permits required for the operation of the business conducted by the Contractor.
2. **Safety Standards:** All items supplies on this contract shall comply with current applicable Occupational Safety and Health Standards of the State of Connecticut and other applicable safety standards.
3. **Performance Interference:** Contractor shall notify the School District immediately of any occurrence of conditions that interfere with the full performance of the contract, and confirm it in writing within twenty-four (24) hours.

**IV. Scope of Work:**

In an effort to expand the learning enviornments to the outdoors, the Rowayton Elementary School desires to improve the central courtyard. The project consists of the following;

* Adding a new motorized awning included all required steel support structure.
* Installation of signage
* Handrail modification, including the painting of existing railings.
* Minor Sidewalk modifications to alleviate trip hazards to create a safe walking path and minor masonry repairs.
* The rework of doors, including hardware modifications.
* Electrical upgrades including lighting, fire alarm, emergency lighting, PA upgrades and electrical wiring for the motorized awning in the courtyard.
* The responsible bidder will be required to obtain and pay for required permits.

All details of the project are detailed on the attached construction drawings.

# V. Response Sheet:

Proposals are scheduled to be accepted or rejected by the Norwalk Public Schools within sixty (60) days of the proposal due date. The Norwalk Public Schools reserves the right to waive any informality and to accept or reject all or any part of any or all Proposals. Prices must be listed on the attached sheets on individual items.

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Total Lump Sum in Numbers, Including all Labor , Permits, Materials and Installation

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Total in Words

Submitted by:

(Printed name) (Signature)

Title: Date:

Telephone #:

# VI. Non-Collusion Affidavit

The undersigned, as a company proposing on the above indicated project, declares that the only persons or parties interested in this proposal as principals or in the contract proposed to be taken are named herein; that this proposal is fair in all respects and made without collusion or fraud; that the proposer has carefully examined the location of the proposed work, the Specifications including the Request for Proposal and all addenda thereto, prepared by the Owner; and proposed and agrees if these terms and conditions are accepted that the undersigned will contract, to provide all necessary and proper personnel to do all the work and furnish all labor and material necessary or proper to carry out the contract in the completion of the work for the following lump sum pricing.

The undersigned further agrees, if awarded the contract on this proposal, to commence work at the time stated in the notice to proceed, unless otherwise permitted or directed by the Owner and further agrees to complete the work of this contract as specified.

This form must be signed by an officer authorized to represent and commit the organization to all terms and conditions contained in the proposal. The authorized person signing below further certifies that this bid has been prepared without collusion with any other bidder, the Norwalk Public Schools, or any employee of the Norwalk Public Schools.

Name of Company \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Phone #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Fax #:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Federal I.D. #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorized Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Fax #:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Federal I.D. #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorized Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Printed Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# REFERENCES:

(Only needed for companies who have not done business with Norwalk Public Schools.)

1. FIRM NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ADDRESS:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CITY, STATE, ZIP CODE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TELEPHONE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

RESPONSIBLE COMPANY AGENT:

NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TYPE OF OPERATION (Bank, School, Industrial, etc.)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. FIRM NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ADDRESS:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CITY, STATE, ZIP CODE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TELEPHONE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

RESPONSIBLE COMPANY AGENT:

NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TYPE OF OPERATION (Bank, School, Industrial, etc.)

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

3. FIRM NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ADDRESS:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CITY, STATE, ZIP CODE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TELEPHONE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

RESPONSIBLE COMPANY AGENT:

NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TYPE OF OPERATION (Bank, School, Industrial, etc.)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PROJECT MANUAL

**CITY OF NORWALK**

**CONNECTICUT**

**COURTYARD IMPROVEMENTS**

**Rowayton Elementary School**

**1 Roton Avenue**

**Norwalk, Connecticut 06583**



**Issued for Bid: March 5, 2020**



**Architect/Engineers/Interior Designers Silver/Petrucelli + Associates, Inc.**

**3190 Whitney Avenue, Hamden, Connecticut 06518**

**One Post Hill Place, New London, Connecticut 06320**

TECHNICAL SPECIFICATIONS TABLE OF CONTENTS

COURTYARD IMPROVEMENTS

**ROWAYTON ELEMENTARY SCHOOL**

**1 ROTON AVENUE**

**NORWALK, CT 06853**

S/P+A PROJECT NO. 19.298

DIVISION 0 – BIDDING AND CONTRACT DOCUMENTS PAGES

Project Application and Project Certificate for Payment (AIA G702) 1 Project Application Continuation Sheet (AIA G703) 1 2019-20 and 2020-21 School Calendars 2

Drawing List 1

DIVISION 1 – GENERAL REQUIREMENTS

Section 012500 Substitution Procedures 4

[Section 012600 Contract Modification Procedures 2](#_Toc178356)

[Section 012900 Payment Procedures 4](#_Toc178357)

[Section 013100 Project Management and Coordination 6](#_Toc178358)

[Section 013200 Construction Progress Documentation 6](#_Toc178359)

Section 013233 Photographic Documentation 2

Section 013300 Submittal Procedures 9

Section 014000 Quality Requirements 9

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Section 017700 Closeout Procedures 4

Section 017823 Operation and Maintenance Data 7

Section 017839 Project Record Documents 3

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Rowayton Elementary School Courtyard Improvements – Norwalk TOC-1

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**User Notes:**

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**TM**

**– 1992**

***Application and Certificate for Payment***

**APPLICATION NO:**

003

**Distribution to:**

**PERIOD TO:**

**TO OWNER:**

**PROJECT:**

GENERIC

**CONTRACT FOR:**

General Construction

**CONTRACT DATE:**

**FROM**

**CONTRACTOR:**

**VIA**

**ARCHITECT:**

**PROJECT NOS:**

/ /

OWNER:

ARCHITECT:

CONTRACTOR:

FIELD:

OTHER

:

**CONTRACTOR'S APPLICATION FOR PAYMENT**

Application is made for payment, as shown below, in connection with the Contract.

Continuation Sheet, AIA Document G703, is attached.

**1. ORIGINAL CONTRACT SUM .................................................................................**

$0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge,

information and belief the Work covered by this Application for Payment has been

completed in accordance with the Contract Documents, that all amounts have been paid

by the Contractor for Work for which previous Certificates for Payment were issued and

payments received from the Owner, and that current payment shown herein is now due.

**. NET CHANGE BY CHANGE ORDERS ..................................................................**

**2**

$0.00

**CONTRACTOR:**

**3**

**. CONTRACT SUM TO DATE**

2)

(

Line 1 ±

**.............................................................**

$0.00

By:

Date:

**4**

**. TOTAL COMPLETED & STORED TO DATE**

(

Column G on G

703)

**..................**

$0.00

State of:

**. RETAINAGE**

**5**

**:**

County of:

0

% of Completed Work

**a.**

Column D + E on G

(

703)

$0.00

Subscribed and sworn to before

me this day of

0

% of Stored Material

**b.**

703)

(

Column F on G

$0.00

Notary Public:

Total Retainage (Lines 5a + 5b or Total in Column I of G703)

**..................**

$0.00

My Commission expires:

**. TOTAL EARNED LESS RETAINAGE ....................................................................**

**6**

$0.00

**ARCHITECT'S CERTIFICATE FOR PAYMENT**

(

)

Line 4 Less Line 5 Total

**7**

**. LESS PREVIOUS CERTIFICATES FOR PAYMENT .............................................**

$0.00

Line 6 from prior Certificate

(

)

**. CURRENT PAYMENT DUE**

**8**

**..........................................................................**

$0.00

In accordance with the Contract Documents, based on on-site observations and the data

comprising this application, the Architect certifies to the Owner that to the best of the

Architect's knowledge, information and belief the Work has progressed as indicated, the

quality of the Work is in accordance with the Contract Documents, and the Contractor is

entitled to payment of the AMOUNT CERTIFIED.

**. BALANCE TO FINISH, INCLUDING RETAINAGE**

**9**

**AMOUNT CERTIFIED ......................................................................................**

$0.00

Line 3 less Line

6)

(

$0.00

*(*

*Attach explanation if amount certified differs from the amount applied. Initial all figures on this*

*Application and on the Continuation Sheet that are changed to conform with the amount certified.)*

CHANGE ORDER SUMMARY

ADDITIONS

DEDUCTIONS

**ARCHITECT:**

Total changes approved in previous months by Owner

$0.00

$0.00

By:

Date:

