

# CALCASIEU PARISH SCHOOL BOARD



HURRICANE LAURA DAMAGES RESTORATION PROGRAM

**BID DOCUMENTS**

**January 2026**

**FOR PROJECT:**

**Westlake High Gymnasium Hurricane Laura  
Repairs Rebid  
HL-064-06**

**PREPARED BY:**



**KING ARCHITECTS, INC**

**1312 SAMPSON STREET, WESTLAKE, LOUISIANA 70669**

**KAI PROJECT NUMBER: 2032B3**

KING ARCHITECTS, INC

SECTION 00 01 07

**PROJECT NAME:** WESTLAKE HIGH GYMNASIUM HURRICANE  
LAURA REPAIRS REBID  
1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

**PROJECT NUMBER:** HL-064-06

**DATE OF DRAWINGS AND SPECIFICATIONS:** NOVEMBER 2025

We hereby certify these plans and specifications were prepared by us or under our direct personal supervision and that we are duly licensed professionals in our specific scope of licensure under the laws of the State of Louisiana.

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**WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID HL-064-06****WESTLAKE, LOUISIANA**

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**CPSB HURRICANE LAURA DAMAGES RESTORATION PROGRAM****CPSB PROJECT NUMBER: HL-064-06**

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**TABLE OF CONTENTS**

| <b>DIVISION 00</b> | <b>BIDDING &amp; CONTRACT REQUIREMENTS</b>                 | <b>PAGES</b>    |
|--------------------|------------------------------------------------------------|-----------------|
| 00 00 01           | PROJECT MANUAL COVER SHEET.....                            | 00 00 01 1-1    |
| 00 01 07           | SEALS PAGE.....                                            | 00 01 07 1-1    |
| 00 01 10           | TABLE OF CONTENTS.....                                     | 00 01 10 1-3    |
| 00 01 15           | LIST OF DRAWINGS.....                                      | 00 01 15- 1-1   |
| 00 11 13           | ADVERTISEMENT FOR BIDS.....                                | 00 11 13 1-2    |
| 00 21 13           | INSTRUCTIONS TO BIDDERS.....                               | 00 21 13 1-13   |
| 00 21 19           | REQUIRED DOCUMENTS.....                                    | 00 21 19 1-1    |
| 00 24 13           | SCOPE OF WORK.....                                         | 00 24 13 1-1    |
| 00 25 13           | PRE-BID MEETING.....                                       | 00 25 13 1-2    |
| 00 41 13           | LOUISIANA PUBLIC WORK BID FORM.....                        | 00 41 13 1-1    |
| 00 41 43           | LOUISIANA PUBLIC WORK BID FORM - UNIT PRICE FORM.....      | 00 41 43 1-1    |
| 00 43 13           | BID BOND.....                                              | 00 43 13 1-1    |
| 00 43 25           | SUBSTITUTION REQUEST FORM (DURING PROCUREMENT).....        | 00 43 25 1-4    |
| 00 43 36           | SUBCONTRACTORS APPROVAL LISTING.....                       | 00 43 36 1-1    |
| 00 45 19           | NON-COLLUSION AFFIDAVIT OF PRIME BIDDER.....               | 00 45 19 1-1    |
| 00 45 19.13        | CPSB NON-COLLUSION AFFIDAVIT.....                          | 00 45 19.13 1-1 |
| 00 45 19.16        | ATTESTATION OF PAST CRIMINAL CONVICTIONS FORM.....         | 00 45 19.16 1-1 |
| 00 45 19.19        | VERIFICATION OF EMPLOYEES AFFIDAVIT FORM.....              | 00 45 19.19 1-1 |
| 00 45 26           | CERTIFICATION REGARDING UNPAID WORKERS COMP INSURANCE..... | 00 45 26 1-1    |
| 00 45 43           | RESOLUTION FORM.....                                       | 00 45 43 1-1    |
| 00 45 63           | ROOFING MANUFACTURER GUARANTEE.....                        | 00 45 63 1-2    |
| 00 51 00           | NOTICE OF AWARD FORM.....                                  | 00 51 00 1-1    |
| 00 52 00           | CONTRACT BETWEEN OWNER & CONTRACTOR WITH P & P BOND.....   | 00 52 00 1-3    |
| 00 54 43           | EXHIBIT A - FEDERAL CONTRACT CLAUSES.....                  | 00 54 43 1-8    |
| 00 55 00           | NOTICE TO PROCEED FORM.....                                | 00 55 00 1-1    |
| 00 62 11           | SUBMITTAL TRANSMITTAL FORM.....                            | 00 62 11 1-1    |
| 00 62 76           | APPLICATION FOR PAYMENT DOCUMENTS.....                     | 00 62 76 1-1    |
| 00 62 76.13        | SALES TAX EXEMPTION CERTIFICATE (LDR FORM R-1020).....     | 00 62 76.13 1-1 |
| 00 63 13           | REQUEST FOR INFORMATION (RFI) FORM.....                    | 00 63 13 1-1    |
| 00 63 57           | CHANGE ORDER REQUEST FORMS.....                            | 00 63 57 1-5    |
| 00 63 63           | SAMPLE CHANGE ORDER FORM.....                              | 00 63 63 1-1    |
| 00 65 19           | RECOMMENDATION OF ACCEPTANCE.....                          | 00 65 19 1-1    |
| 00 65 83           | BENEFICIAL OCCUPANCY.....                                  | 00 65 83 1-2    |
| 00 72 13           | GENERAL CONDITIONS (A201-2017).....                        | 00 72 13 1-44   |
| <b>DIVISION 01</b> | <b>GENERAL REQUIREMENTS</b>                                |                 |
| 01 10 00           | SUMMARY OF WORK.....                                       | 01 10 00 1-3    |
| 01 21 00           | ALLOWANCES.....                                            | 01 21 00 1-2    |
| 01 23 00           | ALTERNATES.....                                            | 01 23 00 1-1    |
| 01 25 00           | SUBSTITUTION PROCEDURES.....                               | 01 25 00 1-3    |
| 01 26 00           | CONTRACT MODIFICATION PROCEDURES.....                      | 01 26 00 1-2    |
| 01 29 00           | PAYMENT PROCEDURES.....                                    | 01 29 00 1-3    |
| 01 31 00           | PROJECT MANAGEMENT AND COORDINATION.....                   | 01 31 00 1-6    |
| 01 32 16           | CONSTRUCTION SCHEDULING.....                               | 01 32 16 1-10   |
| 01 33 00           | SUBMITTAL PROCEDURES.....                                  | 01 33 00 1-7    |
| 01 42 00           | REFERENCES.....                                            | 01 42 00 1-5    |
| 01 45 00           | QUALITY CONTROL.....                                       | 01 45 00 1-2    |
| 01 45 13           | PROCEDURES AND CONTROLS.....                               | 01 45 13 1-2    |
| 01 50 00           | TEMPORARY FACILITIES AND CONTROLS.....                     | 01 50 00 1-7    |
| 01 58 13           | TEMPORARY PROJECT SIGNAGE.....                             | 01 58 13 1-2    |
| 01 60 00           | PRODUCT REQUIREMENTS.....                                  | 01 60 00 1-3    |
| 01 73 00           | EXECUTION.....                                             | 01 73 00 1-7    |
| 01 77 00           | CLOSEOUT PROCEDURES.....                                   | 01 77 00 1-4    |
| 01 78 39           | PROJECT RECORD DOCUMENTS.....                              | 01 78 39 1-2    |

|                    |                                                         |
|--------------------|---------------------------------------------------------|
| <b>DIVISION 02</b> | <b>EXISTING CONDITIONS</b>                              |
| 02 41 00           | DEMOLITION..... 02 41 00 1-3                            |
| <b>DIVISION 03</b> | <b>CONCRETE</b>                                         |
| NOT USED           |                                                         |
| <b>DIVISION 04</b> | <b>MASONRY</b>                                          |
| NOT USED           |                                                         |
| <b>DIVISION 05</b> | <b>METALS</b>                                           |
| 05 05 00           | COMMON WORK RESULTS FOR METALS..... 05 05 00 1-3        |
| 05 12 00           | STRUCTURAL STEEL FRAMING..... 05 12 00 1-5              |
| 05 31 00           | STEEL DECKING..... 05 31 00 1-4                         |
| 05 40 00           | COLD-FORMED METAL FRAMING..... 05 40 00 1-7             |
| 05 40 13           | LIGHT GAUGE STEEL FRAMING..... 05 40 13 1-3             |
| 05 44 00           | ENGINEERED, COLD-FORMED METAL TRUSSES..... 05 44 00 1-8 |
| 05 50 00           | METAL FABRICATIONS..... 05 50 00 1-4                    |
| <b>DIVISION 06</b> | <b>WOOD, PLASTICS &amp; COMPOSITES</b>                  |
| 06 05 73.13        | FIRE-RETARDANT WOOD TREATMENT..... 06 05 73.13 1-3      |
| 06 10 00           | ROUGH CARPENTRY..... 06 10 00 1-4                       |
| 06 20 00           | FINISH CARPENTRY..... 06 20 00 1-3                      |
| <b>DIVISION 07</b> | <b>THERMAL AND MOISTURE PROTECTION</b>                  |
| 07 01 50.19        | PREPARATION FOR RE-ROOFING..... 07 01 50.19 1-3         |
| 07 16 16           | CRYSTALLINE WATERPROOFING..... 07 16 16 1-8             |
| 07 19 23           | WATER REPELLENTS..... 07 19 23 1-4                      |
| 07 25 00           | WEATHER BARRIERS..... 07 25 00 1-6                      |
| 07 41 13.13        | STANDING SEAM METAL ROOF PANELS..... 07 41 13.13 1-8    |
| 07 42 13.13        | METAL WALL PANELS..... 07 42 13.13 1-5                  |
| 07 60 00           | FLASHING AND SHEET METAL..... 07 60 00 1-3              |
| 07 71 23           | GUTTERS AND DOWNSPOUTS..... 07 71 23 1-4                |
| 07 92 00           | JOINT SEALERS..... 07 92 00 1-2                         |
| <b>DIVISION 08</b> | <b>OPENINGS</b>                                         |
| 08 11 13           | HOLLOW METAL DOORS AND FRAMES..... 08 11 13 1-4         |
| <b>DIVISION 09</b> | <b>FINISHES</b>                                         |
| 09 91 00           | PAINTING..... 09 91 00 1-10                             |
| <b>DIVISION 10</b> | <b>SPECIALTIES</b>                                      |
| NOT USED           |                                                         |
| <b>DIVISION 11</b> | <b>EQUIPMENT</b>                                        |
| NOT USED           |                                                         |
| <b>DIVISION 12</b> | <b>FURNISHINGS</b>                                      |
| NOT USED           |                                                         |
| <b>DIVISION 13</b> | <b>SPECIAL CONSTRUCTION</b>                             |
| NOT USED           |                                                         |
| <b>DIVISION 14</b> | <b>CONVEYING EQUIPMENT</b>                              |
| NOT USED           |                                                         |

|                    |                                                            |
|--------------------|------------------------------------------------------------|
| <b>DIVISION 21</b> | <b>FIRE SUPPRESSION</b>                                    |
| NOT USED           |                                                            |
| <b>DIVISION 22</b> | <b>PLUMBING</b>                                            |
| NOT USED           |                                                            |
| <b>DIVISION 23</b> | <b>HVAC</b>                                                |
| NOT USED           |                                                            |
| <b>DIVISION 25</b> | <b>INTEGRATED AUTOMATION</b>                               |
| NOT USED           |                                                            |
| <b>DIVISION 26</b> | <b>ELECTRICAL</b>                                          |
| 26 00 01           | ELECTRICAL GENERAL PROVISIONS..... 26 00 01 1-4            |
| 26 05 01           | BASIC ELECTRICAL MATERIAL & METHODS..... 26 05 01 1-2      |
| 26 05 19           | CONDUCTOR & CABLES..... 26 05 19 1-2                       |
| 26 05 26           | GROUNDING & BONDING..... 26 05 26 1-2                      |
| 26 05 29           | HANGERS & SUPPORTS FOR ELECTRICAL SYSTEM..... 26 05 29 1-3 |
| 26 05 83           | WIRING METHOD..... 26 05 83 1-4                            |
| 26 27 00           | DISTRIBUTION EQUIPMENT..... 26 27 00 1-3                   |
| 26 27 26           | WIRING DEVICES..... 26 28 16 1-3                           |
| 26 28 16           | ENCLOSED SWITCH & CIRCUIT BREAKERS..... 26 28 16 1-2       |
| <b>DIVISION 27</b> | <b>COMMUNICATIONS</b>                                      |
| NOT USED           |                                                            |
| <b>DIVISION 28</b> | <b>ELECTRONIC SAFETY AND SECURITY</b>                      |
| NOT USED           |                                                            |

END OF TABLE OF CONTENTS

***LIST OF DRAWINGS***

---

|         |                                |
|---------|--------------------------------|
| G-100   | COVER SHEET                    |
| G-101   | SCOPE OF WORK NOTES            |
|         |                                |
| A-100   | SITE PLAN                      |
| A-300   | EXTERIOR ELEVATIONS            |
| A-301   | EXTERIOR ELEVATIONS            |
| A-302   | ROOFING PLAN                   |
|         |                                |
| S-1.0   | VICINITY PLAN & NOTES          |
| S-2.0   | GYMNASIUM EXISTING PLANS       |
| S-2.1   | GYMNASIUM EXISTING PLANS       |
| S-2.2   | GYMNASIUM ROOF DEMO SECTIONS   |
| S-2.3   | GYMNASIUM DEMO SECTIONS        |
| S-2.4   | GYMNASIUM DEMO SECTIONS        |
| S-3.0   | GYMNASIUM NEW FRAMING PLAN     |
| S-3.1   | GYMNASIUM NEW FRAMING PLAN     |
| S-3.2   | GYMNASIUM NEW FRAMING PLAN     |
| S-3.3   | GYMNASIUM NEW FRAMING SECTIONS |
| S-3.3.1 | GYMNASIUM NEW FRAMING SECTIONS |
| S-3.4   | GYMNASIUM NEW FRAMING SECTIONS |
| S-3.5   | GYMNASIUM NEW FRAMING SECTIONS |
| S-3.6   | GYMNASIUM NEW FRAMING SECTIONS |
| S-3.7   | GYMNASIUM NEW FRAMING SECTIONS |
| S-3.8   | GYMNASIUM FRAMING DETAILS      |
| S-3.9   | GYMNASIUM FRAMING DETAILS      |

## ADVERTISEMENT FOR BIDS

The Calcasieu Parish School Board will receive sealed bids before Thursday, February 26, 2026 at 2pm. at the **Calcasieu Parish School Board, Attention: Tony Motamedi, Superintendent's Conference Room, 3310 Broad St., Lake Charles, Louisiana 70615** for the following Hurricane Laura Damages Restoration Project:

### WHS GYMNASIUM – HURRICANE LAURA REPAIRS

**HL-064-06**

Complete Bid Documents prepared by King Architects, Inc, 1312 Sampson Street, Westlake, Louisiana 70669 for this Project are available in electronic form. They may be obtained without charge and without deposit from [www.CPSB.org/depts/purchasing/currentbids](http://www.CPSB.org/depts/purchasing/currentbids). Bid Documents may also be obtained from [www.centralbidding.com](http://www.centralbidding.com) for a nominal charge or subscription. Printed copies are not available from the Owner or Architect, but arrangements can be made to obtain printed Bid Documents through most reprographic firms. Bidders are responsible for any subscription, downloading, reproduction or mailing costs.

No Bid shall be considered or accepted unless the bid is accompanied by bid security in an amount not less than five percent (5%) of the Base Bid and all Additive Alternates. The bid security shall be in the form of certified check or cashier's check drawn on a bank insured by the FDIC, or on the Calcasieu Parish School Board Bid Bond Form contained in the Front End Documents written by a surety company licensed to do business in Louisiana with a A.M. Best rating of "A" or better, countersigned by a person who is under contract with the surety company or bond insurer as a licensed agent in this state and who is residing in this state.

Bids shall be accepted only from Contractors who are licensed under LS R.S. 37:2150- 2163 for the classification of BUILDING CONSTRUCTION. No bid may be withdrawn for a period of thirty (30) days after receipt of bids, except under the provisions of LA. R.S. 38:2214. Evidence of authority to submit the bid shall be required in accordance with LA. R.S. 38:2212 (B) (2), (5) and/or LA. R.S. 39:1594 (C) (4).

A Pre-Bid Conference will be conducted at 1000 Garden Drive, Westlake, Louisiana 70669 on Friday, February 13<sup>th</sup>, 2026 at 10:00am. **Attendance is mandatory and a pre-requisite for submitting a Bid.**

In accordance with LA RS 38:2212 , when the design professional or public entity mandates attendance by prospective bidders at pre-bid conferences as a prerequisite to bid on a public works project, all prospective bidders shall be present at the beginning of the pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.

Each bid must be placed in an envelope, sealed and marked on the outside:

"Bid Enclosed for WHS Gymnasium – Hurricane Laura Repairs – HL-064-06 to be opened at February 26, 2026, at 2:00pm at the Calcasieu Parish School Board, Attention: Tony Montamedi, Superintendent's Conference Room, 3310 Broad Street, Lake Charles, LA 70615". Refer to Instructions for Bidders for other requirements on outside of envelope.

Bid may also be submitted by electronic means via website [www.centralbidding.com](http://www.centralbidding.com). Free registration is required in order to submit a bid via the Central Bidding website.

The Owner reserves the right to reject any and all bids for just cause as permitted by LA. R.S. 38:2214 (B). The ability of an entity to reject any bid is applicable only when administered in accordance with the Public Bid Law. In accordance with LA. R.S. 38:2212 (B) (1), the provisions and requirements of this section, and those stated in the Bidding Documents shall not be waived by any public entity.

Dr. Jason VanMetre, Superintendent, Calcasieu Parish School Board

Pc: Bourne, Brown, Architect, State Licensing Board for Contractors, Daily Journal of Commerce, F. W. Dodge, File.

Publish in the Lake Charles American Press Newspaper:  
January 29<sup>th</sup>, February 5<sup>th</sup>, and February 12<sup>th</sup>

## INSTRUCTIONS TO BIDDERS

### ARTICLE 1 - DEFINITIONS

- 1.1 The Bid documents include the following:
- Advertisement for Bids.
  - Instructions to Bidders.
  - List of Required Documents.
  - Louisiana Uniform Public Works Bid Form and Unit Price Form.
  - Bid Bond Form.
  - Resolution.
  - CPSB Non-Collusion Affidavit.
  - Louisiana Non-Collusion Affidavit (LRS 38:2224).
  - Verification of Employees Affidavit (LRS 38:2212.10).
  - Attestation Form – Past Criminal Conviction of Bidders (LRS 38:2227).
  - Certification Regarding Unpaid Worker’s Compensation Insurance (LRS 23:1726(B)).
  - Subcontractor Approval List.
  - Contract Between Owner & Contractor including Payment and Performance Bond.
  - Federal Contract Clauses Exhibit A.
  - General Conditions of the Contract for Construction AIA Document A201-2017.
  - Supplementary Conditions.
  - Change Order Form.
  - Application for Payment Documents.
  - Beneficial Occupancy Form.
  - Recommendation of Acceptance Form.
  - Louisiana Dept. of Revenue Sales Tax Exemption Form.
  - CPSB HL Roofing Guarantee (if applicable).
  - Specifications
  - Drawings
  - Addenda issued during bid period and acknowledged on the Bid Form
- 1.2 All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201-2017 as amended, or in other Contract Documents, are applicable to the Bid Documents.
- 1.3 Addenda are written and/or graphic instruments issued by the Architect prior to the opening of bids which modify or interpret the Bid Documents by additions, deletions, clarifications, corrections, and prior approvals.
- 1.4 A Bid is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein, supported by data called for by the Bid Documents.
- 1.5 Base Bid is the sum stated in the Bid for which the Bidder offers to perform the work



described as the Base, to which work may be added for sums stated in Alternate Bids.

- 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or subtracted from the amount of the Base Bid if the corresponding change in project scope or materials or methods of construction described in the Bid Documents is accepted.
- 1.7 A Bidder is one who submits a bid for a prime contract with the Owner for the work described in the proposed Contract Documents.
- 1.8 A Sub-Bidder is one who submits a bid to a Bidder for materials and/or labor for a portion of the work.
- 1.9 Where the word "Architect" is used in any of the Documents, it shall refer to the Prime Designer of the project, a state-licensed Architect, Engineer or Landscape Architect.

## **ARTICLE 2 - BIDDER'S REPRESENTATION**

- 2.1 Each Bidder by making his Bid represents that:
  - 2.1.1 He has read and understands the Bid Documents and his Bid is made in accordance therewith.
  - 2.1.2 He has visited the site and has familiarized himself with local conditions under which the work is to be performed.
  - 2.1.3 His Bid is based upon the materials, systems, and equipment described in the Bid Documents as advertised and as modified by Addenda.
- 2.2 The Bidder must be fully qualified under any state or local licensing law for Contractors in effect at the time and at the location of the work before submitting his Bid. In the State of Louisiana, Revised Statute 37:2150 et. seq. will be considered, if applicable. Contractor shall be responsible for determining that all of his sub-bidders or prospective subcontractors are duly licensed in accordance with law.
- 2.3 The Bidder must not be debarred as determined by the Federal Government's Excluded Parties List, and it is the responsibility of the Contractor to verify subcontractor eligibility based on factors such as past performance, proof of liability insurance, possession of a federal ID tax number, debarment, and state and local licensing requirements. The prime contractor may use the web site: <https://www.sam.gov/SAM> to determine if a subcontractor has been debarred at the federal level.

**ARTICLE 3 - BID DOCUMENTS****3.1 Bid Documents.**

3.1.1 Complete Bid Documents for this Project are available in electronic form. They may be obtained without charge and without deposit from [www.cpsb.org/depts/purchasing/currentbids](http://www.cpsb.org/depts/purchasing/currentbids). Bid Documents may also be obtained from [www.centralbidding.com](http://www.centralbidding.com) for a nominal charge or subscription. Printed copies are not available from the Owner or Architect, but arrangements can be made to obtain printed Bid Documents through most reprographic firms. Bidders are responsible for any subscription, downloading, reproduction or mailing costs.

3.1.2 Complete sets of Bid Documents shall be used in preparing Bids; neither the Owner nor the Architect assumes any responsibility for error of misinterpretation resulting from the use of incomplete sets of Bid Documents.

3.1.3 The Owner and Architect make the Bid Documents available to Bidders only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

**3.2 Interpretation or Correction of Bid Documents**

3.2.1 Bidders shall promptly notify the Architect of any ambiguity, inconsistency or error, which they may discover upon examination of the Bid Documents or of the site and local conditions.

3.2.2 Bidders requiring clarification or interpretation of Bid Documents shall make a written request to the Architect to reach him at least seven (7) days prior to the date and time of receipt of bids.

3.2.3 Any interpretation, correction or change of the Bid Documents will be made by Addendum. Interpretations, corrections or changes of Bid Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections, or changes.

**3.3 Substitutions**

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

3.3.2 No substitution will be considered unless written request for approval has been submitted by the Proposer and has been received by the Architect at least seven (7) days prior to the date and time for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and complete

description of the proposed substitute including model numbers, drawings, cuts, performance and test data, and other information necessary for evaluation. A statement setting forth any changes in any other materials, equipment or work that incorporation of the substitute would require shall be included. The burden of proof of the merit of the proposed substitute is upon the Proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

3.3.3 If the Architect approves any proposed substitution such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

3.4 Addenda.

3.4.1 Addenda will be posted on [www.cpsb.org/depts/purchasing/currentbids](http://www.cpsb.org/depts/purchasing/currentbids) and [www.centralbidding.com](http://www.centralbidding.com). Printed copies are not available from the Owner or Architect, but arrangements can be made to obtain printed Addenda through most reprographic firms. Bidders are responsible for any subscription, downloading, reproduction or mailing costs.

3.4.2 Bidders are responsible for obtaining Addenda online. Addenda will not be mailed or distributed by Architect or Owner.

3.4.3 Addenda shall not be issued within a period of seventy-two (72) hours prior to the advertised time for the opening of bids, excluding Saturdays, Sundays, and any legal holidays; however, if the necessity arises to issue an addendum modifying plans and specifications within the seventy-two (72) hour period prior to the advertised time for the opening of bids, then the opening of bids shall be extended exactly one (1) week, without the requirement of re-advertising.

3.4.4 Each Bidder shall ascertain from [www.cpsb.org/depts/purchasing/currentbids](http://www.cpsb.org/depts/purchasing/currentbids) and/or [www.centralbidding.com](http://www.centralbidding.com) prior to submitting his Bid that he has received (via download) all Addenda issued, and he shall acknowledge their receipt on the Bid Form.

#### **ARTICLE 4 - BIDDING PROCEDURES**

4.1 Form and Style of Bids

4.1.1 Bids shall be submitted on the forms provided in the Bid Documents. Refer to **List of Required Documents** for other items required to be submitted with Bid.

4.1.2 All blanks on the Bid Form shall be filled in by typewriter or manually in ink.

4.1.3 Where so indicated by the makeup of the Bid Form, sums shall be expressed in both

words and figures, and in case of discrepancy between the two, the written words shall govern.

- 4.1.4 Any interlineation, alteration or erasure must be initialed by the signer of the Bid or his authorized representative.
- 4.1.5 Bidders are cautioned to complete all Alternates should such be required in the Bid Form. Failure to submit alternate prices will render the Proposal informal and may cause its rejection.
- 4.1.6 Bidder shall make no additional stipulation on the Bid Form nor qualify his Bid in any other manner.
- 4.1.7 The Bid shall include the legal name of Bidder and statement whether the Bidder is a sole proprietorship, partnership, corporation, or any other legal entity and his Bid shall be signed by the person or person legally authorized to bind the Bidder to a contract. Bid submitted by an agency shall have a current Power of Attorney attached certifying the agent's authority to bind Bidder.
- 4.1.8 On any Bid in excess of Fifty Thousand Dollars & no cents (\$50,000.00), the Contractor shall certify that he is licensed under LA R.S. 37:2150-2163 and show his license number on the Bid above his signature or signature of his duly authorized representative.
- 4.2 Bid Security
  - 4.2.1 No Bid shall be considered or accepted unless the bid is accompanied by bid security in an amount of not less than five percent (5%) of the Base Bid and all additive Alternates. The bid security shall be in the form of a certified check or cashier's check drawn on a bank insured by the Federal Deposit Insurance Corporation, or on the Calcasieu Parish School Board Bid Bond contained in the Front End Documents written by a surety company licensed to do business in Louisiana and with a current A.M. Best rating of "A- VII" or better, countersigned by a person who is under contract with the surety company or bond insurer as a licensed agent/broker in this state and who is residing in this state and accompanied by appropriate Power of Attorney in Fact or of the State of Louisiana.
  - 4.2.2 Bid security furnished by the Contractor shall guarantee that the Contractor will, if awarded the work according to the terms of his proposal, enter into the Contract and furnish Performance and Payment Bonds as required by these Contract Documents, within ten (10) days after written notice that the instrument is ready for his signature.
  - 4.2.3 Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as

penalty.

- 4.2.4 The Owner will have the right to retain the bid security of Bidders until either (a) the Contract has been executed and bonds have been furnished, or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.
- 4.3 Submission of Bid
- 4.3.1 Bids shall be sealed in an opaque envelope and will be received until the time specified and at the place specified in the Advertisement for Bids. It shall be the specific responsibility of the Bidder to deliver his sealed bid to the Calcasieu Parish School Board at the appointed place and prior to the announced time for the opening of bids. Late delivery of a bid for any reason, including late delivery by U.S. Mail or express delivery, shall disqualify the Bid.
- 4.3.2 The sealed bid envelope shall be marked on the outside with: "Bid Enclosed for <<WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID (HL-064-06) >> to be opened at <<THURSDAY, FEBRUARY 26, 2026 at 2:00 PM>> at the Calcasieu Parish School Board, Attention: Tony Motamedi, Superintendent's Conference Room, 3310 Broad Street, Lake Charles, LA 70615". The outside of the bid envelope shall include the name, address and Contractor's license number of the Bidder as required by LA. R.S. 37:2163.
- 4.3.3 If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the same notation described at 4.3.2 on the face thereof. Such bids shall be sent by Registered or Certified Mail, Return Receipt Requested, and addressed to: Calcasieu Parish School Board, 3310 Broad Street, Lake Charles, LA 70615.
- 4.3.4 Bids shall be deposited at the designated location prior to the time and the date for receipt of bids indicated in the Advertisement for Bids, or an extension thereof made by Addendum. Bids received after the time and date for receipt of bids will be returned unopened.
- 4.3.5 Bidder shall assume full responsibility for timely delivery at location designated for receipt of bids.
- 4.3.6 Oral, telephonic or telegraphic bids or modifications to bids are invalid and will not receive consideration. Owner will not consider notation written on outside of bid envelope which has the effect of amending the Bid.
- 4.3.7 Bid may also be submitted by electronic means via website [www.centralbidding.com](http://www.centralbidding.com). Free registration is required in order to submit a bid via the Central Bidding website.
- 4.4 Modification or Withdrawal of Bid

- 4.4.1 A Bid may not be modified, withdrawn or cancelled by the Bidder during the time stipulated in the Advertisement for Bids, for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with Act III of 1983 which states, in part, "Bids containing patently obvious mechanical, clerical or mathematical errors may be withdrawn by the Contractor, if clear and convincing sworn, written evidence of such errors is furnished to the public entity within forty-eight hours of the bid opening excluding Saturdays, Sundays and legal holidays."
- 4.4.2 Prior to the time and date designated for receipt of Bids, Bids submitted early may be modified or withdrawn only by notice to the party receiving bids at the place and prior to the time designated for receipt of bids.
- 4.4.3 Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
- 4.4.4 Bid Security shall be in an amount sufficient for the Bid as modified or resubmitted.

#### **ARTICLE 5 - CONSIDERATION OF BIDS**

- 5.1 Opening of Bids
  - 5.1.1 The properly identified bids received on time will be opened publicly and read aloud, and a tabulation abstract of the amounts of the Base Bid and Alternates, if any, will be made available to Bidders.
- 5.2 Rejection of Bids
  - 5.2.1 The Owner shall have the right to reject any or all bids and in particular to reject a bid not accompanied by any required bid security or data required by the Bid Documents or a bid in any way incomplete or irregular.
- 5.3 Acceptance of Bid
  - 5.3.1 Any bid shall include no more than three alternates. Alternates, if accepted, shall be accepted in the order in which they are listed on the bid form. Determination of the low bidder shall be on the basis of the sum of the base bid and any alternates accepted. However, the Owner reserves the right to accept alternates in any order which does not affect determination of the low bidder, per LA. R.S. 38:2212 (J).
  - 5.3.2 It is the intent of the Owner to award a contract to the lowest responsible bidder in accordance with the requirements of the Bid Documents, and if the bid does not exceed

the funds available.

- 5.3.3 Due to the nature of potential Project funding sources, full funding may not be readily-available at the time the bids are received. As a result, pursuant to Louisiana Revised Statute 38:2215, the Owner is exempt from the requirement of acting to award the Contract or reject all bids within forty-five (45) calendar days of receipt of the bids. Pursuant to this Statute, the Owner specifically reserves the right to hold all bids for greater than forty-five (45) calendar days.

#### **ARTICLE 6 - POST BID INFORMATION**

- 6.1 Refer to **List of Required Documents** for other items required to be submitted by the apparent low bidder within ten (10) days after bid opening. Where forms are required, blank forms are included in the Bid Documents.
- 6.2 The apparent low Bidder has a maximum of ten (10) days from the bid opening to produce any required post bid submittals. If the apparent low Bidder does not submit the proper information or documentation as required by the Bid documents within the ten-day period, such Bidder shall be declared non-responsive, which will result in automatic disqualification of bid.
- 6.3 Proposed list of subcontractors, materials suppliers, and superintendents.
- 6.3.1 Within 24 hours after bids are opened, the Contractor identified as the apparent low bidder shall make the following submittals to the Architect: A tentative list of all subcontractors or other persons or organizations (including those who are to furnish materials or equipment fabricated to special design) proposed for principal portions of the work, as well as the proposed superintendent. Also provide a designation of the work to be performed by the Contractor with his own forces.
- 6.3.2 It is recognized that the acceptance or rejection of alternates contained in the bid proposal may ultimately determine the low bidder on the project. In the event a Contractor, other than the Contractor identified as the apparent low bidder at the bid opening, becomes the low bidder as a result of such selection of alternates, this contractor shall make the submittals required by this section within 24 hours after notification by the Owner.
- 6.3.3 The Contractor will be required to establish to the satisfaction of the Architect and the Owner the reliability and responsibility of the proposed subcontractors to furnish and perform the work described in the section of the specifications pertaining to such proposed subcontractors' respective trades.

- 6.3.4 The Architect will notify the Contractor if the Owner, after due investigation, has reasonable and substantial objection to any person or organization on the Contractor's list of proposed subcontractors. If there are objections the Contractor shall submit alternative subcontractor(s) for their approval.
- 6.3.5 Subcontractors and other persons and organizations proposed by the Bidder and accepted by the owner and the Architect upon the awarding of a contract must be used on the work for which they were proposed and accepted and shall not be changed except upon the recommendation of the Architect and approved by the Owner in the form of a change order. Any changes on the tentative 24 hour list submitted by the Contractor prior to the awarding of the contract must be requested in writing to the Architect with proper justification. Any change in the tentative list of subcontractors will require recommendation from the Architect to the Owner. The recommendation and approval of the Owner must be made in writing.
- 6.3.6 The lowest responsible bidder shall submit to the Architect and the Owner prior to award of the contract a letter from the manufacturer that the manufacturer will issue the roof system guarantee based on the specified roof system and include the name of the applicator acceptable to the manufacturer for installing the specified roof system. This manufacturer shall be one that has received prior approval or is named in the specifications.
- 6.4 Additional Submissions
- 6.4.1 A Schedule of Values segregating the entire Contract Sum into the divisions of the Specifications shall be provided to the Architect. No payments will be made to the Contractor until this is received.
- 6.4.2 A copy of applicable state, parish, or municipal licenses legally required for Contractor and subcontractors shall be provided to the Architect. No payments will be made to the Contractor until this is received.
- 6.4.3 Federal and state tax identification numbers on General Contractors and subcontractors shall be provided to the Architect. No payments will be made to the Contractor until this is received.

#### **ARTICLE 7 - PERFORMANCE & PAYMENT BONDS**

- 7.1 Bond Required
- 7.1.1 The Contractor shall furnish and pay for a Performance & Payment Bond written by a company licensed to do business in Louisiana, which shall be countersigned by a



person who is contracted with the surety company or bond issuer or approved broker, and who is licensed as an insurance agent/broker of the company or issuer, and who is licensed as an insurance agent in this State, and who is residing in this State, in an amount equal to the 100% of the Contract amount. By issuing such Performance and Payment Bond, the surety acknowledges they are on the current U.S. Department of the Treasury Financial Management Service List of approved bonding companies, and complies with all other provisions of R.S. 38:2219.

7.2 Time of Delivery and Form of Bond

7.2.1 The Bidder shall deliver the required bond to the Owner simultaneous with the execution of the contract.

7.2.2 Bond shall be in form furnished by the Calcasieu Parish School Board, entitled Performance & Payment Bond, a copy of which is included in the Bid Documents.

7.2.3 The Bidder shall require the Attorney-In-Fact who executes the required bond on behalf of the surety to affix thereto a certified and current copy of his power of attorney.

**ARTICLE 8 - FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

8.1 Form to be Used

8.1.1 Form of the contract to be used shall be furnished by Calcasieu Parish School Board, a copy of which is included in the Bid Documents.

8.2 Award

8.2.1 In accordance with Louisiana Law, if the Contract is awarded to the Bidder, he shall at the time of the signing of the Contract or prior, execute the Non-Collusion Affidavit included in the Bid Documents, and shall execute the Byrd Anti-Lobbying Certification contained in Exhibit A to Contract Between Owner and Contractor.

8.2.2 Before award of the contract, the successful Bidders shall furnish to the Owner a certified copy of the minutes of the corporation or partnership meeting which authorized the party executing the Bid to sign on behalf of the Contractor.

8.2.3 When a project is financed either partially or entirely with School Board bonds, the award of a contract is contingent upon the sale of bonds by the School Board. The School Board shall incur no obligation to the Contractor until the Contract between the Owner and Contractor is duly executed.

**ARTICLE 9 - COMPLETION TIME & LIQUIDATED DAMAGES**

- 9.1 The completion of the contract must be as stated below, subject to such extensions as may be granted under Paragraph 8.3, Delays and Extensions of Time: in the General Conditions and the Supplementary Conditions, or the Contractor will be subject to pay to the Owner Liquidated Damages in the amount of FIVE HUNDRED DOLLARS **(\$500.00) per calendar day**. Time is of the essence in performance of this Contract and satisfactory completion of this Project.
- 9.2 Bidder acknowledges that all phases of the Project shall be Substantially Complete in **270 calendar days** from receipt of written Notice to Proceed from Owner.