Total approved this Month

$0.00

$0.00

TOTALS

$0.00

$0.00

NET CHANGES by Change Order

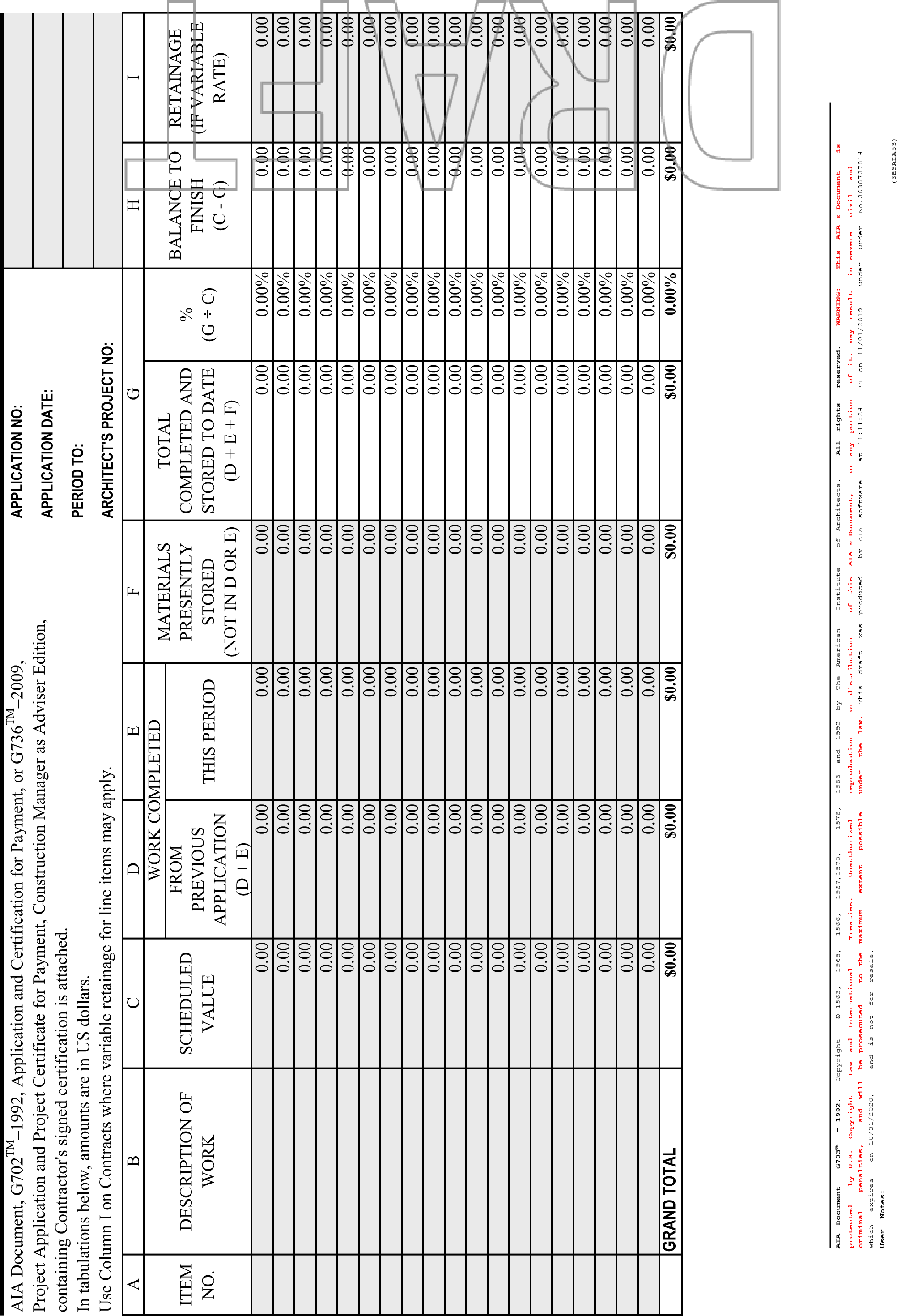
$0.00

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor

named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of

the Owner or Contractor under this Contract.

**1**



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**®**

**Document G703™ – 1992**

***Continuation Sheet***



**2019-20 Norwalk Public Schools Calendar –** Board Approved 06/26/18

**FINAL**



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Jul 2019** |  |  |
| **M** | **T** | **W** | **T** | **F** |
| 1 | 2 | 3 | **4** | 5 |
| 8 | 9 | 10 | 11 | 12 |
| 15 | 16 | 17 | 18 | 19 |
| 22 | 23 | 24 | 25 | 26 |
| 29 | 30 | 31 |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Oct 2019 (22 days)** | | |  |
| **M** | **T W T** | | | **F** |
|  | 1 | 2 | 3 | 4 |
| 7 | 8 | **9** | 10 | 11 |
| 14 | 15 | 16 | 17 | 18 |
| 21 | 22 | 23 | 24 | 25 |
| 28 | 29 | 30 | 31 |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Jan 2020 (21 days)** | | |  |
| **M** | **T W T** | | | **F** |
|  |  | **1** | 2 | 3 |
| 6 | 7 | 8 | 9 | 10 |
| 13 | 14 | 15 | 16 | 17 |
| **20** | 21 | 22 | 23 | 24 |
| 27 | 28 | 29 | 30 | 31 |

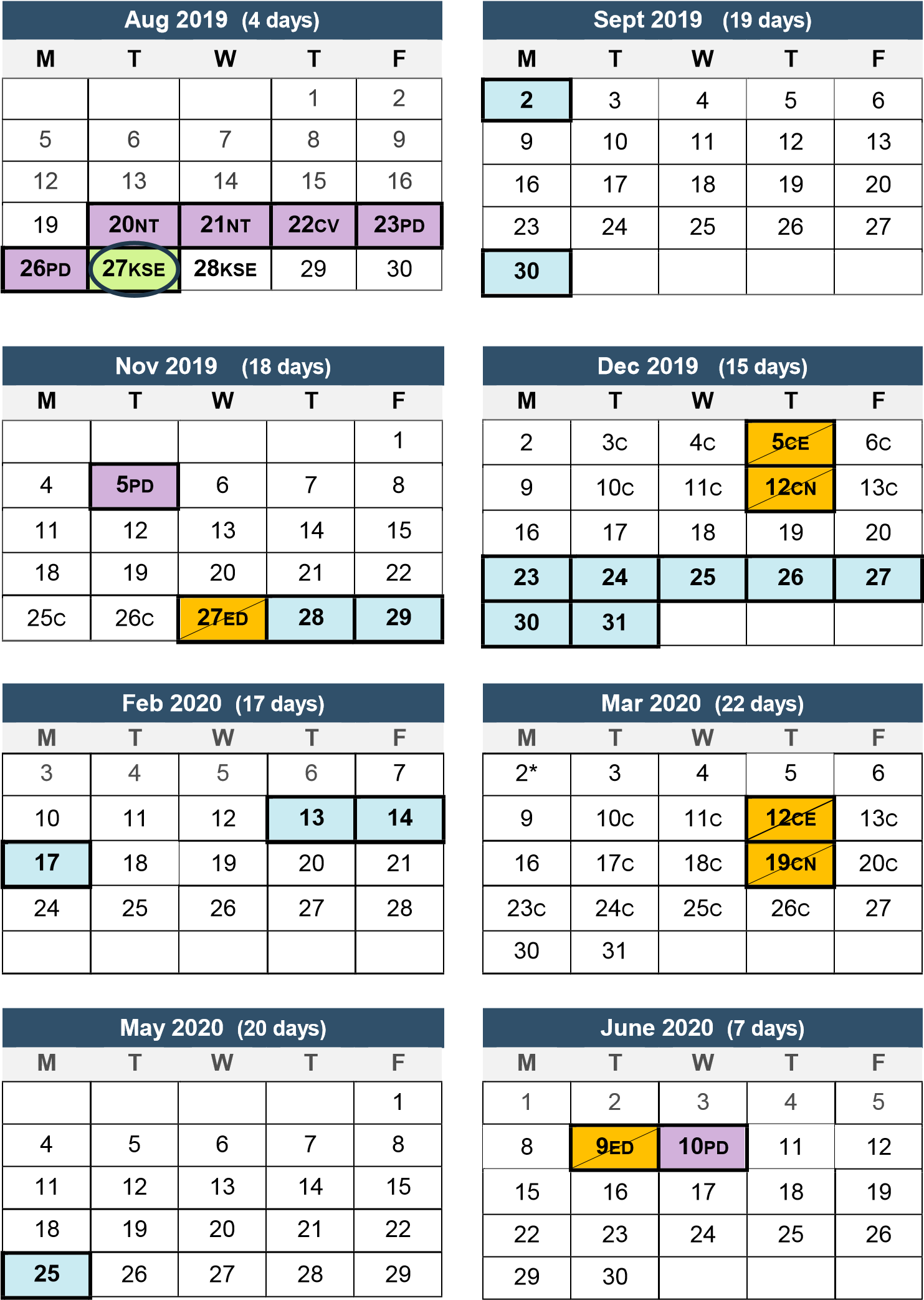
|  |  |  |  |  |
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|  | **April 2020 (17 days)** | | |  |
| **M** | **T W T** | | | **F** |
|  |  | 1 | 2 | 3 |
| **6** | **7** | **8** | **9** | **10** |
| 13 | 14 | 15 | 16 | 17 |
| 20 | 21 | 22 | 23 | 24 |
| 27 | 28 | 29 | 30 |  |

**Key**

First Day of School

Holidays. No School Early Dismissal

PD/Teacher Days. No School **Important Dates**



**S** Summer School **C** K-8 Conferences

**KSE** Kindergarten Staggered Entry **CN** K-8 Conf. Night, 90 Min. Early Dismissal **NT** New Teachers Report **CE** K-8 Conferences 90 Min Early Dismissal

**CV** Convocation/Teachers Report **ED** 2-Hour Early Dismissal

**PD** Professional Development Day **\***Kindergarten Registration opens

|  |  |  |
| --- | --- | --- |
| **June – Aug. (TBD)**: Summer School | **Aug.27 & 28:** Kindergarten Staggered Entry.  One half of Kindergarten classes attend each day. | **Mar. 10-26**: K-8 Conferences |
| **Aug. 20 & 21**: New Teachers Report | **Mar. 12 & 19:** 90 Minute Early Dismissal, K-8 Conferences |
| **Aug. 22:** Convocation/All Teachers Report | **Nov. 27**: 2 Hour Early Dismissal | **Mar. 2**: Kindergarten Registration Opens |
| **Aug. 23, 26 & Nov. 5:** Professional Development | **Nov. 25- Dec. 13**: K-8 Conferences | **June 9**: Tentative Last Day of School, Early Dismissal |
| **Aug. 27**: First Day of School, All Students Gr. 1 - 12 | **Dec. 5 & 12**: 90 Minute Early Dismissal, K-8 Conferences | **June 10**: Professional Development |

**Summary of Holidays**

|  |  |  |  |
| --- | --- | --- | --- |
| **July 4**: Independence Day | **Oct 9:** Yom Kippur | **Dec. 23–Jan. 1:** Winter Recess |  |
| **Sept. 2:** Labor Day | **Nov. 5:** Election Day (PD) | **Jan. 20**: Dr. Martin Luther King Jr. Day | **April 6-10:** Spring Recess |
| **Sept. 30:** Rosh Hashanah | **Nov. 28-29**: Thanksgiving Recess | **Feb. 13, 14 & 17**: Presidents Day Recess | **May 25:** Memorial Day |