**ARTICLE 10 - BUILDING MATERIAL EXCLUSIONS**

- 10.1 All building materials shall be free of asbestos.
- 10.2 All plumbing materials shall be free of lead.
- 10.3 All paints shall be free of lead.
- 10.4 All contractors should use the least hazardous materials on all jobs. Material Safety Data Sheets (MSDS) shall be given to the Owner on all materials used.

**ARTICLE 11 - PRE-BID CONFERENCE**

- 11.1 A pre-bid conference shall be held at the project site at least ten (10) days before the date for receipt for bids. Refer to the Advertisement for Bids to determine if attendance at the pre-bid conference is mandatory and a pre-requisite for submitting a bid, or if attendance is non-mandatory. The Architect shall coordinate the setting of the date, time and place for the pre-bid conference. The purpose of the pre-bid conference is to familiarize Bidders with the requirements of the Project and the intent of the Contract Documents, and to receive comments and information from interested Bidders.
- 11.2 Any revision of the Bid Documents made as a result of the pre-bid conference shall not be valid unless included in an Addendum issued in accordance with Paragraph 3.4 of the Instructions to Bidders.

**ARTICLE 12 - APPLICABILITY**

- 12.1 Any article located in the Instructions to Bidders found to be in conflict with the

General Conditions and/or Supplementary Conditions will take precedence over the latter of the two set of Articles.

### **ARTICLE 13 - FEDERALLY FUNDED PROJECTS**

- 13.1 The Owner intends to pursue reimbursement of eligible Project costs from funding sources including Federal Emergency Management Agency (FEMA) Public Assistance Program, therefore compliance with applicable Federal Contract Clauses (attached as Exhibit A to Contract Between Owner and Contractor) is required.

### **ARTICLE 14 - MISCELLANEOUS PROVISIONS**

- 14.1 The Contractor shall repair, replace or pay for the relocation of telephones and wiring, fire alarms, intercoms, bells, TV cable, security system, wiring and equipment and any other cable type installation that may be damaged, cut or removed during the construction.
- 14.2 The Contractor will be responsible for the removal, reinstallation and/or relocation of any playground equipment that needs to be moved due to construction.
- 14.3 The Calcasieu Parish School Board is hereby recognized as a statutory employer of Contractor's employees, including but not limited to Contractor's direct employees, immediate employees, and statutory employees. This contract recognizes the existence of a statutory employer relationship between Calcasieu Parish School Board and Contractor in accord with Act 315 of 1997.
- 14.4 The costs of any required construction, demolition or other permits from any authority having jurisdiction over the Project are to be included in the Base Bid.

### **ARTICLE 15 - SALES AND USE TAX EXEMPTION**

- 15.1 In accordance with applicable rules adapted and promulgated by the Louisiana Department of Revenue, the Owner shall designate the contractor and all subcontractors as its agents for the purchase and lease of materials, supplies or equipment for the project. The Contractor and all subcontractors shall accept the agency designation. The designation and acceptance thereof shall be made on the form prescribed by the Louisiana Department of Revenue which form shall be part of the contract between the Owner, Calcasieu Parish School Board, and the Contractor. A copy of this form is available at the Architect's office.

The agency relationship between the Owner and the contractor and all subcontractors

shall relieve the Contractor and subcontractors (1) from paying any state or local sales or state or local use taxes on materials, supplies or equipment which is affixed to and/or made a part of the real estate of the project or work or which is permanently incorporated into the project or work and, (2) from paying any state or local use taxes on any materials, supplies or equipment which are leased and used exclusively for the project or work. Accordingly, in preparing their bids and computing costs the contractor and subcontractors shall not consider sales and or use taxes which would otherwise be due.

The Owner will furnish to the contractor and subcontractors its Certificate of Sales/Use Tax Exemption/Exclusion on the form prescribed by the Louisiana Department of Revenue. The contractor and subcontractors shall furnish a copy of such certificate to all vendors or suppliers of any of the materials, supplies or equipment described above,

The Contractor and subcontractors shall make all purchases and leases on behalf of and as the agent of the Calcasieu Parish School Board.

Rules and regulations of the Louisiana Department of Revenue shall prevail over any conflicting provisions or specifications of the contract.

### **End of Instructions to Bidders**

**KING ARCHITECTS, INC**

## PRE-CONSTRUCTION MEETING - SIGN-IN SHEET

## Date and Time

[illegible]

## LIST OF REQUIRED DOCUMENTS

**The following items are required to be submitted as part of the Contractor's Bid:**

1. Louisiana Uniform Public Works Bid Form.
2. Louisiana Uniform Public Works Bid Form – Unit Price Form (when applicable).
3. Bid Security check or Bid Bond Form (with Power of Attorney if applicable).
4. Evidence of Corporate Authority of the person signing the Bid, in accordance with LRS 38:2212(5).

**The following items are required to be submitted by the Apparent Low Bidder to the Architect or Owner within ten (10) days of the Bid, and prior to award of the project:**

*Note: The Calcasieu Parish School Board requires that 6 original, signed and/or notarized copies (as is applicable) of each item listed below be submitted.*

1. Resolution.
2. CPSB Non-Collusion Affidavit
3. Louisiana Non-Collusion Affidavit (LRS 38:2224).
4. Verification of Employees Affidavit (LRS 38:2212.10).
5. Attestation Form – Past Criminal Conviction of Bidders (LRS 38:2227).
6. Certification Regarding Unpaid Worker's Compensation Insurance (LRS 23:1726(B)).
7. Subcontractor Approval List.
8. For Projects involving repair or replacement of roofing: Roofing Manufacturer's Certification and Compliance Letter, issued on the Roofing Manufacturer's Company Letterhead, and signed by an officer, or other duly appointed representative of the Roofing Manufacturer, stating the following:
  - That the proposed Roofing Installer is an Approved Applicator for the system(s) specified and/or prior approved, and is in current good standing with the company.
  - That the roofing system as specified, or as modified by Addendum, is acceptable to the Roofing Manufacturer, and meets the requirements for issuance of the specified 30- year, No-Dollar-Limit-Non-Pro-Rated Roof Weathertightness Warranty, in accordance with the Specifications.
  - That the Roofing Manufacturer will issue the required 30-year, No-Dollar-Limit-Non-Pro-Rated Roof Weathertightness Warranty, in accordance with the Specifications.
  - That the Roofing Manufacturer will provide the required on-site inspections, performed by the Roofing Manufacturer's full-time, Technical Field Representative, and will issue written reports along with photographic documentation accordingly, in accordance with the requirements of the applicable Specifications.

**END OF SECTION**

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## ***SCOPE OF WORK***

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The Project entails furnishing labor, materials, tools and equipment necessary to provide the following renovations to Westlake High School Gymnasium. The installation of all new materials shall be performed in strict accordance with the Manufacturer's written installation instructions, and in accordance with all approved shop drawings.

### **GYMNASIUM**

1. Remove all existing roof trusses; install new light gauge metal roof trusses and metal deck.
2. Remove metal roof and decking; install new 24-gauge standing seam metal roof over metal deck and moisture barrier.
3. Remove all exterior wall panels and instal 3/4" fire retardant sheeting, flashing, vapor barrier and horizontal wall panels as per spec.
4. Remove / Replace light gauge wall studs.
5. Install new structural steel bracing
6. Remove existing and replace all gutters and downspouts.
7. Remove existing lights and wiring from existing trusses and reinstall lights and wiring to new trusses.
8. Remove all electrical and reinstall at exterior walls.
9. Refer to structural drawings for additional details not listed in scope of work.

# LOUISIANA UNIFORM PUBLIC WORK BID FORM

**TO: Calcasieu Parish School Board**  
3310 Broad Street  
Lake Charles, Louisiana 70615

**BID FOR:** Hurricane Laura Damages Restoration Project:  
Westlake High Gymnasium Hurricane Laura Repairs Rebid  
HL-064-06  
1000 Garden Drive, Westlake, Louisiana 70669

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: King Architects, Inc – 1312 Sampson Street, Westlake, Louisiana 70669 and dated: November 2025.

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) \_\_\_\_\_ .

**TOTAL BASE BID:** For all work required by the Bidding Documents (including any and all unit prices designated “Base Bid” \* but not alternates) the sum of:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

**ALTERNATES:** For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

**Alternate No. 1** *(Not Applicable)* for the lump sum of:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

**Alternate No. 2** *(Not Applicable)* for the lump sum of:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

**Alternate No. 3** *(Not Applicable)* for the lump sum of:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

**NAME OF BIDDER:** \_\_\_\_\_

**ADDRESS OF BIDDER:** \_\_\_\_\_

**LOUISIANA CONTRACTOR’S LICENSE NUMBER:** \_\_\_\_\_

**NAME OF AUTHORIZED SIGNATORY OF BIDDER:** \_\_\_\_\_

**TITLE OF AUTHORIZED SIGNATORY OF BIDDER:** \_\_\_\_\_

**SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER \*\*:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

## **THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:**

\* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

\*\* **A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

**BID SECURITY** in the form of a bid bond, certified check or cashier’s check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.



# LOUISIANA UNIFORM PUBLIC WORK BID FORM

## UNIT PRICE FORM

**TO: Calcasieu Parish School Board**  
3310 Broad Street  
Lake Charles, Louisiana 70615

**BID FOR:** Hurricane Laura Damages Restoration Project:  
Westlake High Gymnasium Hurricane Laura Repairs Rebid  
HL-064-06  
1000 Garden Drive, Westlake, Louisiana 70669

**UNIT PRICES:** This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

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**Wording for “DESCRIPTION” is to be provided by the Owner.**

**All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.**

# LOUISIANA UNIFORM PUBLIC WORK BID FORM

## UNIT PRICE FORM

**TO: Calcasieu Parish School Board**  
3310 Broad Street  
Lake Charles, Louisiana 70615

**BID FOR:** Hurricane Laura Damages Restoration Project:  
Westlake High Gymnasium Hurricane Laura Repairs Rebid  
HL-064-06  
1000 Garden Drive, Westlake, Louisiana 70669

**UNIT PRICES:** This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

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| REF. NO.     | QUANTITY:                                                                | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION ( <i>Quantity times Unit Price</i> ) |
|              |                                                                          |                  |            |                                                           |

|              |                                                                          |                  |            |                                                           |
|--------------|--------------------------------------------------------------------------|------------------|------------|-----------------------------------------------------------|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ |                  |            |                                                           |
| REF. NO.     | QUANTITY:                                                                | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION ( <i>Quantity times Unit Price</i> ) |
|              |                                                                          |                  |            |                                                           |

**Wording for “DESCRIPTION” is to be provided by the Owner.**

**All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.**

## BID BOND

PROJECT NAME: **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID  
HL-064-06**

LOCATION: 1000 Garden Drive  
Westlake, Louisiana 70669

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

KNOW ALL MEN BY THESE PRESENTS:

That \_\_\_\_\_ of \_\_\_\_\_, as Principal,

and \_\_\_\_\_, as Surety,

are held and firmly bound unto the Calcasieu Parish School Board, (Obligee), in the full and just sum of five (5%) percent of the total amount of this bid proposal, including all alternates, lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies and that it is listed thereon as approved for an amount equal to or greater that the amount for which it obligates itself in this instrument, that surety currently is licensed to do business in the State of Louisiana, and that this bond is countersigned by a person who is under contract with the surety as a licensed agent/broker in this state, and who is residing in this state.

This Bid Bond shall be accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Obligee on a Contract for:

**WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID  
HL-064-06**

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

BOND CERTIFICATION: The Principal certifies that he meets all bonding requirements of the Calcasieu Parish School Board, as set forth in paragraph 4.2.1 of the Instructions To Bidders, found in the General Guide for Front End Documents for the Calcasieu Parish School Board.

BY: \_\_\_\_\_  
PRINCIPAL (BIDDER)

BY: \_\_\_\_\_  
SURETY

BY: \_\_\_\_\_  
AUTHORIZED OFFICER-OWNER-PARTNER

BY: \_\_\_\_\_  
AGENT OR ATTORNEY-IN-FACT (SEAL)

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

**INCLUDE THIS FORM WITH BID UNLESS BID SECURITY CHECK IS INCLUDED**

**KING ARCHITECTS, INC**

**SECTION 00 43 25**

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***SUBSTITUTION REQUEST FORM***

**IDENTIFICATION:**

Owner: Calcasieu Parish School Board Date: \_\_\_\_\_  
Architect: King Architects, Inc  
Project Name: Westlake High Gymnasium Hurricane Laura Repairs Rebid  
Project Number: HL-064-06

---

**REFERENCE:**

Specification Title: \_\_\_\_\_ Page: \_\_\_\_\_  
Specification No.: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_  
Drawing No./Detail: \_\_\_\_\_ Drawing Issue Date: \_\_\_\_\_  
Item Specified: \_\_\_\_\_

---

**PROPOSED SUBSTITUTION:**

Description: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Address: \_\_\_\_\_ Tel: \_\_\_\_\_  
Trade Name: \_\_\_\_\_ Model No.: \_\_\_\_\_  
Installer: \_\_\_\_\_  
Address: \_\_\_\_\_ Tel: \_\_\_\_\_  
History: ☐ New Product ☐ 2-5 years old ☐ 5-10 years old ☐ more than 10 years old  
Attachments Included: ☐ Drawings ☐ Product Data ☐ Samples  
☐ Test Reports ☐ Comparative Data ☐ Research & Evaluation Reports  
Proposed Substitution General Description:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

---

**REASON FOR SUBSTITUTION:**

Specified Product: \_\_\_\_\_ Proposed Product: \_\_\_\_\_  
☐ Is no longer available. ☐ Will reduce construction time by \_\_\_\_\_ days to Project.  
☐ Is unable to meet project schedule. ☐ Will result in cost savings of \$ \_\_\_\_\_  
☐ Is unsuitable for the designated application. ☐ Is for Supplier's Convenience  
☐ Cannot interface with adjacent materials. ☐ Owner Initiated Substitution  
☐ Is not compatible with adjacent materials. ☐ Other: \_\_\_\_\_  
☐ Cannot provide the specified warranty. \_\_\_\_\_  
☐ Cannot be constructed as indicated. \_\_\_\_\_  
☐ Other: \_\_\_\_\_  
\_\_\_\_\_  
☐ Cannot be obtained due to one or more of the following:  
☐ Strike ☐ Bankruptcy of manufacturer or supplier  
☐ Lockout ☐ Similiar occurrence

Explanation of each item marked above (attach documentation):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**KING ARCHITECTS, INC**

**SECTION 00 43 25**

**COMPARISONS OF THE SPECIFIED ITEM AND THE PROPOSED SUBSTITUTION:**

1. Compare proposed substitution with specified quality, size, weight, visual appearance, durability and performance using fields below:

|                       |                           |                          |
|-----------------------|---------------------------|--------------------------|
| <b>QUALITY:</b>       | <u>Specified Product:</u> | <u>Proposed Product:</u> |
| Manufacturer:         | _____                     | _____                    |
| Name/Brand/No.:       | _____                     | _____                    |
| Supplier/Distributor: | _____                     | _____                    |
| Mfr/Rep:              | _____                     | _____                    |
| Size:                 | _____                     | _____                    |
| Weight:               | _____                     | _____                    |
| Appearance:           | _____                     | _____                    |
|                       | _____                     | _____                    |
|                       | _____                     | _____                    |

**DURABILITY:** Identify at least three (3) similar local projects on which proposed substitution was used:

|   |                      |                       |
|---|----------------------|-----------------------|
| 1 | Project: _____       | Date Installed: _____ |
|   | Address: _____       |                       |
|   | Owner/Contact: _____ | Tel: _____            |
| 2 | Project: _____       | Date Installed: _____ |
|   | Address: _____       |                       |
|   | Owner/Contact: _____ | Tel: _____            |
| 3 | Project: _____       | Date Installed: _____ |
|   | Address: _____       |                       |
|   | Owner/Contact: _____ | Tel: _____            |

| <b>PERFORMANCE CRITERIA:</b> |               | <u>Specified Product:</u> | <u>Proposed Product:</u> |
|------------------------------|---------------|---------------------------|--------------------------|
| Features/Attributes          | Test Protocol |                           |                          |
|                              |               |                           |                          |
|                              |               |                           |                          |
|                              |               |                           |                          |
|                              |               |                           |                          |
|                              |               |                           |                          |
|                              |               |                           |                          |
|                              |               |                           |                          |
|                              |               |                           |                          |
|                              |               |                           |                          |

**VERIFICATION:**

2. Verify specified warranties, maintenance service, parts, code (including relevant ASTMs) and accessibility compliance, sustainability and other requirements are met:

a. **WARRANTY:** Proposed product offers the same warranty?      ☐ Yes      ☐ No; explain \_\_\_\_\_

**SUBSTITUTION REQUEST FORM  
(DURING PROCUREMENT)**

**KING ARCHITECTS, INC**

**SECTION 00 43 25**

|       | Specified Product: | Proposed Product: |
|-------|--------------------|-------------------|
| Item: |                    |                   |
| Item: |                    |                   |
| Item: |                    |                   |
| Item: |                    |                   |
| Item: |                    |                   |

**b. MAINTENANCE SERVICE:** Same day service available? ☐ Yes ☐ No; explain: \_\_\_\_\_

|       | Specified Product: | Proposed Product: |
|-------|--------------------|-------------------|
| Item: |                    |                   |
| Item: |                    |                   |
| Item: |                    |                   |
| Item: |                    |                   |

**c. SPARE PARTS:** Source/Location: \_\_\_\_\_

|       | Specified Product: | Proposed Product: |
|-------|--------------------|-------------------|
| Item: |                    |                   |
| Item: |                    |                   |
| Item: |                    |                   |
| Item: |                    |                   |

**d. CODE REQUIREMENTS:**

|       | Specified Product: | Proposed Product: |
|-------|--------------------|-------------------|
| ASTM: |                    |                   |
| ASTM: |                    |                   |
| ASTM: |                    |                   |
| ASTM: |                    |                   |

**e. ADA COMPLIANCE:** \_\_\_\_\_

**f. SUSTAINABLE DESIGN**

| Features/Attributes |  | Specified Product: | Proposed Product: |
|---------------------|--|--------------------|-------------------|
|                     |  |                    |                   |
|                     |  |                    |                   |
|                     |  |                    |                   |
|                     |  |                    |                   |
|                     |  |                    |                   |
|                     |  |                    |                   |
|                     |  |                    |                   |

**MISCELLANEOUS:**

3. Describe changes required in other elements of the Work to accommodate the proposed substitution, including work performed by the Owner and separate contractors:

|  |
|--|
|  |
|  |
|  |
|  |
|  |

4. Describe changes of the Work required by the Owner, separate Contractors or Consultants:

|  |
|--|
|  |
|--|

**SUBSTITUTION REQUEST FORM  
(DURING PROCUREMENT)**

**KING ARCHITECTS, INC**

**SECTION 00 43 25**

5. Describe the impact the proposed substitution will have on the work schedule in comparison to the work schedule without approval of the proposed substitution:

6. Define detailed cost impact of the proposed substitution in relation to the originally specified item, including related modifications required to other Work:

7. Proposed Substitution Summary:

Savings to the Owner for accepting substitution

(\$ )

Proposed Change in Contract Time: ☐ Yes ☐ No [Add] [Deduct] Days.

**CERTIFICATION:**

The Undersigned certifies that the substitution:

- Has been fully investigated and determined to be equal or superior in all respects to the specified product.
- Will furnish the same warranty for proposed substitution as for specified product.
- Will have the same maintenance service and source of replacement parts, as applicable.
- Will have no adverse effect on other trades and will not affect or delay progress schedule.
- Will not affect dimensions and functional clearances.
- Will satisfy all requirements of the original product, material or equipment specified, including but not limited to appearance, quality, performance, code compliance, sustainability (LEED) and warranty.

Submitted and Signed by:

Name

Title

Firm:

Address:

Telephone:

**ARCHITECT'S REVIEW AND ACTION:**

- ☐ Substitution approved.
- ☐ Substitution approved as noted.
- ☐ Substitution rejected.
- ☐ Substitution Request received too late.

Signed By:

Name

Title

Date





SUBCONTRACTOR APPROVAL LIST

PROJECT NAME: WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID  
LOCATION: WESTLAKE, LA

PROJECT NUMBER: HL-064-06

| WORK DESCRIPTION | SUBCONTRACTOR | LICENSE NUMBER | FED. I.D. NUMBER |
|------------------|---------------|----------------|------------------|
|                  |               |                |                  |
|                  |               |                |                  |
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|                  |               |                |                  |

**NON-COLLUSION AFFIDAVIT**

PROJECT NAME: **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS  
REBID  
HL-064-06**

LOCATION: 1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

Appearer, as a Bidder on the above-entitled Public Works Project, does hereby attest that: In accordance with the requirements of **Louisiana Revised Statute 38:2224**:

- (1) That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and
- (2) That no part of the contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

\_\_\_\_\_  
NAME OF BIDDER

\_\_\_\_\_  
NAME OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER

SWORN TO AND SUBSCRIBED before me this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_, in Lake Charles, Louisiana.

\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

**SUBMIT THIS FORM TO OWNER WITHIN TEN (10) DAYS AFTER BID OPENING**

**CPSB NON-COLLUSION AFFIDAVIT**

PROJECT NAME: **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS**  
**REBID**  
**HL-064-06**

LOCATION: 1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

Appearer does hereby attest that:

- (1) Bidder is \_\_\_\_\_ of \_\_\_\_\_, the Bidder that has submitted the above referenced Bid:
- (2) Bidder is fully informed respecting the preparations and contents of the attached Bid and of all pertinent circumstances respecting such Bid:
- (3) Such Bid is genuine and is not a collusive or sham Bid:
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communications or conference with any other Bidder or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through the collusion, conspiracy, connivance or unlawful agreement any advantage against the CALCASIEU PARISH SCHOOL BOARD, or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this affiant.

\_\_\_\_\_  
NAME OF BIDDER

\_\_\_\_\_  
NAME OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER

SWORN TO AND SUBSCRIBED before me this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_, in Lake Charles, Louisiana.

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

**SUBMIT THIS FORM TO OWNER WITHIN TEN (10) DAYS AFTER BID OPENING**

**ATTESTATION - PAST CRIMINAL CONVICTIONS OF BIDDERS**

PROJECT NAME: **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS  
REBID  
HL-064-06**

LOCATION: 1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

Appearer, as a Bidder on the above-entitled Public Works Project, does hereby attest that: In accordance with the requirements of **Louisiana Revised Statute 38:2227**:

- A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:
- (a) Public bribery (R.S. 14:118)
  - (b) Corrupt influencing (R.S. 14:120)
  - (c) Extortion (R.S. 14:66)
  - (d) Money laundering (R.S. 14:23)
- B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:
- (a) Theft (R.S. 14:67)
  - (b) Identity Theft (R.S. 14:67.16)
  - (c) Theft of a business record (R.S.14:67.20)
  - (d) False accounting (R.S. 14:70)
  - (e) Issuing worthless checks (R.S. 14:71)
  - (f) Bank fraud (R.S. 14:71.1)
  - (g) Forgery (R.S. 14:72)
  - (h) Contractors; misapplication of payments (R.S. 14:202)
  - (i) Malfeasance in office (R.S. 14:134)

\_\_\_\_\_  
NAME OF BIDDER

\_\_\_\_\_  
NAME OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER

**SUBMIT THIS FORM TO OWNER WITHIN TEN (10) DAYS AFTER BID OPENING**

KING ARCHITECTS, INC

SECTION 00 45 19.19

## VERIFICATION OF EMPLOYEES AFFIDAVIT

PROJECT NAME: **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS  
REBID  
HL-064-06**

LOCATION: 1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

Appearer, as a Bidder on the above-entitled Public Works Project, does hereby attest that: In accordance with the requirements of **Louisiana Revised Statute 38:2212.10**:

- A. Appearer is registered and participates in a status verification system (E-Verify) to verify that all new employees in the State of Louisiana are legal citizens of the United States or are legal aliens.
- B. If awarded the contract, Appearer shall continue, during the term of the contract, to utilize a status verification system (E-Verify) to verify the legal status of all new employees in the state of Louisiana.
- C. If awarded the contract, Appearer shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

\_\_\_\_\_  
NAME OF BIDDER

\_\_\_\_\_  
NAME OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER

SWORN TO AND SUBSCRIBED before me this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_, in Lake Charles, Louisiana.

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

**SUBMIT THIS FORM TO OWNER WITHIN TEN (10) DAYS AFTER BID OPENING**

---

**CERTIFICATION REGARDING UNPAID WORKERS'  
COMPENSATION INSURANCE**

PROJECT NAME:     **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS  
                              REBID  
                              HL-064-06**

LOCATION:            1000 GARDEN DRIVE  
                          WESTLAKE, LOUISIANA 70669

Appearer, as a Bidder on the above-entitled Public Works Project, does hereby certify that: In accordance with the requirements of **Louisiana Revised Statute 23:1726(B)**:

- A.     L.R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.
- B.     By signing below, Affiant certifies that no such assessment is in effect against the bidding / proposing entity.

\_\_\_\_\_  
NAME OF BIDDER

\_\_\_\_\_  
NAME OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER

**SUBMIT THIS FORM TO OWNER WITHIN TEN (10) DAYS AFTER BID OPENING**

## RESOLUTION

PROJECT NAME: **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS  
REBID  
HL-064-06**

LOCATION: 1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

BE IT RESOLVED that \_\_\_\_\_ ,

Officer / Owner of \_\_\_\_\_ ,

is hereby authorized to sign any Contract or document on behalf of:

Company Name: \_\_\_\_\_

\_\_\_\_\_  
Name of Officer/Owner

\_\_\_\_\_  
Title of Officer/Owner

\_\_\_\_\_  
Signature

SWORN TO AND SUBSCRIBED before me this \_\_\_\_\_ day of \_\_\_\_\_,

20\_\_\_\_\_, in \_\_\_\_\_, Louisiana.

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

**SUBMIT THIS FORM TO OWNER WITHIN TEN (10) DAYS AFTER BID OPENING**



## SECTION 00 45 63 – ROOFING GUARANTEE(RG-2)

PROJECT: WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID

PROJECT #: HL-064-06

OWNER: CALCASIEU PARISH SCHOOL BOARD

ADDRESS: 3310 Broad Street, Lake Charles, LA 70616

WHEREAS \_\_\_\_\_

Address \_\_\_\_\_

Telephone (\_\_\_\_\_) \_\_\_\_\_ herein called the "Roofing Contractor", has performed roofing and flashing in accordance with the Contract Documents for Project No. \_\_\_\_\_, hereinafter called the "Work") under a subcontract with \_\_\_\_\_

\_\_\_\_\_ General Contractor on the following Project:

Name of Project: \_\_\_\_\_

Location/Address: \_\_\_\_\_

Name and Type of Building(s): \_\_\_\_\_

Type(s) of Roof Deck(s): \_\_\_\_\_

Total Roof Area: \_\_\_\_\_ SF

Flashing – Edge: \_\_\_\_\_ LF Base: \_\_\_\_\_ LF

Date of Acceptance: \_\_\_\_\_ Guarantee Period: 2 Years

Date of Expiration: \_\_\_\_\_

AND WHEREAS the Roofing Contractor has contracted to guarantee said work against water entry from faulty or defective materials and workmanship for the designated Guarantee period;

NOW THEREFORE the Roofing Contractor as the General Contractor guarantees, subject to the terms and conditions herein set forth, that during the Guarantee Period they will at their own cost and expense, make or cause to be made with approved procedures and materials such repairs to or replacements of said work resulting from water entry or faults or defects of said Work as are necessary to correct faulty and defective work and as are necessary to maintain said Work in watertight conditions and further to respond on or within two (2) working days upon written notification of leaks or defects by the Calcasieu Parish School Board. Furthermore, they will at their own cost or expense maintain the roof for (2) years after acceptance, in accordance with the current edition of the Roof Maintenance Manual published by the Roofing Industry Educational Institute. The roof shall be inspected a minimum of twice each year, and a report prepared documenting the conditions observed at each inspection. These inspections shall be made once during the months of April or May and once during the months of September and October. Two copies of each report shall be forwarded to the Calcasieu Parish School Board.

This Guarantee is made subject to the following terms and conditions:

1. Specifically excluded from this guarantee are damages to the Work, other parts of the building and building contents caused by:
  - a. Lightning, windstorm (includes hurricanes and tornados), hailstorm, earthquakes and other unusual phenomena of the elements;
  - b. Fire; and
  - c. Structural failures causing excessive roof deck, edgings and related roof components movement. When the Work has been damaged by any of the foregoing causes, the Guarantee will be null and void until such damage has been repaired by the Roofing Contractor, and until the cost and expense thereof has been paid by the Owner or another responsible party so designated.
2. During the Guarantee Period, if the Calcasieu Parish School Board allows alteration of the Work by anyone other than a Contractor approved in writing by the Roofing Subcontractor, General Contractor, and Roofing Material Manufacturer prior to the work being performed, including cutting, patching and maintenance in connection with penetrations, attachment of other work, and positioning of anything on the roof, this Guarantee shall become null and void upon the date of said alterations. If the Calcasieu Parish School Board engages the Roofing Contractor to perform said alterations, the Guarantee shall not become null and void, unless the Roofing Contractor, prior to proceeding with said work, shall have notified the Calcasieu Parish School Board in writing, showing reasonable cause for claim that said alterations would likely damage or deteriorate the Work, thereby reasonably justifying a termination of this Guarantee.
3. During the Guarantee Period, if the original use of the roof is changed and it becomes used for, but for which it was not originally designed or specified, as a promenade, work deck, spray-cooled surface, flooded basin, or other use of service more severe than originally specified, this Guarantee shall become null and void upon the date of said change.
4. During the Guarantee Period, if any building or area of a building is changed to uses creating extremes of interior temperature and/or humidity, but for which it was not originally designed and specified, without provisions and alterations made to the building which effectively contain or control these conditions, this Guarantee shall become null and void upon the date of said change.
5. The Calcasieu Parish School Board shall promptly notify the Roofing Contractor in writing of observed, known or suspected leaks, defects or deterioration and shall afford reasonable opportunity for the Roofing Contractor to inspect the Work, and to examine the evidence of such leaks, defects, or deterioration.
6. This Guarantee is recognized to be the only guarantee of the General and Roofing Contractor on said work and shall not operate to restrict or cut off the Owner from other remedies and recourses lawfully available to him in case of roofing failure. Specially, this Guarantee shall not operate to relieve the Roofing Contractor of his responsibility for performance of the original work, regardless of whether the Contract was a Contract directly with the Owner or a Subcontract with the Owner's General Contractor.

IN WITNESS THEREOF, this instrument has been duly executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Roofing Contractor's Signature: \_\_\_\_\_

Typed Name: \_\_\_\_\_

Representing: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

WITNESS \_\_\_\_\_

DATE OF ISSUANCE: \_\_\_\_\_ PROJECT NUMBER: \_\_\_\_\_ HL-064-06

PROJECT NAME: WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID  
1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669OWNER:  
Calcasieu Parish School Board  
3310 Broad Street  
Lake Charles, Louisiana 70616ARCHITECT:  
King Architects, Inc  
1312 Sampson Street  
Westlake, Louisiana 70669

TO CONTRACTOR:

You are hereby notified that your Bid dated \_\_\_\_\_ for the above referenced Contract has been considered. You are the apparent Successful Bidder and have been awarded a Contract for your Bid totaling:

DOLLARS (\$) \_\_\_\_\_ )

One (1) digital copy of **executable contract documents** accompany this Notice of Award.

You must comply with the following conditions precedent **within ten (10) days** of the date you receive this Notice of Award.

1. Deliver to Architect 6 counterparts of the Document 00 52 00 (Contract Agreement), fully executed by Bidder.
2. Deliver with the executed Agreements the Contract security (e.g., performance and payment bonds) and insurance documentation as specified in the Instructions to Bidders and General Conditions.
2. Deliver with the executed Contract Agreements one original set of insurance certificates with endorsements required under Section 00 72 13 (General Conditions) and Section 00 73 00 (Supplementary Conditions).
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle the Owner to consider you in default, annul this Notice of Award and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, the Architect will return to you two fully executed counterparts of the Agreement. One copy is for your records and one is for you to file with the Calcasieu parish Clerk of Court.

Authorized By: (Architect) \_\_\_\_\_ Barry King, AIA for King Architects, Inc

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

Title: \_\_\_\_\_ President

**ACCTANCE OF AWARD**

Receipt of the above Notice of Award is hereby acknowledged this \_\_\_\_\_ day of \_\_\_\_\_, 2022.

Accepted By: (Contractor) \_\_\_\_\_

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

Title: \_\_\_\_\_

## CONTRACT BETWEEN OWNER & CONTRACTOR

and

### PERFORMANCE & PAYMENT BOND

This agreement, entered into this << day >> day of <<month>>, 20XX, by and between << insert name of Contractor >>, hereinafter called the "Contractor", whose business address is << insert Contractor's address >>, and the **Calcasieu Parish School Board**, herein represented by the contracting officer executing this Contract, hereinafter called the "Owner".

Witnesseth that the Contractor and the Owner, in consideration of premises and the mutual covenants; consideration and agreement herein contained, agree as follows:

Statement of Work: The Contractor shall furnish all labor and materials, and perform all of the work required to build, construct, and complete in a thorough and workmanlike manner:

<< Insert Project Name >>  
<< HL-XXX-XXX >>

in strict accordance with the Contract Documents prepared by:

<< insert name and address of  
Architect >>

It is recognized by the parties herein that said Contract Documents, including by way of example and not of limitation, the Drawings and Specifications, dated << insert date of Contract Documents >>, Addenda << # of Addenda >>, the Instructions To Bidders, the Bid Form, the General Conditions Of The Contract For Construction, the Supplementary Conditions, any Addenda thereto, **and the Federal Contract Clauses attached as Exhibit A (8 pages)**, impose duties and obligations upon the parties herein, and said parties thereby agree that they shall be bound by said duties and obligations. For these purposes, all of the provisions contained in the aforementioned Construction Documents are incorporated herein by reference, with the same force and effect as though said Construction Documents were herein set out in full.

Contract - 1

Time for Completion: The work shall be commenced on a date to be specified in a written order of the Owner, and shall be completed within << insert Contract Time >> consecutive calendar days from and after the said date. Time is of the essence.

Compensation to be Paid to the contractor: The Owner will pay, and the Contractor will accept, in full consideration for the performance of the Contract, the sum of << insert Contract Sum >> Dollars and no/100 Dollars (\$###.###.00), which sum represents the Base Bid, including Alternates No. #####.

PERFORMANCE & PAYMENT BOND: To these presents personally came and intervened \_\_\_\_\_ herein acting for \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and duly authorized to transact business in the State Of Louisiana, as Surety, who declared that having taken cognizance of this Contract and of the Construction Documents mentioned herein, he hereby in his capacity as its Attorney In Fact, obligates his said company, as Surety for the said Contractor, unto the said Owner, up to the sum of << insert Contract Sum >> and no/100 Dollars (\$###.###.00).

The condition of this Performance & Payment Bond shall be that should the Contractor herein not perform the Contract in accordance with the terms and conditions hereof, or should said Contractor not fully indemnify and save harmless the Owner, from all cost and damages which he may suffer by said Contractor's non-performance, or should said Contractor not pay all persons who have and fulfill obligations to perform labor and/or furnish materials in the prosecution of the work provided for herein, including by way of example: workmen, laborers, mechanics, and furnishers of materials, machinery, equipment, and fixtures, then said Surety agrees and is bound to so perform the Contract and make said payment(s).

Provided, that any alterations which may be made in the terms of the Contract or in the work to be done under it, or the giving by the Owner of any extensions of time for the performance of the Contract, or any other forbearance on the part of either the Owner or the Contractor to the other shall not in any way release the Contractor or the Surety from their liability hereunder, notice to the Surety of any such alterations, extensions, or other forbearance being hereby waived.

In witness hereof, the parties herein on the day and year first written above have executed this agreement in six (6) counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

WITNESSES:

\_\_\_\_\_

#####

**CONTRACTOR**

\_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_  
Title

\_\_\_\_\_

**Calcasieu Parish School Board**  
**OWNER**

\_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_  
Title

\_\_\_\_\_

#####

**SURETY**

\_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_  
ATTORNEY IN FACT



Owner (Calcasieu Parish School Board) intends to pursue reimbursement of eligible Project costs from the Federal Emergency Management Agency (FEMA), therefore this Agreement is subject to compliance by Contractor with all applicable federal contract clauses, including but not limited to, the following:

**1. Remedies**

The parties agree that the Owner reserves all rights and privileges under applicable laws and regulations with respect to this contract in the event of a breach of contract, including but not limited to the right to institute legal proceedings in a court of competent jurisdiction seeking monetary damages, court costs and litigation expenses, as applicable.