**Total Days** **Inclement weather days are added to**

Kindergarten: 181 days, Grades 1-12: 182 days **the end of the school year.**

**Norwalk Public Schools 2020-21 Calendar BOE APPROVED 8/20/19**

**1**

**-**

**3**

**-**

**20**



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Jul 2020** |  |  |
| **M** | **T** | **W** | **T** | **F** |
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| 20 | 21 | 22 | 23 | 24 |
| 27 | 28 | 29 | 30 | 31 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Oct 2020 (21 days)** | | |  |
| **M** | **T W T** | | | **F** |
|  |  |  | 1 | 2 |
| 5 | 6 | **7** | 8 | 9 |
| **12PD** | 13 | 14 | 15 | 16 |
| 19 | 20 | 21 | 22 | 23 |
| 26 | 27 | 28 | 29 | 30 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Jan 2021 (19 days)** | | |  |
| **M** | **T W T** | | | **F** |
|  |  |  |  | **1** |
| 4 | 5 | 6 | 7 | 8 |
| 11 | 12 | 13 | 14 | 15 |
| **18** | 19 | 20 | 21 | 22 |
| 25 | 26 | 27 | 28 | 29 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **April 2021 (21 days)** | | |  |
| **M** | **T W T** | | | **F** |
|  |  |  | 1 | **2** |
| 5 | 6 | 7 | 8 | 9 |
| 12 | 13 | 14 | 15 | 16 |
| 19 | 20 | 21 | 22 | 23 |
| 26 | 27 | 28 | 29 | 30 |

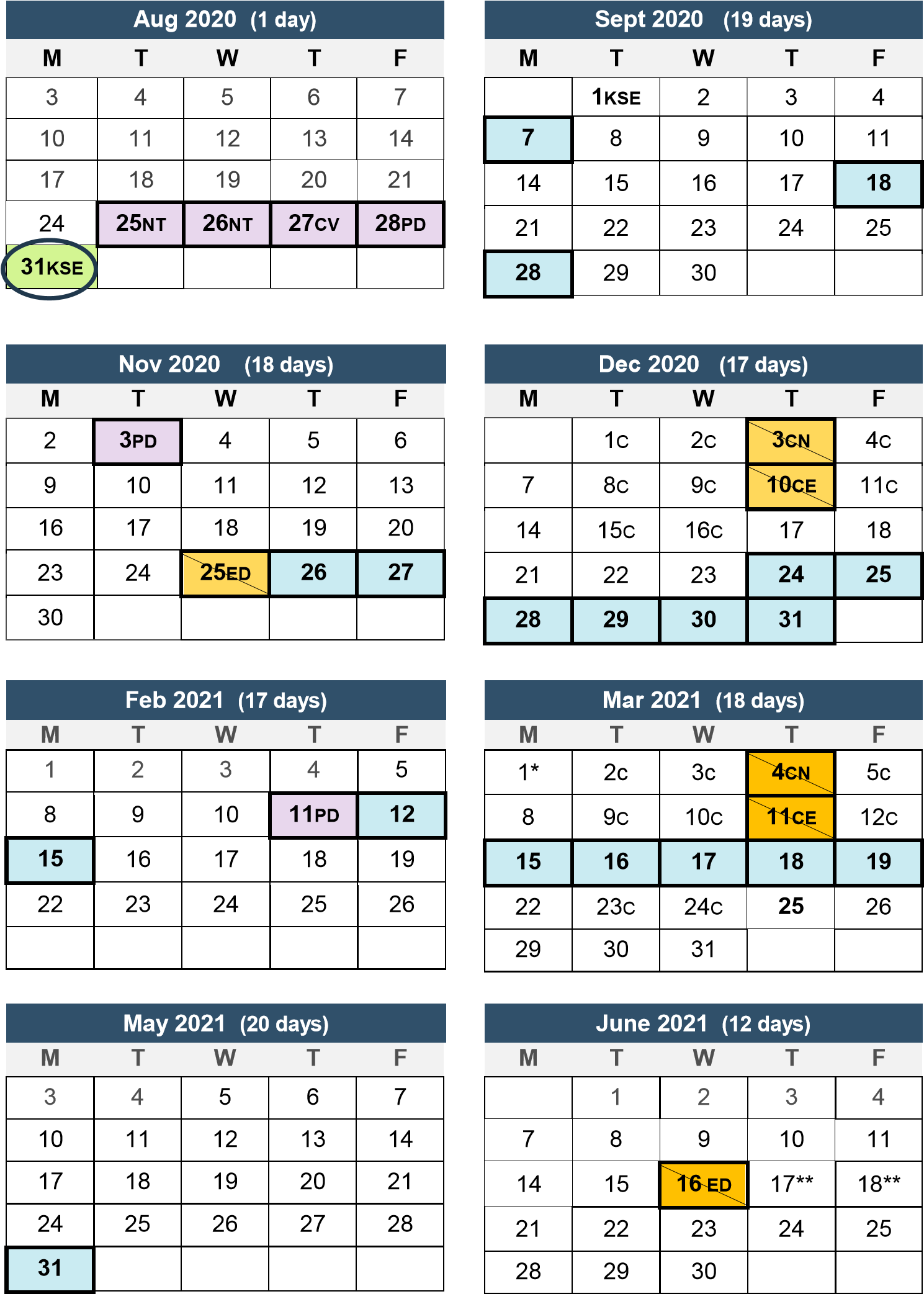
**Key**

First Day of School

Holidays. No School

Early Dismissal

PD/Teacher Days. No School **Important Dates**



**S** Summer School **C** K-8 Conferences

**KSE** Kindergarten Staggered Entry **CN** K-8 Conf. Night, 90 Min. Early Dismissal

**NT** New Teachers Report **CE** K-8 Conferences, 90 Min. Early Dismissal

**CV** Convocation/Teachers Report **ED** 2-Hour Early Dismissal

**PD** Professional Development Day **\***Kindergarten Registration Opens

|  |  |  |
| --- | --- | --- |
| **Aug. 25 & 26**: New Teachers Report | **Aug.31 & Sept. 1:** Kindergarten Staggered Entry.  One half of Kindergarten classes attend each day. | **Dec. 3 & 10**: K-8 Conferences, 90 Minute Early Dismissal |
| **Aug. 27:** Convocation/All Teachers Report | **Feb. 11**: Professional Development |
| **Aug. 28:** Professional Development | **Oct. 12**: Professional Development | **Mar. 4 & 11:** K-8 Conferences, 90 Minute Early Dismissal |
| **Aug. 31**: First Day of School, All Students Gr. 1 - 12 | **Nov. 3:** Professional Development | **June 16**: Tentative Last Day of School, 2 Hour Early Dismissal |
|  | **Nov. 25**: 2 Hour Early Dismissal |  |

## Summary of Holidays

|  |  |  |  |
| --- | --- | --- | --- |
| **Sept. 7:** Labor Day | **Oct. 12**: Columbus Day (PD) | **Dec. 24–Jan. 1:** Winter Recess | **Mar. 15-19:** Spring Recess |
| **Sept. 18:** Rosh Hashanah | **Nov. 3:** Election Day (PD) | **Jan. 18**: Dr. Martin Luther King Jr. Day | **Apr. 2:** Good Friday |
| **Sept. 28:** Yom Kippur | **Nov. 26-27**: Thanksgiving Recess | **Feb. 11 (PD) 12 & 15**: Presidents’ Day Recess | **May 31:** Memorial Day |

**Total Days** **\*\* Inclement weather days are added to**

Kindergarten: 182 days, Grades 1-12: 183 days **the end of the school year.**

DRAWING LIST

COURTYARD IMPROVEMENTS

**ROWAYTON ELEMENTARY SCHOOL**

**1 ROTON AVENUE**

**NORWALK, CT 06853**

S/P+A PROJECT NO. 19.298

## Drawing Number Drawing Name

COVER SHEET

*ARCHITECTURAL DRAWINGS*

A100 PARTIAL BUILDING PLANS

A101 ELEVATIONS, SECTIONS & DETAILS

END OF SECTION

Drawing List-1

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

1. Section includes administrative and procedural requirements for substitutions.
2. Related Sections:
   * 1. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
     2. 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 and proposed by Contractor.

* 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 in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 SUBMITTALS

A. Substitution Requests: Submit three (3) 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 1.5C, 13.1A** or comparable form.
  2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
     1. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
     2. 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.
     3. Detailed, SIDE-BY-SIDE 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.

* + 1. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    2. Samples, where applicable or requested.
    3. Certificates and qualification data, where applicable or requested.
    4. List of similar installations for completed projects with project names and addresses and names and addresses of Architects and Owners.
    5. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    6. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
    7. 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.
    8. Cost information, including a proposal of change, if any, in the Contract Sum.
    9. 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.
    10. 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 will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.

* + 1. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
    2. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage 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.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

1. Procurement Substitution Request: Submit to Architect seven (7) days prior to date of bid opening.
2. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than fifteen (15) days prior to time required for preparation and review of related submittals.
   1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
      1. Requested substitution is consistent with the Contract Documents and will produce indicated results.
      2. Substitution request is fully documented and properly submitted.
      3. Requested substitution will not adversely affect Contractor's construction schedule.
      4. Requested substitution has received necessary approvals of authorities having jurisdiction.
      5. Requested substitution is compatible with other portions of the Work.
      6. Requested substitution has been coordinated with other portions of the Work.
      7. Requested substitution provides specified warranty.
      8. If requested substitution involves more than one (1) 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.
3. Substitutions for Convenience: Architect will consider requests for substitution if received within sixty (60) days after the Notice to Proceed. 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:
      1. 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.
      2. Requested substitution does not require extensive revisions to the Contract Documents.
      3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
      4. Substitution request is fully documented and properly submitted.
      5. Requested substitution will not adversely affect Contractor's construction schedule.
      6. Requested substitution has received necessary approvals of authorities having jurisdiction.
      7. Requested substitution is compatible with other portions of the Work.
      8. Requested substitution has been coordinated with other portions of the Work.
      9. Requested substitution provides specified warranty.
      10. If requested substitution involves more than one (1) 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 3 - EXECUTION (Not Used)

END OF SECTION 012500

CONTRACT MODIFICATION PROCEDURES

# 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 Sections:

1. Section 016000 "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

A. Architect 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."

1.4 PROPOSAL REQUESTS

1. Owner-Initiated Proposal Requests: Architect 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. Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
     2. Within time specified in Proposal Request or twenty (20) 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.
        1. 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.
        2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
        3. Include costs of labor and supervision directly attributable to the change.
        4. 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.
        5. Quotation Form: Use forms acceptable to Architect.

012600-1

CONTRACT MODIFICATION PROCEDURES

1. 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 the Architect.
   * 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 form acceptable to Architect.

1.5 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.

1.6 CONSTRUCTION CHANGE DIRECTIVE

1. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
   1. 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.
2. 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

012600-2

# 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. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment. B. Related Sections:

* 1. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  2. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.
  3. Section 013300 "Submittal Procedures" for administrative requirements governing the preparation and submittal of the submittal schedule.

1.3 SCHEDULE OF VALUES

1. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Correlate line items in the schedule of values with other required administrative forms and schedules, including the following:

* + - 1. Application for Payment forms with continuation sheets.
      2. Submittal schedule.
      3. Items required to be indicated as separate activities in Contractor's construction schedule.

2. Submit the schedule of values to Architect at earliest possible date but no later than seven

(7) days before the date scheduled for submittal of initial Applications for Payment.

1. 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 (1) line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:

* + - 1. Project name and location.
      2. Name of Architect.
      3. Architect's project number.
      4. Contractor's name and address.
      5. Date of submittal.
    1. Arrange schedule of values consistent with format of AIA Document G703.
    2. 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. Provide multiple line items for principal subcontract amounts in excess of five percent (5%) of Contract Sum.
    3. Round amounts to nearest whole dollar; total shall equal the 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. If required, include evidence of insurance.

* + 1. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
    2. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each 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. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.4 APPLICATIONS FOR PAYMENT

1. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

1. 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.
2. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
3. 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.
   5. Include updated and approved Contractor’s construction schedule, potential Change Order Log and Product Submittal Log.
4. 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:
      * 1. Materials previously stored and included in previous Applications for Payment.
        2. Work completed for this Application utilizing previously stored materials.
        3. Additional materials stored with this Application.
        4. Total materials remaining stored, including materials with this Application.
5. Transmittal: Submit three (3) signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One (1) 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.
6. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from 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 covered by the application who is lawfully entitled to a lien.
   5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
7. 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. Products list (preliminary if not final).
     5. Schedule of unit prices.
     6. Submittal schedule (preliminary if not final).
     7. List of Contractor's staff assignments.
     8. List of Contractor's principal consultants.
     9. Copies of building permits.
     10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
     11. Initial progress report.
     12. Report of preconstruction conference.
     13. Certificates of insurance and insurance policies.
     14. Performance and payment bonds.
     15. Data needed to acquire Owner's insurance.
8. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing one hundred percent (100%) 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.
     2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
9. Final Payment Application: 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."
     5. AIA Document G706A, "Contractor's Affidavit of Release of Liens." 6. AIA Document G707, "Consent of Surety to Final Payment."
     6. Evidence that claims have been settled.
     7. 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.
     8. 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

1. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   * 1. General project coordination procedures.
     2. Administrative and supervisory personnel.
     3. Requests for Information (RFIs).
     4. Project meetings.
2. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor. C. Related Sections:
   * 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, or Contractor seeking information from each other during construction.

1.4 COORDINATION

1. 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 (1) 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.
2. 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.

1. 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. Pre-installation conferences.
     7. Project closeout activities.
2. Conservation: Coordinate construction activities to ensure that operations are carried out 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. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.5 KEY PERSONNEL

A. Key Personnel Names: Within fifteen (15) days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and email addresses. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.6 REQUESTS FOR INFORMATION (RFIs)

1. 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 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.
2. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
   1. Project name.
   2. Project number.
   3. Date.
   4. Name of Contractor.
   5. Name of Architect.
   6. RFI number, numbered sequentially.
   7. RFI subject.
   8. Specification Section number and title and related paragraphs, as appropriate.
   9. Drawing number and detail references, as appropriate.
   10. Field dimensions and conditions, as appropriate.
   11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
   12. Contractor's signature.
   13. 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 or comparable form.

1. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow five (5) 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:

* + - * 1. Requests for approval of submittals.
        2. Requests for approval of substitutions.
        3. Requests for coordination information already indicated in the Contract Documents.
        4. Requests for adjustments in the Contract Time or the Contract Sum.
        5. Requests for interpretation of Architect's actions on submittals.
        6. Incomplete RFIs or inaccurately prepared RFIs.
    1. 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.
    2. 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 in writing within seven (7) days of receipt of the RFI response.

1. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within five (5) days if Contractor disagrees with response.
2. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number.

Submit log weekly. Include the following:

* + - 1. Project name.
      2. Name and address of Contractor.
      3. Name and address of Architect.
      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.

1.7 PROJECT MEETINGS

1. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
   * 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
     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 (3) days of the meeting.
2. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than fifteen (15) days after execution of the Agreement.
   * 1. Conduct the conference to review responsibilities and personnel assignments.
     2. Attendees: Authorized representatives of Owner, Construction Administrator, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
     3. Agenda: Discuss items of significance that could affect progress, including the following:
     4. Tentative construction schedule.
     5. Phasing.
     6. Critical work sequencing and long-lead items.
     7. Designation of key personnel and their duties.
     8. Lines of communications.
     9. Procedures for processing field decisions and Change Orders.
     10. Procedures for RFIs.
     11. Procedures for testing and inspecting.
     12. Procedures for processing Applications for Payment.
     13. Distribution of the Contract Documents.
     14. Submittal procedures.
     15. Preparation of record documents.
     16. Work restrictions.
     17. Working hours.
     18. Owner's occupancy requirements.
     19. Responsibility for temporary facilities and controls.
     20. Procedures for moisture and mold control.
     21. Procedures for disruptions and shutdowns.
     22. Parking availability.
     23. Office, work, and storage areas.
     24. Equipment deliveries and priorities.
     25. First aid.
     26. Security.
     27. Progress cleaning.
   1. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
3. Project Closeout Conference: Schedule and conduct a Project closeout conference, at a time convenient to Owner and Architect, but no later than thirty (30) 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, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
   3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
      1. Preparation of record documents.
      2. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
      3. Submittal of written warranties.
      4. Requirements for preparing operations and maintenance data.
      5. Preparation of Contractor's punch list.
      6. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
      7. Submittal procedures.
      8. Installation of Owner's equipment.
      9. Responsibility for removing temporary facilities and controls.
   4. Minutes: Entity conducting meeting will record and distribute meeting minutes. D. Progress Meetings: Conduct progress meetings at biweekly intervals.
   5. Coordinate dates of meetings with preparation of payment requests.
   6. Attendees: In addition to representatives of Owner and Architect, each Contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
   7. 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. Progress cleaning.
        10. Quality and work standards.
        11. Status of correction of deficient items.
        12. Field observations.
        13. Status of RFIs.
        14. Status of proposal requests.
        15. Pending changes.
        16. Status of Change Orders.
        17. Pending claims and disputes.
        18. 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.

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. Contractor's construction schedule.
  2. Daily construction reports.
  3. Material location reports.
  4. Field condition reports.
  5. Special reports. B. Related Sections:
  6. Section 013300 "Submittal Procedures" for submitting schedules and reports.
  7. Section 014000 "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

1. 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.
2. 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.
3. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float. D. Event: The starting or ending point of an activity.
4. 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.
5. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

1. Format for Submittals: Submit required submittals in the following format:

1. PDF electronic file.

1. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.

1. Daily Construction Reports: Submit at weekly intervals.
2. Material Location Reports: Submit at weekly intervals.
3. Field Condition Reports: Submit at time of discovery of differing conditions.
4. Special Reports: Submit at time of unusual event.

1.5 QUALITY ASSURANCE

A. Prescheduling Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to the Contractor's construction schedule, including, but not limited to, the following:

* 1. Review software limitations and content and format for reports.
  2. Discuss constraints, including phasing, work stages and area separations.
  3. Review delivery dates for Owner-furnished products.
  4. Review schedule for work of Owner's separate contracts.
  5. Review time required for review of submittals and resubmittals.
  6. Review requirements for tests and inspections by independent testing and inspecting agencies.
  7. Review time required for completion and startup procedures.
  8. Review and finalize list of construction activities to be included in schedule.
  9. Review submittal requirements and procedures.
  10. Review procedures for updating schedule.

1.6 COORDINATION

1. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
2. 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.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

1. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial 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.

1. 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 twenty (20) days, unless specifically allowed by Architect.
       2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than sixty (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. 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.
       5. Punch List and Final Completion: Include not more than thirty (30) days for punch list and final completion.
2. 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 Restrictions: Show the effect of the following items on the schedule:
          1. Coordination with existing construction.
          2. Uninterruptible services.
          3. Use of premises restrictions.
          4. Provisions for future construction.
          5. Seasonal variations.
          6. Environmental control.

3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:

* + - * 1. Subcontract awards.
        2. Submittals.
        3. Purchases.
        4. Fabrication.
        5. Sample testing.
        6. Deliveries.
        7. Installation.
        8. Tests and inspections.
        9. Adjusting.

4. 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:

* + - * 1. Completion of electrical installation.
        2. Substantial Completion.

1. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion**.**
2. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.

1. Refer to Section 012900 "Payment Procedures" for cost reporting and payment procedures.

1. 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 RFIs.
     3. Rejected or unreturned submittals.
     4. Notations on returned submittals.
2. Recovery Schedule: When periodic update indicates the Work is fourteen (14) 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. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
3. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

1. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's construction schedule within seven (7) days of date established for the Notice to Proceed.
2. 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 ten percent (10%) increments within time bar.

2.3 REPORTS

1. 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. Accidents.
     8. Meetings and significant decisions.
     9. Unusual events (refer to special reports).
     10. Stoppages, delays, shortages, and losses.
     11. Meter readings and similar recordings.
     12. Emergency procedures.
     13. Orders and requests of authorities having jurisdiction.
     14. Change Orders received and implemented.
     15. Construction Change Directives received and implemented.
     16. Services connected and disconnected.
     17. Partial completions and occupancies.
     18. Substantial Completions authorized.
2. Material Location Reports: At weekly 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.
3. Field Condition Reports: Immediately on discovery of a difference between field 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.