**2. Termination for Cause and Convenience**

The parties agree that the Owner reserves the right to terminate the contract immediately, with written notice to the Contractor, in the event of a breach or default of the Contractor, including but not limited to situations in which the Contractor fails, after a reasonable opportunity to cure, to: (1) meet schedules, deadlines, and / or delivery dates within the time specified in the procurement solicitation, contract, and / or a purchase order; (2) make any payments owed; or (3) otherwise perform in accordance with the contract and / or the procurement solicitations. The Owner also reserves the right to terminate the contract immediately, with written notice to the Contractor, for convenience, if the Owner believes that it is in the best interest of the Owner to do so. In the event of a termination for convenience of the Owner, the Contractor will be compensated only for work performed and goods provided by the Owner as of the termination date. The amount of compensation due the Contractor in the event of a termination for the convenience of the Owner shall be a reasonable amount, using as a guide factors such as the percentage of work or services performed by the Contractor and accepted by the Owner as of the date of termination, the contract price and any unit prices specified in the contract, as applicable.

**3. Small and Minority Businesses, Women's Business Enterprises, and Labor Surplus Area Firms**

Owner encourages participation from small, minority-owned, women-owned, and labor surplus area business. Incorporation of these types of firms into the project team is encouraged. Additionally, prime contracts are required, if subcontracts are to be let, to take the following affirmative steps 1 through 5 of this section.

- (1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;



## Calcasieu Parish School Board - Hurricane Laura Damages Restoration Program

### **Exhibit A - Federal Contract Clauses**

issue 210216 **REVISED 6-19-2023**

Page 2 of 9

(4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;

(5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

#### **4. Contract Work Hours and Safety Standards Act**

a. *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

b. *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (a) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a) of this section.

c. *Withholding for unpaid wages and liquidated damages.* The Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) of this section.

d. *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (a) through (d) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a) through (d) of this section.

#### **Further Compliance with the Contract Work Hours and Safety Standards Act.**

(1) The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall





contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid.

(2) Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

### **5. Clean Water Act & Federal Water Pollution Control Act**

The Contractor hereby agrees to adhere to the provisions which require compliance with all applicable standards, orders, or requirements issued under Section 508 of the Clean Water Act which prohibits the use under non-exempt Federal contracts, grants or loans of facilities included on the EPA List of Violating Facilities.

Contractor agrees to comply with all applicable standards, orders or regulations issues pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C 1251 et seq.

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The contractor agrees to report each violation to the Owner and understands and agrees that the Owner will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

### **6. Clean Air Act**

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The contractor agrees to report each violation to the Owner and understands and agrees that the Owner will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

### **7. Energy Efficiency**

The Contractor hereby recognizes the mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (P.L. 94-163).



**8. Suspension and Debarment**

Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such the contractor is required to verify that none of the contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

Contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into to the extent set forth elsewhere in this contract. This certification is a material representation of fact relied upon by Owner. If it is later determined that Contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to Owner, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

**9. Anti-Kickback Clause**

The Contractor hereby agrees to adhere to the mandate dictated by the Copeland "Anti-Kickback" Act which provides that each Contractor or subgrantee shall be prohibited from inducing, by any means, any person employed in the completion of work, to give up any part of the compensation to which he is otherwise entitled.

**10. Record Retention, Record Ownership, & Access to Records**

The Contractor shall maintain all records in relation to this Agreement for a period of at least five (5) years after final payment.

All records, reports, documents, or other material related to this Agreement and/or obtained or prepared by Contractor in connection with the performance of the services contracted for herein shall become the property of the Owner and shall, upon request, be returned by Contractor to Owner, at Contractor's expense, at termination or expiration of this contract. Contractor agrees to allow the Owner access to Contractor's records.

**11. No Obligation by Federal Government**

The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

**12. Equal Employment Opportunity**



## Calcasieu Parish School Board - Hurricane Laura Damages Restoration Program

### **Exhibit A - Federal Contract Clauses**

issue 210216 **REVISED 6-19-2023**

Page 5 of 9

Contractor agrees to abide by the requirements of the following as applicable: Title VI and Title VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended the Vietnam Era of 1975, and the Americans with Disabilities Act of 1990. Contractor agrees not to discriminate in its employment practices, and will render services under this Agreement and any contract entered into as a result of this Agreement, without regard to race, color, religion, sex, sexual orientation, national origin, veteran status, political affiliation, or disabilities. Any act of discrimination committed by Contractor, or failure to comply with these statutory obligations when applicable shall be grounds for termination of this Agreement and any contract entered into as a result of this agreement.

Pursuant to 2 C.F.R. Part 200, Appendix II, C, the contract must include *all* clauses from 41 C.F.R. § 60-1.4(b). These are:

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

*(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.*

*(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.*

*(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.*

*(4) The contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.*



Calcasieu Parish School Board - Hurricane Laura Damages Restoration Program

**Exhibit A - Federal Contract Clauses**

issue 210216 **REVISED 6-19-2023**

Page 6 of 9

*(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.*

*(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.*

*(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.*

*(8) The contractor will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.*

*Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.*

*The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a state or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.*

*The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.*

*The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has*



## Calcasieu Parish School Board - Hurricane Laura Damages Restoration Program

### **Exhibit A - Federal Contract Clauses**

issue 210216 **REVISED 6-19-2023**

Page 7 of 9

*not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.*

#### **13. Procurement of Recovered Materials**

1. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—

- a. Competitively within a timeframe providing for compliance with the contract performance schedule;
- b. Meeting contract performance requirements; or
- c. At a reasonable price.

2. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

3. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.”

#### **14. Access to Records**

The following access to records requirements apply to this contract:

- a. The Contractor agrees to provide Owner, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
- b. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- c. The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.



d. In compliance with the Disaster Recovery Act of 2018, the Owner and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

**15. DHS Seal, Logo, and Flags**

The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

**16. Compliance with Federal Law, Regulations and Executive Orders**

This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives.

**17. No Obligation by Federal Government**

The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

**18. Program Fraud and False or Fraudulent Statements or Related Acts**

The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.

**18B. Domestic Preferences for Procurements**

As appropriate, and to the extent consistent with law, the contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other manufactured products.

For purposes of this clause:

*Produced in the United States* means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

*Manufactured products* mean items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber."

**19. Byrd Anti-Lobbying**

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. §1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient. Sample certification is attached on following page.





**BYRD ANTI-LOBBYING CERTIFICATION**

**RE: PROJECT NAME / HL-NUMBER: Westlake High Gymnasium Hurricane Laura Repairs Rebid / HL-064-06**

**Byrd Anti-Lobbying Certification  
for Contracts, Grants, Loans, and Cooperative Agreements  
(To be executed with Agreement if Contract Sum exceeds \$100,000)**

The undersigned [Contractor] certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form- LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, \_\_\_\_\_, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Proposer understands and agrees that the provisions of 31 U.S.C. § 3801 *et seq.*, apply to this certification and disclosure, if any.

\_\_\_\_\_  
Signature of Contractor's Authorized Representative

\_\_\_\_\_  
Name and Title of Contractor's Authorized Representative

\_\_\_\_\_  
Date

# KING

ARCHITECTS, INC

## NOTICE TO PROCEED

**PROJECT NAME:** WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID  
1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

**CONTRACT INFORMATION:**

Contract For: General Construction  
Contract Date:

**OTHER INFORMATION:**

Date:  
Project Number: HL-064-06

**OWNER:**

Calcasieu Parish School Board  
3310 Broad Street  
Lake Charles, Louisiana 70615

**ARCHITECT:**

King Architects, Inc  
1312 Sampson Street  
Westlake, Louisiana 70669

**TO CONTRACTOR:**

**ATTENTION CONTRACTOR:**

In accordance with the provisions of the Contract General Conditions, you are hereby notified that the Contract Times stated for the Project will commence on . On that date, start performing the obligations required by the Contract Documents. You are to fully complete the work within consecutive calendar days in accordance with your Contract Completion Date of .

The Contract provides for assessment of Liquidated Damages of \$ for each consecutive calendar day that is required to finish the Work after the Contract Completion Date.

Before commencing Work at the Project Site, deliver the certificates of insurance to the Architect as required by the Contract Documents.

Also before commencing Work at the Project Site, perform:

Authorized By: (Architect) Barry King, AIA for King Architects, Inc

Authorized Signature:

Title: President

Date:



## SUBMITTAL TRANSMITTAL FORM

DATE: \_\_\_\_\_

SUBMITTAL NO: \_\_\_\_\_

☐ original submittal ☐ resubmittal

PROJECT NAME: WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID  
1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

PROJECT NUMBER: HL-064-06 KAI:(2032B3)

TO (Architect):

FROM (General Contractor):

Attn: Summer Broussard  
King Architects, Inc  
1312 Sampson Street  
Westlake, Louisiana 70669  
[office@kingarchitects.net](mailto:office@kingarchitects.net)

*Per the Contract Documents, contractor shall use this transmittal form for submittal of submittals, shop drawings, testing reports, and product information. The procedure for submitting these items is located in the Contract Documents.*

*Contractor shall follow all specifications. Failure to follow requirements included in the Contract Documents and Specifications will constitute as reason for the return of the submittal for an additional re-submittal. Contractor is to number each submittal.*

Submittal Name/Description: \_\_\_\_\_

Specification Section No: \_\_\_\_\_

Contractor: \_\_\_\_\_

Subcontractor/Supplier: \_\_\_\_\_

Submittal Type: ☐ Shop Drawing ☐ Sample(s) ☐ Other: \_\_\_\_\_

Notes/Comments: \_\_\_\_\_

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

Contractor hereby certifies that (i) CONTRACTOR has complied with the requirements of the Contract Documents in preparation, review, and submission of designated Submittal and (ii) the Submittal is complete and in accordance with the Contract Documents and requirements of laws and regulations and governing agencies.

CONTRACTOR SIGNATURE PRINT DATE

---

## APPLICATION FOR PAYMENT DOCUMENTS

**The following documents are to be used for Contractor's Applications for Payment:**

Samples not included.

Application for Payment:

AIA Document G702®–1992, Application and Certificate for Payment.

With:

Continuation Sheet:

AIA Document G703®–1992, Continuation Sheet.

Both prepared in accordance with their published Instructions.

**END OF SECTION**



**Designation of Construction Contractor  
as Agent of a Governmental Entity  
Sales Tax Exemption Certificate**

\_\_\_\_\_, an agency of the United States government, or an agency, board, commission, or instrumentality of the State of Louisiana or its political subdivisions, including parishes, municipalities and school boards, does hereby designate the following contractor as its agent for the purpose of making sales tax exempt purchases on behalf of the governmental body:

|                    |       |     |
|--------------------|-------|-----|
| Name of Contractor |       |     |
| Address            |       |     |
| City               | State | ZIP |

This designation of agency shall be effective for purchases of component construction materials, taxable services and leases and rentals of tangible personal property for the following named construction project:

|                      |                 |
|----------------------|-----------------|
| Construction Project | Contract Number |
|----------------------|-----------------|

This designation and acceptance of agency is effective for the period

|                             |                       |
|-----------------------------|-----------------------|
| Beginning Date (mm/dd/yyyy) | End Date (mm/dd/yyyy) |
|-----------------------------|-----------------------|

Purchases for the named project during this period by the designated contractor shall be considered as the legal equivalent of purchases directly by the governmental body. Any materials purchased by this agent shall immediately, upon the vendor’s delivery to the agent, become the property of this government entity. This government entity, as principal, assumes direct liability to the vendor for the payment of any property, services, leases, or rentals made by this designated agent. This agreement does not void or supersede the obligations of any party created under any construction contract related to this project, including specifically any contractual obligation of the construction contractor to submit payment to the vendors of materials or services for the project.

This contractor-agent is not authorized to delegate this purchasing agency to others; separate designations of agency by this governmental entity are required for each contractor or sub-contractor who is to purchase on behalf of this governmental entity. The undersigned hereby certify that this designation is the entirety of the agency designation agreement between them. In order for a purchase for an eligible governmental entity through a designated agent to be eligible for sales tax exemption, the designation of agency must be made, accepted, and disclosed to the vendor before or at the time of the purchase transaction.

| Designation of Agency              |       |                   | Acceptance of Agency                                         |       |                   |
|------------------------------------|-------|-------------------|--------------------------------------------------------------|-------|-------------------|
| Signature of Authorized Designator |       | Date (mm/dd/yyyy) | Signature of Contractor or Subcontractor Authorized Acceptor |       | Date (mm/dd/yyyy) |
| Name of Authorized Designator      |       |                   | Name of Contractor's or Subcontractor's Acceptor             |       |                   |
| Name of Governmental Entity        |       |                   | Name of Contractor                                           |       |                   |
| Address                            |       |                   | Address                                                      |       |                   |
| City                               | State | ZIP               | City                                                         | State | ZIP               |

This designation of agency form, when properly executed by both the contractor and the governmental entity, shall serve as evidence of the sales tax exempt status that has been conferred onto the contractor. No other exemption certificate form is necessary to claim exemption from sales taxes. The agency agreement evidenced by this sales tax exemption certificate must be implemented at the time of contract execution with the governmental entity. The contract between the governmental entity and his agent must contain provisions to authenticate the conferment of agency.

# KING

ARCHITECTS, INC

## REQUEST FOR INFORMATION (RFI)

PROJECT NAME: WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID  
1000 GARDEN DRIVE  
WESTLAKE, LOUISIANA 70669

PROJECT NUMBER: HL-064-06 KAI: 2032B3

RFI No: Issue Date:

CONTRACTOR:

RFI DESCRIPTION:

REFERENCES/ATTACHMENTS:  
Specifications Drawings Other

CONTRACTOR'S RECOMMENDATION:

ARCHITECT'S RESPONSE:

Architect's Name and Title: Date:

☐ This document is not an RFI and therefore is being returned to you without a response. This document has not been entered into the Projects RFI Log.

Note: Some of the items in this response may result in credits or additions which may become part of a future Request for Change Order.

# Construction Contract Change Order SUMMARY

Calcasieu Parish School Board

Item No. \_\_\_\_\_

CO Request No (or RFI, CPR, etc) \_\_\_\_\_

CPSB Project No. HL-064-06

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

Site Code: 064

Project Name: WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID

General Contractor Name: \_\_\_\_\_

Description of Work: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

General Contractor Direct Costs - Breakdown No. \_\_\_\_\_

(See attached breakdown)

Total General Contractor Cost

(General Contract Direct Cost plus OH&P)

\_\_\_\_\_%  
(Max: 8%)

\$0.00

Subcontractor Cost Breakdowns

(See attached.)

| Subcontractor Name | Breakdown No. | A                 | B                | C                  |
|--------------------|---------------|-------------------|------------------|--------------------|
|                    |               | Total Direct Cost | OH&P<br>(Max 8%) | Total<br>A+(A X B) |
| _____              | _____         | _____             | _____%           | \$0.00             |
| _____              | _____         | _____             | _____%           | \$0.00             |
| _____              | _____         | _____             | _____%           | \$0.00             |
| _____              | _____         | _____             | _____%           | \$0.00             |
| _____              | _____         | _____             | _____%           | \$0.00             |
| _____              | _____         | _____             | _____%           | \$0.00             |
| _____              | _____         | _____             | _____%           | \$0.00             |
| _____              | _____         | _____             | _____%           | \$0.00             |

Subcontractor Direct Costs Total

(Sum column A)

\$ -

Subcontractor Direct Costs + Subcontractor OH&P

(Sum column C)

\$0.00

General Contractor OH&P on Subcontractor Direct Cost at

(Sum column A times General Contractor OH&P rate. )

\_\_\_\_\_%  
(Max: 8%)

\$0.00

Total Subcontractor Costs

(Subcontractor Direct Costs + OH&P + General Contractor OH&P)

\$0.00

Change Order Subtotal

(Sum of Total General Contractor Costs and Total Subcontractor Costs)

\$0.00

Performance and Payment Bond at

(Change Order Subtotal times Performance and Payment Bond rate)

\_\_\_\_\_%

\$0.00

Amount will be ☐ increased ☐ decreased ☐ unchanged by

(Sum of Change Order Subtotal and Performance and Payment Bond)

\$0.00

Days will be ☐ increased ☐ decreased ☐ unchanged by

(Attach supporting data such as meteorological reports)

## CHANGE ORDER

Change Order No.: << CO number >>  
Date: << date >>  
Contract Date: << Contract Date >>

Project No.: HL-064-06

Project Name: WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS REBID  
Calcasieu Parish School Board  
Hurricane Laura Damages Restoration Program

To: << Contractor >>  
<< address 1 >>  
<< address 2 >>

You are hereby directed to make the following change(s) in this Contract: (Attach Itemized Recap Sheet)

|                                                 |                      |
|-------------------------------------------------|----------------------|
| The Original Contract Sum                       | \$ ###,###.##        |
| Net Change by Previous Change Order             | <u>\$ ###,###.##</u> |
| Contract Sum Prior to this Change Order         | \$ ###,###.##        |
| Contract Sum will be _____ by this Change Order | <u>\$ ###,###.##</u> |
| New Contract Sum Including this Change Order    | \$ ###,###.##        |

Contract Time will be **INCREASED / DECREASED** by: ## days  
Revised Contract Completion Date: ##### ##, 20XX

RECOMMENDED

ACCEPTED

APPROVED

King Architects, Inc  
(ARCHITECT)

<< Contractor >>  
(CONTRACTOR)

Calcasieu Parish School  
Board  
(OWNER)

1312 Sampson Street  
Westlake, Louisiana 70669

3310 Broad Street  
Lake Charles, LA 70615

By: \_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

Dated: \_\_\_\_\_

Dated: \_\_\_\_\_

Dated: \_\_\_\_\_

---

**RECOMMENDATION OF ACCEPTANCE**

Dated: << date >>

Project No.: **HL-064-06**

Project Name: **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS  
REBID  
Hurricane Laura Damages Restoration Program  
Calcasieu Parish School Board**

Architect: King Architects, Inc  
1312 Sampson Street  
Westlake, Louisiana 70669

Contractor: << Contractor >>  
<< address 1 >>  
<< address 2 >>

Owner: **Calcasieu Parish School Board  
3310 Broad Street  
Lake Charles, LA 70615**

I hereby certify that, to the best of my knowledge and belief, this project is complete or substantially complete, in accordance with the plans and specifications to a point that it can be used for the purpose intended, and I hereby recommend that this project be accepted.