2.4 SPECIAL REPORTS

1. General: Submit special reports directly to Owner within one (1) day of an occurrence. Distribute copies of report to parties affected by the occurrence.
2. Reporting Unusual Events: 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, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

1. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one (1) 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.
2. Distribution: Distribute copies of approved schedule to Architect, Construction Administrator, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
   * 1. Post copies in Project meeting rooms and temporary field offices.
     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.

END OF SECTION 013200

PHOTOGRAPHIC DOCUMENTATION

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Periodic construction photographs. B. Related Sections:

* 1. Section 013300 "Submittal Procedures" for submitting photographic documentation.
  2. Section 017700 "Closeout Procedures" for submitting photographic documentation as project record documents at Project closeout.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of eight (8) megapixels, and at an image resolution of not less than 1600 by 1200 pixels and 400 dpi.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

1. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

1. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
   * 1. Date and Time: Include date and time in file name for each image.
     2. Field Office Images: Maintain one set of images accessible in the field office at Project site, available at all times for reference. Identify images in the same manner as those submitted to Architect.

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PHOTOGRAPHIC DOCUMENTATION

1. Periodic Construction Photographs: Take eighteen to twenty (18-20) photographs weekly, with timing each month adjusted to coincide with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.
2. Additional Photographs: Architect may request photographs in addition to periodic photographs specified.
   * 1. In emergency situations, take additional photographs within 24 hours of request.
     2. Circumstances that could require additional photographs include, but are not limited to, the following:
        1. Immediate follow-up when on-site events result in construction damage or losses.
        2. Substantial Completion of a major phase or component of the Work. END OF SECTION 013233

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SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals. B. Related Sections:

* 1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
  2. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
  3. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  4. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 DEFINITIONS

1. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as action submittals.
2. Informational Submittals: Written and graphic information and physical samples that do not require Architect'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.
3. 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.
4. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule 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 modifications to submittals noted by the Architect 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. Submit concurrently with Contractor’s construction schedule. Include submittals required during the first sixty (60) days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
  3. Format: Arrange the following information in a tabular format:
     1. Scheduled date for first submittal.
     2. Specification Section number and title.
     3. Submittal Category: Action, informational.
     4. Name of subcontractor.
     5. Description of the Work covered.
     6. Scheduled date for Architect's final release or approval.
     7. Scheduled dates for purchasing.
     8. Scheduled dates for installation.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

1. Architect's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings will **not** be provided by Architect for Contractor's use in preparing submittals unless requested and Architect’s user agreement properly completed.
2. 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 different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

a. Architect reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

1. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
   * 1. Initial Review: Allow five (5) days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
     2. Resubmittal Review: Allow five (5) days for review of each resubmittal.
     3. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow ten (10) days for initial review of each submittal.
2. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.
   * 1. Indicate name of firm or entity that prepared each submittal on label or title block.
     2. Provide a space on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
     3. Include the following information for processing and recording action taken:
        + 1. Project name.
          2. Date.
          3. Name of Architect.
          4. Name of Contractor.
          5. Name of subcontractor.
          6. Name of supplier.
          7. Name of manufacturer.
          8. Submittal number or other unique identifier, including revision identifier.

1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).

* + - * 1. Number and title of appropriate Specification Section.
        2. Drawing number and detail references, as appropriate.
        3. Location(s) where product is to be installed, as appropriate.
        4. Other necessary identification.

1. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
   * 1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
     2. Name file with submittal number or other unique identifier, including revision identifier.

a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

* + 1. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
    2. Include the following information on an inserted cover sheet:
       - 1. Project name.
         2. Date.
         3. Name and address of Architect.
         4. Name of Contractor.
         5. Name of firm or entity that prepared submittal.
         6. Name of subcontractor.
         7. Name of supplier.
         8. Name of manufacturer.
         9. Number and title of appropriate Specification Section.
         10. Drawing number and detail references, as appropriate.
         11. Location(s) where product is to be installed, as appropriate.
         12. Related physical samples submitted directly.
         13. Other necessary identification.

5. Include the following information as keywords in the electronic file metadata:

* + - * 1. Project name.
        2. Number and title of appropriate Specification Section.
        3. Manufacturer name.
        4. Product name.

1. Options: Identify options requiring selection by the Architect.
2. Deviations: Identify deviations from the Contract Documents on submittals.
3. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
4. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architectwill return submittals, without review received from sources other than Contractor.

1. Transmittal Form: Provide locations on form for the following information:

* + - * 1. Project name.
        2. Date.
        3. Destination (To:).
        4. Source (From:).
        5. Names of subcontractor, manufacturer, and supplier.
        6. Category and type of submittal.
        7. Submittal purpose and description.
        8. Specification Section number and title.
        9. Indication of full or partial submittal.
        10. Drawing number and detail references, as appropriate.
        11. Transmittal number**,** numbered consecutively.
        12. Submittal and transmittal distribution record.
        13. Remarks.
        14. Signature of transmitter.

2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architecton previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

1. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
   * + 1. Note date and content of previous submittal.
       2. Note date and content of revision in label or title block and clearly indicate extent of revision.
       3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
2. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
3. Use for Construction: Use only final submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

1. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Submit electronic submittals via email as PDF electronic files.

a. Architect will return annotated file. Annotate and retain one (1) copy of file as an electronic Project record document file.

* + - * 1. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
        2. Certificates and Certifications Submittals: Provide 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 digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.

Provide a notarized statement on original paper copy certificates and certifications where indicated.

4. Test and Inspection Reports Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."

1. 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 not suitable 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:

Manufacturer's catalog cuts.

Manufacturer's product specifications.

Standard color charts.

Statement of compliance with specified referenced standards.

Testing by recognized testing agency.

Application of testing agency labels and seals.

Notation of coordination requirements.

Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

Wiring diagrams showing factory-installed wiring.

Printed performance curves.

Operational range diagrams.

Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before or concurrent with Samples.

1. 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.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

Identification of products.

Schedules.

Compliance with specified standards.

Notation of coordination requirements.

Notation of dimensions established by field measurement.

Relationship and attachment to adjoining construction clearly indicated.

Seal and signature of professional engineer if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8½ by 11 inches but no larger than 30 by 42 inches.

1. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
   * + 1. Transmit Samples that contain multiple, related components such as accessories together in one (1) submittal package.
       2. Identification: Attach label on unexposed side of Samples that includes the following:

Generic description of Sample.

Product name and name of manufacturer.

Sample source.

Number and title of applicable Specification Section.

3. Disposition: Maintain sets of approved Samples at Project site, available for qualitycontrol comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

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.

Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

1. 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.
       2. Manufacturer and product name, and model number if applicable.
       3. Number and name of room or space.
       4. Location within room or space.
2. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
3. Application for Payment: Comply with requirements specified in Section 012900 "Payment Procedures."
4. Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."
5. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design**.** Include the following information in tabular form:
   * + 1. Name, address, 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.
6. 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.
7. 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 American Welding Society (AWS) forms. Include names of firms and personnel certified.
8. 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.
9. 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.
10. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
11. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
12. 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.
13. Product Test Reports: Submit written reports indicating 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.
14. 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:
    * + 1. Name of evaluation organization.
        2. Date of evaluation.
        3. Time period when report is in effect.
        4. Product and manufacturers' names.
        5. Description of product.
        6. Test procedures and results.
        7. Limitations of use.
15. Schedule of Tests and Inspections: Comply with requirements specified in Section 014000 "Quality Requirements."
16. 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.
17. 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.
18. Field Test Reports: Submit 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.
19. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

* + 1. Action 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.
    2. Project Closeout and Maintenance/Material Submittals: Refer to requirements in Section 017700 "Closeout Procedures."
    3. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, 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.

3.2 ARCHITECT'S ACTION

* + 1. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
    2. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
    3. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
    4. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
    5. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
    6. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

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

* + 1. Section includes administrative and procedural requirements for quality assurance and quality control.
    2. Testing and inspecting 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 -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 qualityassurance 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, or authorities having jurisdiction are not limited by provisions of this Section. C. Related Sections:

1. Divisions 02 through 49 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

* + 1. 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.
    2. 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 enforcement activities performed by Architect.
    3. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
    4. 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.
    5. Source Quality-Control Tests: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.
    6. Field Quality-Control Tests: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
    7. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
    8. 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, and similar operations.

1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.

I. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five (5) 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.

1.4 CONFLICTING REQUIREMENTS

* + 1. Conflicting Standards and Other Requirements: If compliance with two (2) or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for direction before proceeding.
    2. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

* + 1. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
    2. Qualification Data: For Contractor's quality-control personnel.
    3. 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. Main wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
    4. 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.
    5. 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.
    6. Reports: Prepare and submit certified written reports and documents as specified.
    7. 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.

1.6 CONTRACTOR'S QUALITY-CONTROL PLAN

* + 1. Quality-Control Plan, General: Submit quality-control plan within ten (10) days of Notice to Proceed, and not less than five (5) 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. Coordinate with Contractor's construction schedule.
    2. 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.
    3. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
    4. Testing and Inspection: Include in quality-control plan 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 qualitycontrol 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.
    5. 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 work into compliance with standards of workmanship established by Contract requirements.
    6. 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.

1.7 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.

1.8 QUALITY ASSURANCE

* + 1. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
    2. 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.
    3. 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.
    4. 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.
    5. 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 are similar in material, design, and extent to those indicated for this Project.
    6. 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 for the activities indicated.

1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

* + 1. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
    2. 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.

* + 1. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.9 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 inspecting they are engaged to perform.
        2. 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.
        3. Costs for testing that is cancelled will be charged to the 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 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 these quality-control services.

a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

* + - * 1. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
        2. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
        3. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
        4. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
    1. 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."
    2. 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.
    3. 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.
    4. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
       1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
       2. Determine the 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 any duties of Contractor.

1. Associated Contractor 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 inspecting equipment at Project site.
2. 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 inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar qualitycontrol services required by the Contract Documents 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.

1.10 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, 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 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, Contractor and to authorities having jurisdiction.
        4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
        5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
        6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. 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's reference during normal working hours.

1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, 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."

* + 1. Protect construction exposed by or for quality-control service activities.
    2. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

* + 1. General: Basic Contract definitions are included in the Conditions of the Contract.
    2. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
    3. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
    4. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
    5. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
    6. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
    7. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
    8. "Provide": Furnish and install, complete and ready for the intended use.
    9. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

* + 1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
    2. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
    3. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA Aluminum Association, Inc. (The) (703) 358-2960

www.aluminum.org

AABC Associated Air Balance Council (202) 737-0202

www.aabchq.com

AAMA American Architectural Manufacturers Association (847) 303-5664

www.aamanet.org

AASHTO American Association of State Highway and (202) 624-5800

Transportation Officials

www.transportation.org

ACI American Concrete Institute (248) 848-3700

www.concrete.org

AGA American Gas Association (202) 824-7000

www.aga.org

AHA American Hardboard Association

(Now part of CPA)

AI Asphalt Institute (859) 288-4960 www.asphaltinstitute.org

AIA American Institute of Architects (The) (800) 242-3837 www.aia.org (202) 626-7300

AISC American Institute of Steel Construction (800) 644-2400 www.aisc.org (312) 670-2400

AISI American Iron and Steel Institute (202) 452-7100

www.steel.org

ALSC American Lumber Standard Committee, Incorporated (301) 972-1700 www.alsc.org

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| AMCA | Air Movement and Control Association International, Inc. | (847) 394-0150 |
|  | www.amca.org |  |
|  |  |  |
| ANSI | American National Standards Institute | (202) 293-8020 |
|  | www.ansi.org |  |
|  |  |  |
| APA | APA - The Engineered Wood Association | (253) 565-6600 |
|  | www.apawood.org |  |
|  |  |  |
| ARI | Air-Conditioning & Refrigeration Institute | (703) 524-8800 |
|  | www.ari.org |  |
|  |  |  |
| ARMA | Asphalt Roofing Manufacturers Association | (202) 207-0917 |
|  | www.asphaltroofing.org |  |
|  |  |  |
| ASCE | American Society of Civil Engineers | (800) 548-2723 |
|  | www.asce.org | (703) 295-6300 |
|  |  |  |
| ASCE/SEI | American Society of Civil Engineers/Structural Engineering Institute |  |
|  | (See ASCE) |  |
|  |  |  |
| ASHRAE | American Society of Heating, Refrigerating and AirConditioning Engineers | (800) 527-4723 |
|  | www.ashrae.org | (404) 636-8400 |
|  |  |  |
| ASME | ASME International | (800) 843-2763 |
|  | (American Society of Mechanical Engineers International) | (973) 882-1170 |
|  | www.asme.org |  |
|  |  |  |
| ASSE | American Society of Sanitary Engineering | (440) 835-3040 |
|  | www.asse-plumbing.org |  |
|  |  |  |
| ASTM | ASTM International | (610) 832-9500 |
|  | (American Society for Testing and Materials International) |  |
|  | www.astm.org |  |
|  |  |  |
| AWI | Architectural Woodwork Institute | (571) 323-3636 |
|  | www.awinet.org |  |
| AWPA | American Wood Protection Association | (205) 733-4077 |
|  | (Formerly: American Wood Preservers' Association) |  |
|  | www.awpa.com |  |
|  |  |  |
| AWS | American Welding Society | (800) 443-9353 |
|  | www.aws.org | (305) 443-9353 |
|  |  |  |
| AWWA | American Water Works Association | (800) 926-7337 |
|  | www.awwa.org | (303) 794-7711 |
|  |  |  |
| BHMA | Builders Hardware Manufacturers Association www.buildershardware.com | (212) 297-2122 |

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| BICSI | BICSI, Inc. | (800) 242-7405 |
|  | www.bicsi.org | (813) 979-1991 |
|  |  |  |
| CDA | Copper Development Association | (800) 232-3282 |
|  | www.copper.org | (212) 251-7200 |
|  |  |  |
| CGA | Compressed Gas Association | (703) 788-2700 |
|  | www.cganet.com |  |
|  |  |  |
| CISCA | Ceilings & Interior Systems Construction Association | (630) 584-1919 |
|  | www.cisca.org |  |
|  |  |  |
| CISPI | Cast Iron Soil Pipe Institute | (423) 892-0137 |
|  | www.cispi.org |  |
|  |  |  |
| CPPA | Corrugated Polyethylene Pipe Association | (800) 510-2772 |
|  | www.cppa-info.org | (202) 462-9607 |
|  |  |  |
| CRI | Carpet and Rug Institute (The) | (800) 882-8846 |
|  | www.carpet-rug.com | (706) 278-3176 |
|  |  |  |
| CRSI | Concrete Reinforcing Steel Institute | (847) 517-1200 |
|  | www.crsi.org |  |
|  |  |  |
| CSA | CSA International | (866) 797-4272 |
|  | (Formerly: IAS - International Approval Services) | (416) 747-4000 |
|  | www.csa-international.org |  |
|  |  |  |
| CSI | Construction Specifications Institute (The) | (800) 689-2900 |
|  | www.csinet.org | (703) 684-0300 |
|  |  |  |
| DHI | Door and Hardware Institute | (703) 222-2010 |
|  | www.dhi.org |  |
|  |  |  |
| EIA | Electronic Industries Alliance | (703) 907-7500 |
|  | www.eia.org |  |
|  |  |  |
| EJMA | Expansion Joint Manufacturers Association, Inc. | (914) 332-0040 |
|  | www.ejma.org |  |
|  |  |  |
| ESD | ESD Association | (315) 339-6937 |
|  | (Electrostatic Discharge Association) |  |
|  | www.esda.org |  |
|  |  |  |
| FM Approvals FM Approvals LLC | | (781) 762-4300 |
| www.fmglobal.com | |  |
|  | |  |
| FM Global FM Global | | (401) 275-3000 |
| (Formerly: FMG - FM Global) | |  |
| www.fmglobal.com | |  |
| FSA | Fluid Sealing Association | (610) 971-4850 | |
|  | www.fluidsealing.com |  | |
|  |  |  | |
| FSC | Forest Stewardship Council | 49 228 367 66 0 | |
|  | www.fsc.org |  | |
|  |  |  | |
| GA | Gypsum Association | (202) 289-5440 | |
|  | www.gypsum.org |  | |
|  |  |  | |
| GANA | Glass Association of North America | (785) 271-0208 | |
|  | www.glasswebsite.com |  | |
|  |  |  | |
| HI | Hydraulic Institute | (973) 267-9700 | |
|  | www.pumps.org |  | |
|  |  |  | |
| HMMA | Hollow Metal Manufacturers Association |  | |
|  | (Part of NAAMM) |  | |
|  |  |  | |
| HPVA | Hardwood Plywood & Veneer Association | (703) 435-2900 | |
|  | www.hpva.org |  | |
|  |  |  | |
| ICEA | Insulated Cable Engineers Association, Inc. | (770) 830-0369 | |
|  | www.icea.net |  | |
|  |  |  | |
| IEC | International Electrotechnical Commission | 41 22 919 02 11 | |
|  | www.iec.ch |  | |
|  |  |  | |
| IEEE | Institute of Electrical and Electronics Engineers, Inc. (The) | (212) 419-7900 | |
|  | www.ieee.org |  | |
|  |  |  | |
| IESNA | Illuminating Engineering Society of North America | (212) 248-5000 | |
|  | www.iesna.org |  | |
|  |  |  | |
| IGCC | Insulating Glass Certification Council | (315) 646-2234 | |
|  | www.igcc.org |  | |
|  |  |  | |
| IGMA | Insulating Glass Manufacturers Alliance | (613) 233-1510 | |
|  | www.igmaonline.org |  | |
|  |  |  | |
| ISO | International Organization for Standardization | 41 22 749 01 11 | |
|  | www.iso.ch |  | |
|  |  |  | |
|  | Available from ANSI | (202) 293-8020 | |
|  | www.ansi.org |  | |
|  |  |  | |
| MFMA | Metal Framing Manufacturers Association, Inc. | (312) 644-6610 | |
|  | www.metalframingmfg.org |  | |
|  |  |  | |
| MPI | Master Painters Institute | (888) 674-8937 | |
|  | www.paintinfo.com | (604) 298-7578 | |