Date of Acceptance by Architect: << date >>

Contract Date of Completion: << date >> Number  
of Days Overrun / Underrun: << days >>

Liquidated Damages Per Day Stipulated in Contract: << \$ XXX.XX >>

Value of Punch List (Itemized List Attached): << \$ XXX.XX >>

Was Part of the Project Occupied Prior To Acceptance: Yes / No

Portion Occupied: **Not Applicable** (Attach Beneficial Occupancy Forms)

Accepted: \_\_\_\_\_  
King Architects, Inc

For Use By Owner:

I concur in the Acceptance of this project: \_\_\_\_\_  
Calcasieu Parish School Board

**BENEFICIAL OCCUPANCY**

\* Not for Recordation \*

Dated: &lt;&lt; date &gt;&gt;

Project No.: **HL-064-06**Project Name: **WESTLAKE HIGH GYMNASIUM HURRICANE LAURA REPAIRS  
REBID****Hurricane Laura Damages Restoration Program  
Calcasieu Parish School Board**Architect: King Architects, Inc  
1312 Sampson Street  
Westlake, Louisiana 70669Contractor: << Contractor >>  
<< address 1 >>  
<< address 2 >>Owner: Calcasieu Parish School Board  
3310 Board Street  
Lake Charles, Louisiana 70615

The Owner desires to utilize the portion(s) of the Project described below prior to Substantial Completion.

The portion(s) of the Project described below is/are, to the best of my knowledge and belief, complete to a point that they may be legally occupied, and utilized as intended, in accordance with the requirements of the Contract Documents.

The Owner's occupancy of any portion of this project does not violate any applicable warranties, and does not constitute Acceptance of the Project, as a whole.

The portion(s) of the subject Project described below is, to the best of my knowledge and belief, complete to a point that the Owner desires to use in accordance with the requirements of the Contract Documents.

Portion(s) Occupied: &lt;&lt; describe portions of Project &gt;&gt;

Date Occupied: &lt;&lt; insert date of Beneficial Occupancy &gt;&gt;

Warranty Items Covered by Occupancy (See attached list).



Punch List: Attached, dated \_\_\_\_\_  
(If not applicable, indicate "N/A")

Punch List Value \$ \_\_\_\_\_

Accepted by:

\_\_\_\_\_  
**Architect**  
**King Architects, Inc**

\_\_\_\_\_  
**Contractor**  
<< Contractor >>

\_\_\_\_\_  
**Owner**  
**Calcasieu Parish School Board**

\* Not for Recordation \*



# AIA® Document A201® – 2017

## General Conditions of the Contract for Construction

for the following PROJECT:

*(Name and location or address)*

**Calcasieu Parish School Board Hurricane Laura Damages Restoration Program**  
AIA Document A201™–2017, General Conditions of the Contract for Construction,  
amended by Owner, issue 210225.

### THE OWNER:

*(Name, legal status and address)*

**Calcasieu Parish School Board**  
3310 Broad Street  
Lake Charles, LA 70615  
337-217-4000

### THE ARCHITECT:

*(Name, legal status and address)*

Refer to the Advertisement for Bids issued for the individual HL-Project for name and address of Architect

### TABLE OF ARTICLES

- |    |                                                  |
|----|--------------------------------------------------|
| 1  | GENERAL PROVISIONS                               |
| 2  | OWNER                                            |
| 3  | CONTRACTOR                                       |
| 4  | ARCHITECT                                        |
| 5  | SUBCONTRACTORS                                   |
| 6  | CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS |
| 7  | CHANGES IN THE WORK                              |
| 8  | TIME                                             |
| 9  | PAYMENTS AND COMPLETION                          |
| 10 | PROTECTION OF PERSONS AND PROPERTY               |
| 11 | INSURANCE AND BONDS                              |
| 12 | UNCOVERING AND CORRECTION OF WORK                |
| 13 | MISCELLANEOUS PROVISIONS                         |

### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

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

Init.

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**User Notes:**

(1145659762)

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES



Init.

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## INDEX

(Topics and numbers in bold are Section headings.)

**NOTE:** This Document has been amended by Owner without revision to references listed in this Index.

### Acceptance of Nonconforming Work

9.6.6, 9.9.3, **12.3**

Acceptance of Work

9.6.6, 9.8.2, 9.9.3, 9.10.1, 9.10.3, **12.3**

### Access to Work

**3.16**, 6.2.1, **12.1**

Accident Prevention

10

Acts and Omissions

3.2, 3.3.2, 3.12.8, 3.18, 4.2.3, 8.3.1, 9.5.1, 10.2.5,

10.2.8, 13.3.2, 14.1, 15.1.2, **15.2**

Addenda

1.1.1

Additional Costs, Claims for

3.7.4, 3.7.5, 10.3.2, **15.1.5**

### Additional Inspections and Testing

9.4.2, 9.8.3, **12.2.1**, **13.4**

### Additional Time, Claims for

3.2.4, 3.7.4, 3.7.5, 3.10.2, 8.3.2, **15.1.6**

### Administration of the Contract

3.1.3, **4.2**, 9.4, 9.5

Advertisement or Invitation to Bid

1.1.1

Aesthetic Effect

4.2.13

### Allowances

**3.8**

### Applications for Payment

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5.1, 9.5.4, 9.6.3, 9.7, 9.10

Approvals

2.1.1, 2.3.1, 2.5, 3.1.3, 3.10.2, 3.12.8, 3.12.9,

3.12.10.1, 4.2.7, 9.3.2, **13.4.1**

### Arbitration

8.3.1, **15.3.2**, **15.4**

## ARCHITECT

**4**

Architect, Definition of

**4.1.1**

Architect, Extent of Authority

2.5, 3.12.7, 4.1.2, 4.2, 5.2, 6.3, 7.1.2, 7.3.4, 7.4, 9.2,

9.3.1, 9.4, 9.5, 9.6.3, 9.8, 9.10.1, 9.10.3, **12.1**, **12.2.1**,

**13.4.1**, **13.4.2**, **14.2.2**, **14.2.4**, **15.1.4**, **15.2.1**

Architect, Limitations of Authority and Responsibility

2.1.1, 3.12.4, 3.12.8, 3.12.10, 4.1.2, 4.2.1, 4.2.2, 4.2.3,

4.2.6, 4.2.7, 4.2.10, 4.2.12, 4.2.13, 5.2.1, 7.4, 9.4.2,

9.5.4, 9.6.4, **15.1.4**, **15.2**

Architect's Additional Services and Expenses

2.5, **12.2.1**, **13.4.2**, **13.4.3**, **14.2.4**

Architect's Administration of the Contract

3.1.3, 3.7.4, **15.2**, 9.4.1, 9.5

Architect's Approvals

2.5, 3.1.3, 3.5, 3.10.2, 4.2.7

Architect's Authority to Reject Work

3.5, 4.2.6, **12.1.2**, **12.2.1**

Architect's Copyright

1.1.7, **1.5**

Architect's Decisions

3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 4.2.14, 6.3,

7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4.1, 9.5, 9.8.4, 9.9.1,

**13.4.2**, **15.2**

Architect's Inspections

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, **13.4**

Architect's Instructions

3.2.4, 3.3.1, 4.2.6, 4.2.7, **13.4.2**

Architect's Interpretations

4.2.11, 4.2.12

Architect's Project Representative

4.2.10

Architect's Relationship with Contractor

1.1.2, **1.5**, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2,

3.5, 3.7.4, 3.7.5, 3.9.2, 3.9.3, 3.10, 3.11, 3.12, 3.16,

3.18, 4.1.2, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5,

9.7, 9.8, 9.9, 10.2.6, 10.3, **11.3**, **12**, **13.3.2**, **13.4**, **15.2**

Architect's Relationship with Subcontractors

1.1.2, 4.2.3, 4.2.4, 4.2.6, 9.6.3, 9.6.4, **11.3**

Architect's Representations

9.4.2, 9.5.1, 9.10.1

Architect's Site Visits

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, **13.4**

Asbestos

**10.3.1**

Attorneys' Fees

3.18.1, 9.6.8, 9.10.2, **10.3.3**

Award of Separate Contracts

6.1.1, 6.1.2

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

**5.2**

## Basic Definitions

**1.1**

Bidding Requirements

1.1.1

Binding Dispute Resolution

8.3.1, 9.7, **11.5**, **13.1**, **15.1.2**, **15.1.3**, **15.2.1**, **15.2.5**,

**15.2.6.1**, **15.3.1**, **15.3.2**, **15.3.3**, **15.4.1**

Bonds, Lien

7.3.4.4, 9.6.8, 9.10.2, 9.10.3

### Bonds, Performance, and Payment

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**, **11.1.3**, **11.5**

### Building Information Models Use and Reliance

**1.8**

Building Permit

3.7.1

## Capitalization

**1.3**

Certificate of Substantial Completion

9.8.3, 9.8.4, 9.8.5

**Certificates for Payment**

4.2.1, 4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7,

9.10.1, 9.10.3, 14.1.1.3, 14.2.4, 15.1.4

Certificates of Inspection, Testing or Approval

13.4.4

Certificates of Insurance

9.10.2

**Change Orders**

1.1.1, 3.4.2, 3.7.4, 3.8.2.3, 3.11, 3.12.8, 4.2.8, 5.2.3,

7.1.2, 7.1.3, **7.2**, 7.3.2, 7.3.7, 7.3.9, 7.3.10, 8.3.1,

9.3.1.1, 9.10.3, 10.3.2, 11.2, 11.5, 12.1.2

**Change Orders**, Definition of

**7.2.1**

**CHANGES IN THE WORK**

2.2.2, 3.11, 4.2.8, 7, 7.2.1, 7.3.1, 7.4, 8.3.1, 9.3.1.1,

11.5

**Claims**, Definition of

**15.1.1**

**Claims**, Notice of

1.6.2, 15.1.3

**CLAIMS AND DISPUTES**

3.2.4, 6.1.1, 6.3, 7.3.9, 9.3.3, 9.10.4, 10.3.3, **15**, 15.4

**Claims and Timely Assertion of Claims**

15.4.1

**Claims for Additional Cost**

3.2.4, 3.3.1, 3.7.4, 7.3.9, 9.5.2, 10.2.5, 10.3.2, **15.1.5**

**Claims for Additional Time**

3.2.4, 3.3.1, 3.7.4, 6.1.1, 8.3.2, 9.5.2, 10.3.2, **15.1.6**

**Concealed or Unknown Conditions, Claims for**

**3.7.4**

**Claims for Damages**

3.2.4, 3.18, 8.3.3, 9.5.1, 9.6.7, 10.2.5, 10.3.3, 11.3,

11.3.2, 14.2.4, 15.1.7

**Claims Subject to Arbitration**

15.4.1

**Cleaning Up**

**3.15**, 6.3

**Commencement of the Work**, Conditions Relating to

2.2.1, 3.2.2, 3.4.1, 3.7.1, 3.10.1, 3.12.6, 5.2.1, 5.2.3,

6.2.2, 8.1.2, 8.2.2, 8.3.1, 11.1, 11.2, **15.1.5**

**Commencement of the Work**, Definition of

**8.1.2**

**Communications**

3.9.1, **4.2.4**

**Completion**, Conditions Relating to

3.4.1, 3.11, 3.15, 4.2.2, 4.2.9, 8.2, 9.4.2, 9.8, 9.9.1,

9.10, 12.2, 14.1.2, 15.1.2

**COMPLETION, PAYMENTS AND**

**9**

**Completion**, Substantial

3.10.1, 4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, 9.8, 9.9.1,

9.10.3, 12.2, 15.1.2

**Compliance with Laws**

2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 10.2.2, 13.1,

13.3, 13.4.1, 13.4.2, 13.5, 14.1.1, 14.2.1.3, 15.2.8,

15.4.2, 15.4.3

**Concealed or Unknown Conditions**

3.7.4, 4.2.8, 8.3.1, 10.3

**Conditions of the Contract**

1.1.1, 6.1.1, 6.1.4

**Consent**, Written

3.4.2, 3.14.2, 4.1.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3, 13.2,

15.4.4.2

**Consolidation or Joinder**

**15.4.4**

**CONSTRUCTION BY OWNER OR BY  
SEPARATE CONTRACTORS**

1.1.4, **6**

**Construction Change Directive**, Definition of

**7.3.1**

**Construction Change Directives**

1.1.1, 3.4.2, 3.11, 3.12.8, 4.2.8, 7.1.1, 7.1.2, 7.1.3, **7.3**,

9.3.1.1

**Construction Schedules**, Contractor's

3.10, 3.11, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2

**Contingent Assignment of Subcontracts**

**5.4**, 14.2.2.2

**Continuing Contract Performance**

**15.1.4**

**Contract**, Definition of

**1.1.2**

**CONTRACT, TERMINATION OR  
SUSPENSION OF THE**

5.4.1.1, 5.4.2, 11.5, **14**

**Contract Administration**

3.1.3, 4, 9.4, 9.5

**Contract Award and Execution**, Conditions Relating  
to

3.7.1, 3.10, 5.2, 6.1

**Contract Documents**, Copies Furnished and Use of  
1.5.2, 2.3.6, 5.3

**Contract Documents**, Definition of

**1.1.1**

**Contract Sum**

2.2.2, 2.2.4, 3.7.4, 3.7.5, 3.8, 3.10.2, 5.2.3, 7.3, 7.4,

**9.1**, 9.2, 9.4.2, 9.5.1.4, 9.6.7, 9.7, 10.3.2, 11.5, 12.1.2,

12.3, 14.2.4, 14.3.2, 15.1.4.2, **15.1.5**, **15.2.5**

**Contract Sum**, Definition of

**9.1**

**Contract Time**

1.1.4, 2.2.1, 2.2.2, 3.7.4, 3.7.5, 3.10.2, 5.2.3, 6.1.5,

7.2.1.3, 7.3.1, 7.3.5, 7.3.6, 7, 7, 7.3.10, 7.4, 8.1.1,

8.2.1, 8.2.3, 8.3.1, 9.5.1, 9.7, 10.3.2, 12.1.1, 12.1.2,

14.3.2, 15.1.4.2, 15.1.6.1, 15.2.5

**Contract Time**, Definition of

8.1.1

**CONTRACTOR**

**3**

Contractor, Definition of  
**3.1, 6.1.2**  
**Contractor's Construction and Submittal Schedules**  
**3.10**, 3.12.1, 3.12.2, 4.2.3, 6.1.3, 15.1.6.2  
 Contractor's Employees  
 2.2.4, 3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3, 11.3, 14.1, 14.2.1.1  
**Contractor's Liability Insurance**  
**11.1**  
 Contractor's Relationship with Separate Contractors and Owner's Forces  
 3.12.5, 3.14.2, 4.2.4, 6, 11.3, 12.2.4  
 Contractor's Relationship with Subcontractors  
 1.2.2, 2.2.4, 3.3.2, 3.18.1, 3.18.2, 4.2.4, 5, 9.6.2, 9.6.7, 9.10.2, 11.2, 11.3, 11.4  
 Contractor's Relationship with the Architect  
 1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2, 3.5.1, 3.7.4, 3.10, 3.11, 3.12, 3.16, 3.18, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3, 12, 13.4, 15.1.3, 15.2.1  
 Contractor's Representations  
 3.2.1, 3.2.2, 3.5, 3.12.6, 6.2.2, 8.2.1, 9.3.3, 9.8.2  
 Contractor's Responsibility for Those Performing the Work  
 3.3.2, 3.18, 5.3, 6.1.3, 6.2, 9.5.1, 10.2.8  
 Contractor's Review of Contract Documents  
 3.2  
 Contractor's Right to Stop the Work  
 2.2.2, 9.7  
 Contractor's Right to Terminate the Contract  
 14.1  
 Contractor's Submittals  
 3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 9.2, 9.3, 9.8.2, 9.8.3, 9.9.1, 9.10.2, 9.10.3  
 Contractor's Superintendent  
 3.9, 10.2.6  
 Contractor's Supervision and Construction Procedures  
 1.2.2, 3.3, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.4, 7.3.6, 8.2, 10, 12, 14, 15.1.4  
 Coordination and Correlation  
 1.2, 3.2.1, 3.3.1, 3.10, 3.12.6, 6.1.3, 6.2.1  
 Copies Furnished of Drawings and Specifications  
 1.5, 2.3.6, 3.11  
 Copyrights  
 1.5, **3.17**  
 Correction of Work  
 2.5, 3.7.3, 9.4.2, 9.8.2, 9.8.3, 9.9.1, 12.1.2, **12.2**, 12.3, 15.1.3.1, 15.1.3.2, 15.2.1  
**Correlation and Intent of the Contract Documents**  
**1.2**  
**Cost**, Definition of  
**7.3.4**

Costs  
 2.5, 3.2.4, 3.7.3, 3.8.2, 3.15.2, 5.4.2, 6.1.1, 6.2.3, 7.3.3.3, 7.3.4, 7.3.8, 7.3.9, 9.10.2, 10.3.2, 10.3.6, 11.2, 12.1.2, 12.2.1, 12.2.4, 13.4, 14  
**Cutting and Patching**  
**3.14**, 6.2.5  
 Damage to Construction of Owner or Separate Contractors  
 3.14.2, 6.2.4, 10.2.1.2, 10.2.5, 10.4, 12.2.4  
 Damage to the Work  
 3.14.2, 9.9.1, 10.2.1.2, 10.2.5, 10.4, 12.2.4  
 Damages, Claims for  
 3.2.4, 3.18, 6.1.1, 8.3.3, 9.5.1, 9.6.7, 10.3.3, 11.3.2, 11.3, 14.2.4, 15.1.7  
 Damages for Delay  
 6.2.3, 8.3.3, 9.5.1.6, 9.7, 10.3.2, 14.3.2  
**Date of Commencement of the Work**, Definition of  
**8.1.2**  
**Date of Substantial Completion**, Definition of  
**8.1.3**  
**Day**, Definition of  
**8.1.4**  
 Decisions of the Architect  
 3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 6.3, 7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4, 9.5.1, 9.8.4, 9.9.1, 13.4.2, 14.2.2, 14.2.4, 15.1, 15.2  
**Decisions to Withhold Certification**  
 9.4.1, **9.5**, 9.7, 14.1.1.3  
 Defective or Nonconforming Work, Acceptance, Rejection and Correction of  
 2.5, 3.5, 4.2.6, 6.2.3, 9.5.1, 9.5.3, 9.6.6, 9.8.2, 9.9.3, 9.10.4, 12.2.1  
 Definitions  
 1.1, 2.1.1, 3.1.1, 3.5, 3.12.1, 3.12.2, 3.12.3, 4.1.1, 5.1, 6.1.2, 7.2.1, 7.3.1, 8.1, 9.1, 9.8.1, 15.1.1  
**Delays and Extensions of Time**  
**3.2**, **3.7.4**, 5.2.3, 7.2.1, 7.3.1, **7.4**, **8.3**, 9.5.1, **9.7**, 10.3.2, **10.4**, 14.3.2, **15.1.6**, 15.2.5  
**Digital Data Use and Transmission**  
**1.7**  
 Disputes  
 6.3, 7.3.9, 15.1, 15.2  
**Documents and Samples at the Site**  
**3.11**  
**Drawings**, Definition of  
**1.1.5**  
 Drawings and Specifications, Use and Ownership of  
 3.11  
 Effective Date of Insurance  
 8.2.2  
**Emergencies**  
**10.4**, 14.1.1.2, **15.1.5**  
 Employees, Contractor's  
 3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3.3, 11.3, 14.1, 14.2.1.1