|  |  |  |  |
| --- | --- | --- | --- |
| MSS | Manufacturers Standardization Society of The Valve and (703) 281-6613 Fittings Industry Inc. | | |
|  | www.mss-hq.com | | |
|  |  | | |
| NAAMM | National Association of Architectural Metal Manufacturers (630) 942-6591 | | |
|  | www.naamm.org |  | |
|  |  |  | |
| NACE | NACE International | (800) 797-6623 | |
|  | (National Association of Corrosion Engineers International) | (281) 228-6200 | |
|  | www.nace.org |  | |
|  |  |  | |
| NADCA | National Air Duct Cleaners Association | (202) 737-2926 | |
|  | www.nadca.com |  | |
|  |  |  | |
| NAIMA | North American Insulation Manufacturers Association | (703) 684-0084 | |
|  | www.naima.org |  | |
|  |  |  | |
| NCMA | National Concrete Masonry Association | (703) 713-1900 | |
|  | www.ncma.org |  | |
|  |  |  | |
| NEBB | National Environmental Balancing Bureau | (301) 977-3698 | |
|  | www.nebb.org |  | |
|  |  |  | |
| NECA | National Electrical Contractors Association | (301) 657-3110 | |
|  | www.necanet.org |  | |
|  |  |  | |
| NeLMA | Northeastern Lumber Manufacturers' Association | (207) 829-6901 | |
|  | www.nelma.org |  | |
|  |  |  | |
| NEMA | National Electrical Manufacturers Association | (703) 841-3200 | |
|  | www.nema.org |  | |
|  |  |  | |
| NETA | InterNational Electrical Testing Association | (888) 300-6382 | |
|  | www.netaworld.org | (269) 488-6382 | |
|  |  |  | |
| NFPA | NFPA | (800) 344-3555 | |
|  | (National Fire Protection Association) | (617) 770-3000 | |
|  | www.nfpa.org |  | |
|  |  |  | |
| NFRC | National Fenestration Rating Council | (301) 589-1776 | |
|  | www.nfrc.org |  | |
|  |  |  | |
| NHLA | National Hardwood Lumber Association | (800) 933-0318 | |
|  | www.natlhardwood.org | (901) 377-1818 | |
|  |  |  | |
| NLGA | National Lumber Grades Authority | (604) 524-2393 | |
|  | www.nlga.org |  | |
|  |  |  | |
| NRCA | National Roofing Contractors Association | (800) 323-9545 | |
|  | www.nrca.net | (847) 299-9070 | |
| NRMCA | National Ready Mixed Concrete Association | | (888) 846-7622 |
|  | www.nrmca.org | | (301) 587-1400 |
|  |  | |  |
| NSF | NSF International | | (800) 673-6275 |
|  | (National Sanitation Foundation International) | | (734) 769-8010 |
|  | www.nsf.org | |  |
|  |  | |  |
| NWWDA | National Wood Window and Door Association | |  |
|  | (Now WDMA) | |  |
|  |  | |  |
| PDI | Plumbing & Drainage Institute | | (800) 589-8956 |
|  | www.pdionline.org | | (978) 557-0720 |
|  |  | |  |
| PGI | PVC Geomembrane Institute | | (217) 333-3929 |
|  | http://pgi-tp.ce.uiuc.edu | |  |
|  |  | |  |
| RCSC | Research Council on Structural Connections | |  |
|  | www.boltcouncil.org | |  |
|  |  | |  |
| RFCI | Resilient Floor Covering Institute | | (301) 340-8580 |
|  | www.rfci.com | |  |
|  |  | |  |
| RIS | Redwood Inspection Service | | (888) 225-7339 |
|  | www.redwoodinspection.com | | (415) 382-0662 |
|  |  | |  |
| SDI | Steel Door Institute | | (440) 899-0010 |
|  | www.steeldoor.org | |  |
|  |  | |  |
| SEI/ASCE | Structural Engineering Institute/American Society of Civil Engineers | |  |
|  | (See ASCE) | |  |
|  |  | |  |
| SIGMA | Sealed Insulating Glass Manufacturers Association | |  |
|  | (Now IGMA) | |  |
|  |  | |  |
| SMA | Screen Manufacturers Association | | (561) 533-0991 |
|  | www.smacentral.org | |  |
|  |  | |  |
| SMACNA | Sheet Metal and Air Conditioning Contractors' | | (703) 803-2980 |
|  | National Association | |  |
|  | www.smacna.org | |  |
|  |  | |  |
| SPIB | Southern Pine Inspection Bureau (The) | | (850) 434-2611 |
|  | www.spib.org | |  |
|  |  | |  |
| SSINA | Specialty Steel Industry of North America | | (800) 982-0355 |
|  | www.ssina.com | | (202) 342-8630 |
|  |  | |  |
| SSPC | SSPC: The Society for Protective Coatings | | (877) 281-7772 |
|  | www.sspc.org | | (412) 281-2331 |

|  |  |  |
| --- | --- | --- |
| STI | Steel Tank Institute | (847) 438-8265 |
|  | www.steeltank.com |  |
|  |  |  |
| TCA | Tile Council of America, Inc. |  |
|  | (Now TCNA) |  |
|  |  |  |
| TIA/EIA | Telecommunications Industry Association/Electronic Industries Alliance | (703) 907-7700 |
|  | www.tiaonline.org |  |
|  |  |  |
| TMS | The Masonry Society | (303) 939-9700 |
|  | www.masonrysociety.org |  |
|  |  |  |
| TPI | Truss Plate Institute, Inc. | (703) 683-1010 |
|  | www.tpinst.org |  |
|  |  |  |
| UL | Underwriters Laboratories Inc. | (877) 854-3577 |
|  | www.ul.com | (847) 272-8800 |
|  |  |  |
| UNI | Uni-Bell PVC Pipe Association | (972) 243-3902 |
|  | www.uni-bell.org |  |
|  |  |  |
| USGBC | U.S. Green Building Council | (800) 795-1747 |
|  | www.usgbc.org |  |
|  |  |  |
| WCLIB | West Coast Lumber Inspection Bureau | (800) 283-1486 |
|  | www.wclib.org | (503) 639-0651 |
|  |  |  |
| WCMA | Window Covering Manufacturers Association | (212) 297-2122 |
|  | www.wcmanet.org |  |
|  |  |  |
| WDMA | Window & Door Manufacturers Association | (800) 223-2301 |
|  | (Formerly: NWWDA - National Wood Window and Door Association) | (847) 299-5200 |
|  | www.wdma.com |  |
|  |  |  |
| WWPA | Western Wood Products Association | (503) 224-3930 |
|  | www.wwpa.org |  |

1. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and upto-date as of the date of the Contract Documents.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| IAPMO | International Association of Plumbing and Mechanical Officials | (909) 472-4100 |
|  | www.iapmo.org |  |
|  |  |  |
| ICC | International Code Council | (888) 422-7233 |
|  | www.iccsafe.org |  |

ICC-ES ICC Evaluation Service, Inc. (800) 423-6587 www.icc-es.org (562) 699-0543

UBC Uniform Building Code

(See ICC)

1. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE Army Corps of Engineers (202) 761-0011

www.usace.army.mil

DOC Department of Commerce (202) 482-2000

www.commerce.gov

DOE Department of Energy (202) 586-9220

www.energy.gov

EPA Environmental Protection Agency (202) 272-0167

www.epa.gov

FDA Food and Drug Administration (888) 463-6332

www.fda.gov

GSA General Services Administration (800) 488-3111

www.gsa.gov

LBL Lawrence Berkeley National Laboratory (510) 486-4000

www.lbl.gov

NIST National Institute of Standards and Technology (301) 975-6478 www.nist.gov

OSHA Occupational Safety & Health Administration (800) 321-6742 www.osha.gov (202) 693-1999

SD State Department (202) 647-4000 www.state.gov

USDA Department of Agriculture (202) 720-2791 www.usda.gov

1. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

|  |  |  |
| --- | --- | --- |
| ADAAG | Americans with Disabilities Act (ADA) | (800) 872-2253 |
|  | Architectural Barriers Act (ABA) | (202) 272-0080 |
|  | Accessibility Guidelines for Buildings and Facilities |  |
|  | Available from U.S. Access Board |  |
|  | www.access-board.gov |  |
|  |  |  |
| CFR | Code of Federal Regulations | (866) 512-1800 |
|  | Available from Government Printing Office | (202) 512-1800 |
|  | www.gpoaccess.gov/cfr/index.html |  |
|  |  |  |
| FED-STD | Federal Standard |  |
|  | (See FS) |  |
|  |  |  |
| FS | Federal Specification | (215) 697-2664 |
|  | Available from Department of Defense Single Stock Point |  |
|  | http://dodssp.daps.dla.mil |  |
|  |  |  |
|  | Available from Defense Standardization Program |  |
|  | www.dps.dla.mil |  |
|  |  |  |
|  | Available from General Services Administration | (202) 619-8925 |
|  | www.gsa.gov |  |
|  |  |  |
|  | Available from National Institute of Building Sciences | (202) 289-7800 |
|  | www.wbdg.org/ccb |  |
|  |  |  |
| FTMS | Federal Test Method Standard |  |
|  | (See FS) |  |
| MIL | (See MILSPEC) |  |
|  |  |  |
| MIL-STD | (See MILSPEC) |  |
|  |  |  |
| MILSPEC | Military Specification and Standards | (215) 697-2664 |
|  | Available from Department of Defense Single Stock Point |  |
|  | http://dodssp.daps.dla.mil |  |
|  |  |  |
| UFAS | Uniform Federal Accessibility Standards | (800) 872-2253 |
|  | Available from Access Board | (202) 272-0080 |
|  | www.access-board.gov |  |

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

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

* + 1. Section includes requirements for temporary support, security and protection facilities.
    2. Related Requirements:

1. Section 011000 "Summary of Work" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

* + 1. General: Installation and removal of 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, Architect, testing agencies, and authorities having jurisdiction.
    2. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
    3. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 INFORMATIONAL SUBMITTALS

* + 1. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
    2. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

1.5 QUALITY ASSURANCE

* + 1. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
    2. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

* + 1. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading., if required. Unit must be large enough for regular job meetings, plan review areas, submittal storage and other job file and administrative functions.
    2. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
       1. Sheds to be metal box storage units or have wood floors raised above the ground.
       2. Store combustible materials apart from building.

2.2 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

* + 1. 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.
    2. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 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.

* + 1. 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.
    2. Sanitary Facilities: 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.
    3. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
    4. Telephone Service: The Contractor shall maintain at his expense a job telephone, not a "Pay Telephone". The job telephone shall be available to the Architect, the Owner's staff, Municipal Officials or Inspectors and all subcontractors. All calls shall be paid for by the Contractor.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

* + - 1. Provide construction for temporary 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. 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. Traffic Controls: Comply with requirements of authorities having jurisdiction.

* + - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
      2. Maintain access for fire-fighting equipment and access to fire hydrants. C. Parking: Provide temporary parking areas for construction personnel.

D. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

* + - 1. Identification Signs: Provide Project identification signs.
      2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

a. Provide temporary, directional signs for construction personnel and visitors.

3. Maintain and touch up signs so they are legible at all times.

1. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."
2. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

1. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
2. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
3. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
4. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

3.5 OPERATION, TERMINATION, AND REMOVAL

1. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
2. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
   * 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
     2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products. B. Related Sections:

* 1. Section 012500 "Substitution Procedures" for requests for substitutions.
  2. Section 014200 "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

1. 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. Products salvaged or recycled from other projects are not considered new products.
     3. Comparable Product: Product that is demonstrated and approved through submittal process 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.
2. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

1. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
   * 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
     2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one (1) week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
        1. Form of Approval: 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.
2. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two (2) or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

* 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
  2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

1. 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.
2. 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:
     5. Store products to allow for inspection and measurement of quantity or counting of units.
     6. Store materials in a manner that will not endanger Project structure.
     7. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
     8. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
     9. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
     10. Protect stored products from damage and liquids from freezing.
     11. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

1. 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 warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
     2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
2. 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 with the Specifications, prepare a written document using indicated form properly executed.
     3. Refer to Divisions 02 through 49. Sections for specific content requirements and particular requirements for submitting special warranties.

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. B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Products:
   * 1. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one (1) of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered, unless otherwise indicated.
     2. Non-Restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one (1) of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
4. Manufacturers:
   * 1. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one (1) of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered, unless otherwise indicated.
     2. Non-Restricted List: Where Specifications include a list of available manufacturers, provide a product by one (1) of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
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 (1) of the other named manufacturers. Drawings and Specifications 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 (1) of the other named manufacturers.
6. Visual Matching Specification: Where Specifications require "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.

1. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or 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: 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 these requirements:

* 1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  2. Detailed, SIDE-BY-SIDE comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
  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.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

* 1. Installation of the Work.
  2. Cutting and patching.
  3. Progress cleaning.
  4. Protection of installed construction.
  5. Correction of the Work. B. Related Sections:
  6. Section 013300 "Submittal Procedures" for submitting surveys.
  7. Section 017700 "Closeout Procedures" for submitting recording of Owner-accepted deviations from indicated lines and levels and final cleaning.

1.3 DEFINITIONS

1. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
2. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 INFORMATIONAL SUBMITTALS

A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.5 QUALITY ASSURANCE

1. 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, notify Architect of locations and details of cutting and await directions from the Architect before proceeding. Shore, brace, and support structural element 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.
     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
     4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
2. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

1. General: Comply with requirements specified in other Sections.
2. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

1. Existing Conditions: The existence and location of utilities and construction indicated as existing are not guaranteed.
2. 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. 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.
      2. List of detrimental conditions, including substrates.
      3. List of unacceptable installation tolerances.
      4. Recommended corrections.
    1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
    2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
    3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
    4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

1. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
2. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
3. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

3.3 INSTALLATION

1. 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 96 inches in occupied spaces and 90 inches in unoccupied spaces.
2. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
3. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
4. 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.
5. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
6. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
7. 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.
   * 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.
8. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
9. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

1. Cutting and Patching, 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.

1. Temporary Support: Provide temporary support of work to be cut.
2. 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.
3. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching.
4. Existing Utility Services: Where existing services are required to be removed, relocated, or abandoned, bypass such systems before cutting to minimize interruption to occupied areas.
5. 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. 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.
     4. Proceed with patching after construction operations requiring cutting are complete.
6. 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. 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 minimize evidence of patching and refinishing.
        1. Clean piping, conduit, and similar features before applying paint or other finishing materials.
        2. Restore damaged pipe covering to its original condition.

3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

1. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.5 PROGRESS CLEANING

1. General: 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 (7) days during normal weather or three (3) days if the temperature is expected to rise above 80 deg F (27 deg C).
   3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

a. Utilize containers intended for holding waste materials of type to be stored.

* 1. Coordinate progress cleaning for joint-use areas where more than one installer has worked.

1. Site: Maintain Project site free of waste materials and debris.
2. 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.
3. 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.
4. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
5. 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."
6. 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.
7. 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.
8. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

1. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
2. Comply with manufacturer's written instructions for temperature and relative humidity.

3.7 CORRECTION OF THE WORK

1. Repair or remove and replace defective construction. Restore damaged substrates and finishes.

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

1. Restore permanent facilities used during construction to their specified condition.
2. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
3. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
4. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

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. B. Related Sections:
  4. Section 017300 "Execution" for progress cleaning of Project site.
  5. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
  6. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  7. Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

1. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete with request.
   * 1. Prepare 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.
     2. Advise Owner of pending insurance changeover requirements.
     3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
     4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
     5. Prepare and submit Project Record Documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, and similar final record information.
     6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
     7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
     8. Advise Owner of changeover in heat and other utilities.
     9. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
     10. Complete final cleaning requirements, including touchup painting.
     11. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
2. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
   * 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
     2. Results of completed inspection will form the basis of requirements for final completion.

1.4 FINAL COMPLETION

1. Preliminary Procedures: 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. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
     3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
     4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
     5. Secure and provide both temporary and final Certificate of Occupancy from the Building Official, meeting all local and state permit closeout requirements.
2. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 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. Use **CSI Form 14.1A** or comparable form.

* 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
  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:
     1. Project name.
     2. Date.
     3. Name of Architect.
     4. Name of Contractor.
     5. Page number.

4. Submit list of incomplete items in the following format:

a. PDF electronic file. Architect will return annotated file.

1.6 WARRANTIES

1. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
2. Partial Occupancy: Submit properly executed warranties within fifteen (15) days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
3. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
   * 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 8½-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.
     4. Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide table of contents at beginning of document.
4. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION (Not Used)

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.
  2. Emergency manuals.
  3. Operation manuals for systems, subsystems, and equipment.
  4. Product maintenance manuals. B. Related Sections:
  5. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
  6. Divisions 02 through 49 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

1. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
2. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

1. Manual Content: Operations and maintenance manual content is specified in individual specification sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Where applicable, clarify and update reviewed manual content to correspond to modifications and field conditions.

1. Format: Submit operations and maintenance manuals in the following format:

1. Three (3) paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return two (2) copies.

1. Initial Manual Submittal: Submit draft copy of each manual at least thirty (30) days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
2. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least fifteen (15) days before commencing demonstration and training. Architect will return copy with comments.

1. Correct or modify each manual to comply with Architect's comments. Submit copies of each corrected manual within fifteen (15) days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

1. Organization: Include a section in the directory for each of the following:
   * 1. List of documents.
     2. List of systems.
     3. List of equipment.
     4. Table of contents.
2. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
3. 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.
4. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
5. 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."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

1. Organization: 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.

1. 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. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
     8. Cross-reference to related systems in other operation and maintenance manuals.
2. 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 (1) volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

1. 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 (1) system into a single binder.
2. 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 8½-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.

* + - * 1. If two (2) 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.
        2. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
    1. 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.
    2. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
    3. Supplementary Text: Prepared on 8½-by-11-inch white bond paper.
    4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
       - 1. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
         2. 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.

2.3 EMERGENCY MANUALS

1. Content: Organize manual into a separate section for each of the following:
   * 1. Type of emergency.
     2. Emergency instructions.
     3. Emergency procedures.
2. 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.
3. 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. D. 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.

2.4 OPERATION MANUALS

A. 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 is 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. B. Descriptions: Include the following:

Product name and model number. Use designations for products indicated on Contract Documents.

1. Manufacturer's name.
2. Equipment identification with serial number of each component.
3. Equipment function.
4. Operating characteristics.
5. Limiting conditions.
6. Performance curves.
7. Engineering data and tests.
8. Complete nomenclature and number of replacement parts. C. Operating Procedures: Include the following, as applicable:
9. Startup procedures.
10. Equipment or system break-in procedures.
11. Routine and normal operating instructions.
12. Regulation and control procedures.
13. Instructions on stopping.
14. Normal shutdown instructions.
15. Seasonal and weekend operating instructions.
16. Required sequences for electric or electronic systems.
17. Special operating instructions and procedures.
18. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
19. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

1. 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.
2. 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.
3. 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.
4. Maintenance Procedures: Include manufacturer's written recommendations and the following:

Inspection procedures.

* + 1. Types of cleaning agents to be used and methods of cleaning.
    2. List of cleaning agents and methods of cleaning detrimental to product.
    3. Schedule for routine cleaning and maintenance.
    4. Repair instructions.

1. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
2. 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 3 - EXECUTION

3.1 MANUAL PREPARATION

1. 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.
2. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
3. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
   * 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.
4. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, 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 (1) 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.

1. 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.

1. 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.

Do not use original project record documents as part of operation and maintenance manuals.

2. Comply with requirements of newly prepared record Drawings in Section 017839 "Project Record Documents."

1. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

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 Sections:
  5. Section 017700 "Closeout Procedures" for general closeout procedures.
  6. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
  7. Divisions 02 through 49 Sections for specific requirements for project record documents of the Work in those Sections.

1.3 CLOSEOUT SUBMITTALS

1. Record Drawings: Comply with the following:

1. Number of Copies: Submit one (1) set(s) of marked-up record prints.

1. Record Specifications: Submit one (1) paper copy of Project's Specifications, including addenda and contract modifications.
2. Record Product Data: Submit one (1) paper copy 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.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

1. Record Prints: Maintain one (1) set of marked-up paper copies of the Contract Drawings and Shop Drawings.

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.

* + - 1. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
      2. Accurately record information in an acceptable drawing technique.
      3. Record data as soon as possible after obtaining it.
      4. Record and check the markup before enclosing concealed installations.
      5. Cross-reference record prints to corresponding archive photographic documentation.

2. Content: Types of items requiring marking include, but are not limited to, the following:

* + - 1. Dimensional changes to Drawings.
      2. Revisions to details shown on Drawings.
      3. Revisions to routing of piping and conduits.
      4. Revisions to electrical circuitry.
      5. Actual equipment locations.
      6. Locations of concealed internal utilities.
      7. Changes made by Change Order or Construction Change Directive.
      8. Changes made following Architect's written orders.
      9. Details not on the original Contract Drawings.
      10. Field records for variable and concealed conditions.
      11. Record information on the Work that is shown only schematically.
    1. Mark the Contract Drawings and Shop Drawings completely and accurately. Utilize personnel proficient at recording graphic information in production of marked-up record prints.
    2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
    3. Mark important additional information that was either shown schematically or omitted from original Drawings.
    4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

1. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
   * 1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
     2. Format: Paper copy.
     3. Identification: As follows:
        1. Project name.
        2. Date.
        3. Designation "PROJECT RECORD DRAWINGS."
        4. Name of Architect.
        5. Name of Contractor.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

* 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
  4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
  5. Note related Change Orders, record Product Data, and record Drawings where applicable. B. Format: Submit record Specifications as paper copy.

2.3 RECORD PRODUCT DATA

1. 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.
2. Format: Submit record Product Data as paper copy.

1. Include record Product Data directory organized by specification section number and title, electronically linked to each item of record Product Data.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

1. Recording: Maintain one (1) copy of each submittal during the construction period for project record document purposes. Post changes and modifications to project record documents as they occur; do not wait until the end of Project.
2. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 017839