Equipment, Labor, or Materials

1.1.3, 1.1.6, 3.4, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1, 4.2.6, 4.2.7, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2

Execution and Progress of the Work

1.1.3, 1.2.1, 1.2.2, 2.3.4, 2.3.6, 3.1, 3.3.1, 3.4.1, 3.7.1, 3.10.1, 3.12, 3.14, 4.2, 6.2.2, 7.1.3, 7.3.6, 8.2, 9.5.1, 9.9.1, 10.2, 10.3, 12.1, 12.2, 14.2, 14.3.1, 15.1.4

Extensions of Time

3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3, 7.4, 9.5.1, 9.7, 10.3.2, 10.4, 14.3, 15.1.6, **15.2.5**

**Failure of Payment**

9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Faulty Work

(See Defective or Nonconforming Work)

**Final Completion and Final Payment**

4.2.1, 4.2.9, 9.8.2, **9.10**, 12.3, 14.2.4, 14.4.3

Financial Arrangements, Owner's

2.2.1, 13.2.2, 14.1.1.4

## **GENERAL PROVISIONS**

### **1**

**Governing Law**

#### **13.1**

Guarantees (See Warranty)

**Hazardous Materials and Substances**

#### **10.2.4, 10.3**

Identification of Subcontractors and Suppliers

5.2.1

**Indemnification**

3.17, **3.18**, 9.6.8, 9.10.2, 10.3.3, 11.3

**Information and Services Required of the Owner**

2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10.1, 6.1.3, 6.1.4, 6.2.5, 9.6.1, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2, 14.1.1.4, 14.1.4, 15.1.4

**Initial Decision**

#### **15.2**

**Initial Decision Maker, Definition of**

1.1.8

Initial Decision Maker, Decisions

14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

Initial Decision Maker, Extent of Authority

14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

**Injury or Damage to Person or Property**

#### **10.2.8, 10.4**

Inspections

3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 12.2.1, 13.4

Instructions to Bidders

1.1.1

Instructions to the Contractor

3.2.4, 3.3.1, 3.8.1, 5.2.1, 7, 8.2.2, 12, 13.4.2

**Instruments of Service, Definition of**

#### **1.1.7**

Insurance

6.1.1, 7.3.4, 8.2.2, 9.3.2, 9.8.4, 9.9.1, 9.10.2, 10.2.5, **11**

Insurance, Notice of Cancellation or Expiration

11.1.4, 11.2.3

**Insurance, Contractor's Liability**

#### **11.1**

Insurance, Effective Date of

8.2.2, 14.4.2

**Insurance, Owner's Liability**

#### **11.2**

**Insurance, Property**

**10.2.5**, 11.2, 11.4, 11.5

Insurance, Stored Materials

9.3.2

## **INSURANCE AND BONDS**

### **11**

Insurance Companies, Consent to Partial Occupancy

9.9.1

Insured loss, Adjustment and Settlement of

11.5

Intent of the Contract Documents

1.2.1, 4.2.7, 4.2.12, 4.2.13

**Interest**

#### **13.5**

**Interpretation**

1.1.8, 1.2.3, **1.4**, 4.1.1, 5.1, 6.1.2, 15.1.1

Interpretations, Written

4.2.11, 4.2.12

Judgment on Final Award

15.4.2

**Labor and Materials, Equipment**

1.1.3, 1.1.6, **3.4**, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2

Labor Disputes

8.3.1

Laws and Regulations

1.5, 2.3.2, 3.2.3, 3.2.4, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 9.9.1, 10.2.2, 13.1, 13.3.1, 13.4.2, 13.5, 14, 15.2.8, 15.4

Liens

2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

Limitations, Statutes of

12.2.5, 15.1.2, 15.4.1.1

Limitations of Liability

3.2.2, 3.5, 3.12.10, 3.12.10.1, 3.17, 3.18.1, 4.2.6, 4.2.7, 6.2.2, 9.4.2, 9.6.4, 9.6.7, 9.6.8, 10.2.5, 10.3.3, 11.3, 12.2.5, 13.3.1

Limitations of Time

2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2.7, 5.2, 5.3, 5.4.1, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3, 9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15, 15.1.2, 15.1.3, 15.1.5

**Materials, Hazardous**

#### **10.2.4, 10.3**

Materials, Labor, Equipment and

1.1.3, 1.1.6, 3.4.1, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1.2, 10.2.4, 14.2.1.1, 14.2.1.2



Means, Methods, Techniques, Sequences and Procedures of Construction

3.3.1, 3.12.10, 4.2.2, 4.2.7, 9.4.2

Mechanic's Lien

2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

## **Mediation**

8.3.1, 15.1.3.2, 15.2.1, 15.2.5, 15.2.6, **15.3**, 15.4.1, 15.4.1.1

## **Minor Changes in the Work**

1.1.1, 3.4.2, 3.12.8, 4.2.8, 7.1, **7.4**

## **MISCELLANEOUS PROVISIONS**

### **13**

**Modifications**, Definition of

#### **1.1.1**

Modifications to the Contract

1.1.1, 1.1.2, 2.5, 3.11, 4.1.2, 4.2.1, 5.2.3, 7, 8.3.1, 9.7, 10.3.2

**Mutual Responsibility**

#### **6.2**

**Nonconforming Work, Acceptance of**

9.6.6, 9.9.3, **12.3**

Nonconforming Work, Rejection and Correction of  
2.4, 2.5, 3.5, 4.2.6, 6.2.4, 9.5.1, 9.8.2, 9.9.3, 9.10.4, 12.2

**Notice**

**1.6**, 1.6.1, 1.6.2, 2.1.2, 2.2.2., 2.2.3, 2.2.4, 2.5, 3.2.4, 3.3.1, 3.7.4, 3.7.5, 3.9.2, 3.12.9, 3.12.10, 5.2.1, 7.4, 8.2.2 9.6.8, 9.7, 9.10.1, 10.2.8, 10.3.2, 11.5, 12.2.2.1, 13.4.1, 13.4.2, 14.1, 14.2.2, 14.4.2, 15.1.3, 15.1.5, 15.1.6, 15.4.1

Notice of Cancellation or Expiration of Insurance

11.1.4, 11.2.3

**Notice of Claims**

1.6.2, 2.1.2, 3.7.4, 9.6.8, 10.2.8, **15.1.3**, 15.1.5, 15.1.6, 15.2.8, 15.3.2, 15.4.1

Notice of Testing and Inspections

13.4.1, 13.4.2

Observations, Contractor's

3.2, 3.7.4

Occupancy

2.3.1, 9.6.6, 9.8

Orders, Written

1.1.1, 2.4, 3.9.2, 7, 8.2.2, 11.5, 12.1, 12.2.2.1, 13.4.2, 14.3.1

## **OWNER**

### **2**

**Owner**, Definition of

#### **2.1.1**

**Owner, Evidence of Financial Arrangements**

**2.2**, 13.2.2, 14.1.1.4

**Owner, Information and Services Required of the**

2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10, 6.1.3, 6.1.4, 6.2.5, 9.3.2, 9.6.1, 9.6.4, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2, 14.1.1.4, 14.1.4, 15.1.4

Owner's Authority

1.5, 2.1.1, 2.3.32.4, 2.5, 3.4.2, 3.8.1, 3.12.10, 3.14.2, 4.1.2, 4.2.4, 4.2.9, 5.2.1, 5.2.4, 5.4.1, 6.1, 6.3, 7.2.1,

7.3.1, 8.2.2, 8.3.1, 9.3.2, 9.5.1, 9.6.4, 9.9.1, 9.10.2, 10.3.2, 11.4, 11.5, 12.2.2, 12.3, 13.2.2, 14.3, 14.4, 15.2.7

## **Owner's Insurance**

### **11.2**

Owner's Relationship with Subcontractors

1.1.2, 5.2, 5.3, 5.4, 9.6.4, 9.10.2, 14.2.2

**Owner's Right to Carry Out the Work**

**2.5**, 14.2.2

**Owner's Right to Clean Up**

#### **6.3**

**Owner's Right to Perform Construction and to Award Separate Contracts**

#### **6.1**

**Owner's Right to Stop the Work**

#### **2.4**

Owner's Right to Suspend the Work

14.3

Owner's Right to Terminate the Contract

14.2, 14.4

**Ownership and Use of Drawings, Specifications and Other Instruments of Service**

1.1.1, 1.1.6, 1.1.7, **1.5**, 2.3.6, 3.2.2, 3.11, 3.17, 4.2.12, 5.3

**Partial Occupancy or Use**

9.6.6, **9.9**

**Patching, Cutting and**

**3.14**, 6.2.5

Patents

3.17

**Payment, Applications for**

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5, 9.6.3, 9.7, 9.8.5, 9.10.1, 14.2.3, 14.2.4, 14.4.3

**Payment, Certificates for**

4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1, 9.10.3, 14.1.1.3, 14.2.4

**Payment, Failure of**

9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Payment, Final

4.2.1, 4.2.9, **9.10**, 12.3, 14.2.4, 14.4.3

**Payment Bond, Performance Bond and**

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**

**Payments, Progress**

9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4

## **PAYMENTS AND COMPLETION**

### **9**

Payments to Subcontractors

5.4.2, 9.5.1.3, 9.6.2, 9.6.3, 9.6.4, 9.6.7, 14.2.1.2

PCB

10.3.1

**Performance Bond and Payment Bond**

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**

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

2.3.1, **3.7**, 3.13, 7.3.4.4, 10.2.2

## **PERSONS AND PROPERTY, PROTECTION OF**

### **10**



Polychlorinated Biphenyl  
10.3.1  
**Product Data**, Definition of  
**3.12.2**  
**Product Data and Samples, Shop Drawings**  
3.11, **3.12**, 4.2.7  
**Progress and Completion**  
4.2.2, **8.2**, 9.8, 9.9.1, 14.1.4, 15.1.4  
**Progress Payments**  
9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4  
**Project**, Definition of  
**1.1.4**  
Project Representatives  
4.2.10  
**Property Insurance**  
10.2.5, **11.2**  
**Proposal Requirements**  
1.1.1  
**PROTECTION OF PERSONS AND PROPERTY**  
**10**  
Regulations and Laws  
1.5, 2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 9.9.1,  
10.2.2, 13.1, 13.3, 13.4.1, 13.4.2, 13.5, 14, 15.2.8, 15.4  
Rejection of Work  
4.2.6, 12.2.1  
Releases and Waivers of Liens  
9.3.1, 9.10.2  
Representations  
3.2.1, 3.5, 3.12.6, 8.2.1, 9.3.3, 9.4.2, 9.5.1, 9.10.1  
Representatives  
2.1.1, 3.1.1, 3.9, 4.1.1, 4.2.10, 13.2.1  
Responsibility for Those Performing the Work  
3.3.2, 3.18, 4.2.2, 4.2.3, 5.3, 6.1.3, 6.2, 6.3, 9.5.1, 10  
Retainage  
9.3.1, 9.6.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3  
**Review of Contract Documents and Field**  
**Conditions by Contractor**  
**3.2**, 3.12.7, 6.1.3  
Review of Contractor's Submittals by Owner and  
Architect  
3.10.1, 3.10.2, 3.11, 3.12, 4.2, 5.2, 6.1.3, 9.2, 9.8.2  
Review of Shop Drawings, Product Data and Samples  
by Contractor  
3.12  
**Rights and Remedies**  
1.1.2, 2.4, 2.5, 3.5, 3.7.4, 3.15.2, 4.2.6, 5.3, 5.4, 6.1,  
6.3, 7.3.1, 8.3, 9.5.1, 9.7, 10.2.5, 10.3, 12.2.1, 12.2.2,  
12.2.4, **13.3**, 14, 15.4  
**Royalties, Patents and Copyrights**  
**3.17**  
Rules and Notices for Arbitration  
15.4.1  
**Safety of Persons and Property**  
**10.2**, 10.4  
**Safety Precautions and Programs**  
3.3.1, 4.2.2, 4.2.7, 5.3, **10.1**, 10.2, 10.4

**Samples**, Definition of  
**3.12.3**  
**Samples, Shop Drawings, Product Data and**  
3.11, **3.12**, 4.2.7  
**Samples at the Site, Documents and**  
**3.11**  
**Schedule of Values**  
**9.2**, 9.3.1  
Schedules, Construction  
3.10, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2  
Separate Contracts and Contractors  
1.1.4, 3.12.5, 3.14.2, 4.2.4, 4.2.7, 6, 8.3.1, 12.1.2  
**Separate Contractors**, Definition of  
**6.1.1**  
**Shop Drawings**, Definition of  
**3.12.1**  
**Shop Drawings, Product Data and Samples**  
3.11, **3.12**, 4.2.7  
**Site**, Use of  
**3.13**, 6.1.1, 6.2.1  
Site Inspections  
3.2.2, 3.3.3, 3.7.1, 3.7.4, 4.2, 9.9.2, 9.4.2, 9.10.1, 13.4  
Site Visits, Architect's  
3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.4  
Special Inspections and Testing  
4.2.6, 12.2.1, 13.4  
**Specifications**, Definition of  
**1.1.6**  
**Specifications**  
1.1.1, **1.1.6**, 1.2.2, 1.5, 3.12.10, 3.17, 4.2.14  
Statute of Limitations  
15.1.2, 15.4.1.1  
Stopping the Work  
2.2.2, 2.4, 9.7, 10.3, 14.1  
Stored Materials  
6.2.1, 9.3.2, 10.2.1.2, 10.2.4  
**Subcontractor**, Definition of  
**5.1.1**  
**SUBCONTRACTORS**  
**5**  
Subcontractors, Work by  
1.2.2, 3.3.2, 3.12.1, 3.18, 4.2.3, 5.2.3, 5.3, 5.4, 9.3.1.2,  
9.6.7  
**Subcontractual Relations**  
**5.3**, 5.4, 9.3.1.2, 9.6, 9.10, 10.2.1, 14.1, 14.2.1  
Submittals  
3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 7.3.4, 9.2, 9.3, 9.8,  
9.9.1, 9.10.2, 9.10.3  
Submittal Schedule  
3.10.2, 3.12.5, 4.2.7  
**Subrogation, Waivers of**  
6.1.1, **11.3**  
**Substances, Hazardous**  
**10.3**  
**Substantial Completion**  
4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, **9.8**, 9.9.1, 9.10.3, 12.2,  
15.1.2

## **Substantial Completion, Definition of**

### **9.8.1**

Substitution of Subcontractors

5.2.3, 5.2.4

Substitution of Architect

2.3.3

Substitutions of Materials

3.4.2, 3.5, 7.3.8

## **Sub-subcontractor, Definition of**

### **5.1.2**

Subsurface Conditions

3.7.4

## **Successors and Assigns**

### **13.2**

## **Superintendent**

3.9, 10.2.6

## **Supervision and Construction Procedures**

1.2.2, 3.3, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3,

7.3.4, 8.2, 8.3.1, 9.4.2, 10, 12, 14, 15.1.4

Suppliers

1.5, 3.12.1, 4.2.4, 4.2.6, 5.2.1, 9.3, 9.4.2, 9.5.4, 9.6, 9.10.5, 14.2.1

Surety

5.4.1.2, 9.6.8, 9.8.5, 9.10.2, 9.10.3, 11.1.2, 14.2.2, 15.2.7

Surety, Consent of

9.8.5, 9.10.2, 9.10.3

Surveys

1.1.7, 2.3.4

## **Suspension by the Owner for Convenience**

### **14.3**

Suspension of the Work

3.7.5, 5.4.2, 14.3

Suspension or Termination of the Contract

5.4.1.1, 14

## **Taxes**

3.6, 3.8.2.1, 7.3.4.4

## **Termination by the Contractor**

14.1, 15.1.7

## **Termination by the Owner for Cause**

5.4.1.1, 14.2, 15.1.7

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

### **14.4**

Termination of the Architect

2.3.3

Termination of the Contractor Employment

14.2.2

## **TERMINATION OR SUSPENSION OF THE CONTRACT**

### **14**

## **Tests and Inspections**

3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3,

9.9.2, 9.10.1, 10.3.2, 12.2.1, 13.4

## **TIME**

### **8**

## **Time, Delays and Extensions of**

3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3.1, 7.4, 8.3, 9.5.1, 9.7, 10.3.2, 10.4, 14.3.2, 15.1.6, 15.2.5

Time Limits

2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2, 5.2, 5.3, 5.4, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3, 9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15.1.2, 15.1.3, 15.4

## **Time Limits on Claims**

3.7.4, 10.2.8, 15.1.2, 15.1.3

Title to Work

9.3.2, 9.3.3

## **UNCOVERING AND CORRECTION OF WORK**

### **12**

## **Uncovering of Work**

### **12.1**

Unforeseen Conditions, Concealed or Unknown

3.7.4, 8.3.1, 10.3

Unit Prices

7.3.3.2, 9.1.2

Use of Documents

1.1.1, 1.5, 2.3.6, 3.12.6, 5.3

## **Use of Site**

3.13, 6.1.1, 6.2.1

## **Values, Schedule of**

9.2, 9.3.1

Waiver of Claims by the Architect

13.3.2

Waiver of Claims by the Contractor

9.10.5, 13.3.2, 15.1.7

Waiver of Claims by the Owner

9.9.3, 9.10.3, 9.10.4, 12.2.2.1, 13.3.2, 14.2.4, 15.1.7

Waiver of Consequential Damages

14.2.4, 15.1.7

Waiver of Liens

9.3, 9.10.2, 9.10.4

## **Waivers of Subrogation**

6.1.1, 11.3

## **Warranty**

3.5, 4.2.9, 9.3.3, 9.8.4, 9.9.1, 9.10.2, 9.10.4, 12.2.2,

15.1.2

Weather Delays

8.3, 15.1.6.2

## **Work, Definition of**

### **1.1.3**

Written Consent

1.5.2, 3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.10.3, 13.2, 13.3.2, 15.4.4.2

Written Interpretations

4.2.11, 4.2.12

Written Orders

1.1.1, 2.4, 3.9, 7, 8.2.2, 12.1, 12.2, 13.4.2, 14.3.1

## **ARTICLE 1 GENERAL PROVISIONS**

### **§ 1.1 Basic Definitions**

#### **§ 1.1.1 The Contract Documents**

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. The Contract Documents shall include the Bid Documents as listed in the Instructions to Bidders and any modifications made thereto by addenda .

#### **§ 1.1.2 The Contract**

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

#### **§ 1.1.3 The Work**

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

#### **§ 1.1.4 The Project**

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

#### **§ 1.1.5 The Drawings**

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

#### **§ 1.1.6 The Specifications**

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

#### **§ 1.1.7 Instruments of Service**

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

#### **§ 1.1.8 Initial Decision Maker**

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor.

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

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

**§ 1.2.1.1** The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and

enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

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

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

### **§ 1.3 Capitalization**

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

### **§ 1.4 Interpretation**

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

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

**§ 1.5.1** The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication.

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

### **§ 1.6 Notice**

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

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

### **§ 1.7 Digital Data Use and Transmission**

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

*(Paragraphs deleted)*

## **ARTICLE 2 OWNER**

### **§ 2.1 General**

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

**§ 2.1.2** If requested, the Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights.

Init.

Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

## **§ 2.2 Program Manager**

The Owner assigns **CSRS Disaster Recovery Management, LLC**, 6767 Perkins Rd., Ste. 200, Baton Rouge, LA 70808 as Program Manager and Owner's authorized representative.

*(Paragraphs deleted)*

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

**§ 2.3.1** The Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

**§ 2.3.2** The term Architect, when used in the Contract Documents, shall mean the prime Designer (Architect, Engineer, or Landscape Architect), or his authorized representative, lawfully licensed to practice architecture, engineering, or landscape architecture in the State of Louisiana, identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number.

**§ 2.3.3** If the employment of the Architect terminates, the Owner shall employ a successor and whose status under the Contract Documents shall be that of the Architect.

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

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

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

## **§ 2.4 Owner's Right to Stop the Work**

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

## **§ 2.5 Owner's Right to Carry Out the Work**

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

# **ARTICLE 3 CONTRACTOR**

## **§ 3.1 General**

**§ 3.1.1** The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction



where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

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

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

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

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

**§ 3.2.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

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

### **§ 3.3 Supervision and Construction Procedures**

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

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

requirements and ensure compliance with Work Area limits defined on drawings. Contractor shall immediately honor any requests from Owner or Architect to temporarily interrupt Work due to excessive noise, dust or vibrations, at no additional expense to Owner.

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

#### **§ 3.4 Labor and Materials**

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

#### **§ 3.4.2 Not Used.**

**§ 3.4.3** Contractor and its employees, officers, agents, representatives, and Subcontractors shall conduct themselves in an appropriate and professional manner, in accordance with the Owner's requirements, at all times while working on the Project. Any such individual who behaves in an inappropriate manner or who engages in the use of inappropriate language or conduct while on Owner's property, as determined by the Owner, shall be removed from the Project at the Owner's request. Such individual shall not be permitted to return without the written permission of the Owner. The Owner shall not be responsible or liable to Contractor or any Subcontractor for any additional costs, expenses, losses, claims or damages incurred by Contractor or its Subcontractor as a result of the removal of an individual from the Owner's property pursuant to this Section. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. Contractor shall strictly comply with Owner's requirements regarding background checks and/or badging of employees.

#### **§ 3.5 Warranty**

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

**§ 3.5.2** All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.6.

#### **§ 3.6 Taxes**

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

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

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

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

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

#### **§ 3.7.4 Concealed or Unknown Conditions**

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15. Contractor acknowledges that Work on this Project involves storm-damage repair to damaged portions of existing buildings and exact existing conditions may not be fully captured and identified in the Contract Documents.

**§ 3.7.5** If, during the course of the Work, the Contractor discovers human remains, unmarked burial or archaeological sites, burial artifacts, or wetlands, which are not indicated in the Contract Documents, the Contractor shall follow all procedures mandated by State and Federal law, including but not limited to La R.S. 8:671 et seq., the Office of Coastal Protection and Restoration, and Sections 401 & 404 of the Federal Clean Water Act. Request for adjustment of the Contract Sum and Contract Time arising from the existence of such remains or features shall be submitted in writing to the Owner pursuant to the Contract Documents.

#### **§ 3.8 Allowances**

**§ 3.8.1** Allowances shall not be made on any of the Work.

*(Paragraphs deleted)*

#### **§ 3.9 Superintendent**

**§ 3.9.1** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The Superintendent, or a qualified designee, shall be available at all times should the Owner require Contractor's presence on the Project site (for emergencies and similar situations). The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

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

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

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

**§ 3.10.1** The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's review and approval a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised and submitted for review and approval at appropriate intervals as required by the conditions of the Work and Project. For projects with a contract sum greater than \$1,000,000.00, the Contractor shall include with the schedule, for the Owner's and Architect's information, a network analysis to identify those tasks which are on the critical path, i.e., where any delay in the completion of these tasks will lengthen the project timescale, unless action is taken. A revised



schedule shall be submitted for review and approval by Architect with each Application and Certificate for Payment. No payment shall be made until this schedule is approved by Architect.

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

**§ 3.10.3** The Contractor shall perform the Work in accordance with the most recent schedules approved by the Owner and Architect. If the Work is not on schedule, as determined by the Architect, and the Contractor fails to take action to bring the Work on schedule, then the Contractor shall be deemed in default under this Contract and the progress of the Work shall be deemed unsatisfactory. Such default may be considered grounds for termination by the Owner for cause in accordance with Section 14.2.

**§ 3.10.4** Submittal by the contractor of a schedule or other documentation showing a completion date for his Work prior to the completion date stated in the contract shall not impose any obligation or responsibility on the Owner or Architect for the earlier completion date.

**§ 3.10.5** In the event the Owner employs a commissioning consultant, the Contractor shall cooperate fully in the commissioning process and shall require all subcontractors and others under his control to cooperate. The purpose of such services shall be to ensure that all systems perform correctly and interactively according to the provisions of the Contract Documents.

### **§ 3.11 Documents and Samples at the Site**

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed. This requirement is of the essence of the contract. The Architect shall determine the value of these documents and this amount shall not be approved for payment to the Contractor until all of the listed documents are delivered to the Architect in good order, completely marked with field changes and otherwise complete in all aspects.

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

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

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

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

**§ 3.12.4** Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

**§ 3.12.5** The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal

schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

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

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

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

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

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

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

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

### **§ 3.13 Use of Site**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. Contractor shall strenuously enforce campus security requirements and ensure compliance with Work Area limits defined on drawings. Contractor is responsible for security of Work Area(s) and other portions of site in use by Contractor related to the Work. Contractor shall not interfere in any way with routine campus operations when working on occupied campuses, including parking lots, drives and roads required for

vehicle and bus access and egress. Contractor and any entity for which Contractor is responsible shall not erect or post any sign on the Project site without the prior written consent of Owner.

### **§ 3.14 Cutting and Patching**

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

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

### **§ 3.15 Cleaning Up**

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

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

### **§ 3.16 Access to Work**

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

### **§ 3.17 Royalties, Patents and Copyrights**

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

### **§ 3.18 Indemnification**

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

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

## ARTICLE 4 ARCHITECT

### § 4.1 General

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

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

### § 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until end of Warranty Phase. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed to endeavor to guard the Owner against defects and deficiencies in the Work, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

### § 4.2.4 Communications

The Owner and Contractor may communicate directly with each other, when deemed necessary by the Owner, and the Owner will notify the Architect of any decision. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

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

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

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or



performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4. The Architect will monitor Change Order activity and advise Contractor to record Change Orders whenever required by La. R.S. 38:2192.

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

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives. There shall be no restriction on the Owner having a Representative.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretation required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretation until 15 days after written request is made for them.

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

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

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretation required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretation until 15 days after written request is made for them. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 Definitions

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

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

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

**§ 5.2.1** Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review.

**§ 5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection. The Contractor shall be solely responsible for selection and performance of all subcontractors. The Contractor shall not be entitled to claims for additional time and/or an increase in the contract sum due to a problem with performance or nonperformance of a subcontractor.

**§ 5.2.3** The Contractor shall notify the Architect and the Owner when a subcontractor is to be changed and substituted with another subcontractor .

*(Paragraph deleted)*

## **§ 5.3 Subcontractual Relations**

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Contractor shall include all sub-contractors as insureds under its insurance policies OR shall be responsible for verifying and maintaining the Insurance Certificates provided by each sub-tenant and each sub-contractor's compliance with the insurance requirements stated herein. Sub-contractors shall be subject to all of the requirements stated herein. The Owner reserves the right to request copies of sub-contractor's Certificates of Insurance and endorsements at any time. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

## **§ 5.4 Not Used.**

*(Paragraphs deleted)*

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

### **§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts**

**§ 6.1.1** The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

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

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

schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

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

## **§ 6.2 Mutual Responsibility**

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

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

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

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

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

## **§ 6.3 Owner's Right to Clean Up**

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

## **ARTICLE 7 CHANGES IN THE WORK**

### **§ 7.1 General**

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

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

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

**§ 7.1.4** As part of the pre-construction conference submittals, the Contractor shall submit the following for review and approval by Architect and Owner, prior to the Contractor's initial request for payment:

**§ 7.1.4.1** Fixed job site overhead cost itemized with documentation to support daily rates.

§ 7.1.4.2 Bond Premium Rate with supporting information from the General Contractor's carrier.

§ 7.1.4.3 Labor Burden by trade for both Subcontractors and General Contractor. The Labor Burden shall be supported by the Worker's Compensation and Employer's Liability Insurance Policy Information Page. Provide for all trades.

§ 7.1.4.4 Internal Rate Charges for all significant company owned equipment.

§ 7.1.5 If the General Contractor fails to submit the aforementioned documentation as part of the pre-construction submittals, then pay applications shall not be processed until such time as the Owner receives and approves this information.

## § 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, the Architect, and the Contractor issued after execution of the Contract, authorizing a change in the Work and/or an adjustment in the Contract Sum and/or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum or the Contract Time. Any reservation of rights, stipulation, or other modification made on the change order by the contractor shall have no effect.

§ 7.2.2 "Cost of the Work" for the purpose of Change Orders shall be the eligible costs required to be incurred in performance of the Work and paid by the Contractor and Subcontractors which eligible costs shall be limited to:

§ 7.2.2.1 Actual wages paid directly to labor personnel, with a labor burden markup exclusively limited to applicable payroll taxes, worker's compensation insurance, unemployment compensation, and social security taxes for those labor personnel performing the Work. Wages shall be the basic hourly labor rate paid an employee exclusive of fringe benefits or other employee costs. The labor burden percentage for the "Cost of the Work" is limited to categories listed herein. Employer-provided health insurance, fringe benefits, employee training (whether a requirement of employment or not), vacation pay, etc., are examples of ineligible labor burden costs which **shall not** be included, as these costs are already compensated by the Overhead and Profit markup. Supervision shall not be included as a line item in the "Cost of the Work", except when the change results in a documented delay in the critical path, as described in Section 7.2.7.

§ 7.2.2.2 Cost of all materials and supplies necessary and required to perform the Work, identifying each item and its individual cost, including taxes. Incidental consumables are not eligible costs and shall not be included.

§ 7.2.2.3 Cost of each necessary piece of machinery and equipment required to perform the Work, identifying each item and its individual cost, including taxes. Incidental small tools of a specific trade (i.e., shovels, saws, hammers, air compressors, etc.) and general use vehicles, such as pickup trucks even for moving items around the site, fuel for these general use vehicles, travel, lodging, and/or meals are not eligible and shall not be included.

§ 7.2.2.4 Eligible Insurance costs shall be limited to documented increases in "Builder's Risk" insurance premium / costs only. Commercial General Liability, Automobile Liability, and all other required insurances, where referenced in the Contract shall be considered part of normal overhead. These costs are already compensated by the Overhead and Profit markup.

§ 7.2.2.5 Cost for the General Contractor Performance and Payment Bond premium, where the documented cost of the premiums have been increased due to the Change Order.

§ 7.2.3 Overhead and Profit - The Contractor and Subcontractor shall be due home office fixed overhead and profits on the Cost of the Work, but shall not exceed a total of 16% of the direct cost of any portion of Work. The credit to the Owner resulting from a change in the Work shall be the sum of those items above, including overhead and profit. Where a change results in both credits to the Owner and extras to the Contractor for related items, overhead and profit shall be computed for credits to the Owner and extras to the Contractor. The Owner shall receive full credit for the computed overhead and profit on credit change order items.



§ 7.2.4 The cost to the Owner resulting from a change in the Work shall be the sum of: Cost of the Work (as defined at Section 7.2.2) and Overhead and Profit (as defined at Section 7.2.3), and shall be computed as follows:

§ 7.2.4.1 When all of the Work is General Contractor Work; 8% markup on the Cost of the Work.

§ 7.2.4.2 When the Work is all Subcontract Work; 8% markup on the Cost of the Work for Subcontractor's Overhead and Profit, plus 8% markup on the Cost of the Work, not including the Subcontractor's Overhead and Profit markup, for General Contractor's Overhead and Profit.

§ 7.2.4.3 When the Work is a combination of General Contractor Work and Subcontract Work; that portion of the direct cost that is General Contract Work shall be computed per Section 7.2.4.1 and that portion of the direct cost that is Subcontract Work shall be computed per Section 7.2.4.2. Premiums for the General Contractor's bond may be included, but after the markup is added to the Cost of the Work. Premiums for the Subcontractor's Bond shall not be included.

§ 7.2.4.4 Subcontract cost shall consist of the items in Section 7.2.2 above plus Overhead and Profit as defined in Section 7.2.3.

§ 7.2.5 Before a Change Order is prepared, the Contractor shall prepare and deliver to the Architect the following information concerning the Cost of the Work, not subject to waiver, within a reasonable time after being notified to prepare said Change Order:

A detailed, itemized list of labor, material and equipment costs for the General Contractor's Work including quantities and unit costs for each item of labor, material and equipment.

An itemized list of labor, material and equipment costs for each Subcontractor's and/or Sub-Subcontractor's Work including quantities and unit costs for each item of labor, material and equipment.

For any item submitted under this Section to determine adjustments to Contract Sum, the Contractor shall keep and present copies of actual paid invoices, and/or other such documentation as Owner or Architect may require, that:

- a) substantiates claimed quantities actually purchased;
- b) substantiates claimed unit costs actually paid;
- c) substantiates claimed costs actually paid for equipment usage.

§ 7.2.6 After a Change Order has been approved, no future requests for extensions of time or additional cost shall be considered for that Change Order.

§ 7.2.7 Extended fixed job-site costs are indirect costs that are necessary to support the work in the field. Examples of fixed job-site costs are field office rental, salaries of field office staff, field office utilities, and telephone.

*(Paragraph deleted)*

Extended fixed job-site costs or equitable adjustment may be included in a Change Order due to a delay in the critical path, with the exception of weather-related delays. In the event of a delay in the critical path, the Contractor shall submit all changes or adjustments to the Contract Time **within twenty-one (21) days** of the event giving rise to the delay. The Contractor shall submit documentation and justification for the adjustment by performing a critical path analysis of its most recent schedule in use prior to the change, which shows an extension in critical path activities. The Contractor shall notify the Architect in writing that the Contractor is making a claim for extended fixed job-site overhead as required by Section 15.1.2. The Contractor shall provide proof that the Contractor is unable to mitigate financial damages through Alternate Work within this Contract or replacement work. "Replacement Work" is that work which the Contractor is obligated to perform under any construction contract separate from this Contract. Reasonable proof shall be required by the Architect that the delays affected the Completion Date.

§ 7.2.8 "Cost of the Work" whether General Contractor cost or Subcontractor cost shall not apply to the following:

§ 7.2.8.1 Salaries or other compensation of the Contractor's personnel at the Contractor's principal office and branch offices.

§ 7.2.8.2 Any part of the Contractor's capital expenses, including interest on the Contractor's capital employed for the Work.

§ 7.2.8.3 Overhead and general expenses of any kind or the cost of any item not specifically and expressly included above in Cost of the Work.

§ 7.2.8.4 Cost of supervision refer to section 7.2.2.1, with exception as provided in Section 7.2.7.

§ 7.2.9 When applicable as provided by the Contract, the cost to Owner for Change Orders shall be determined by quantities and unit prices. The quantity of any item shall be as submitted by the Contractor and approved by the Architect. Unit prices shall cover cost of Material, Labor, Equipment, Overhead and Profit.

### § 7.3 Construction Change Directives

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

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

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods, but not to exceed a specified amount:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.
- .5 For any item submitted under this Section to determine adjustments to Contract Sum, the Contractor shall keep and present copies of actual paid invoices, and/or other such documentation as Owner or Architect may require, that:
  - a) substantiates claimed quantities actually purchased;
  - b) substantiates claimed unit costs actually paid;
  - c) substantiates claimed costs actually paid for equipment usage.

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

- .1 Costs of labor, including social security, old age and employment insurance, applicable payroll taxes, and workers' compensation insurance;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

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

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

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

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

§ 7.3.9 Pending final determination of the total costs of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs.

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

#### § 7.4 Minor Changes in the Work

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

### ARTICLE 8 TIME

#### § 8.1 Definitions

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

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

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

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

§ 8.1.5 The Contract Time shall not be changed by the submission of a schedule that shows an early completion date unless specifically authorized by change order.

#### § 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work. Completion of the Work must be within the Time for Completion stated in the Agreement, subject to such extensions as may be granted under Section 8.3. The Contractor agrees to commence Work not later than fourteen (14) days after the transmittal date of Written Notice to Proceed from the Owner and to substantially complete the project within the time stated in the Contract. The Owner will suffer financial loss if the project is not substantially complete in the time set forth in the

Contract Documents. The Contractor and the Contractor's Surety shall be liable for and shall pay to the Owner the sum stated in the Contract Documents as fixed, agreed and liquidated damages for each consecutive calendar day (Saturdays, Sundays and holidays included) of delay until the Work is substantially complete. The Owner shall be entitled to the sum stated in the Contract Documents. Such Liquidated Damages shall be withheld by the Owner from the amounts due the Contractor for progress payments.

#### **§ 8.2.2 Not Used.**

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

#### **§ 8.3 Delays and Extensions of Time**

**§ 8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending litigation; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may recommend, subject to Owner's approval of Change Order. If the claim is not made within the limits of Article 15, all rights for future claims for that month are waived.

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

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

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

#### **§ 9.1 Contract Sum**

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

*(Paragraph deleted)*

#### **§ 9.2 Schedule of Values**

At the Pre-Construction Conference, the Contractor shall submit to the Owner and the Architect a Schedule of Values prepared as follows:

**§ 9.2.1** The Schedule of Values Format shall be as defined in the Contract Documents and acceptable to Architect and Owner. If applicable, the cost of Work for each section listed under each division, shall be given. The cost for each section shall include Labor, Materials, Overhead and Profit.

**§ 9.2.2** The Total of all items shall equal the Total Contract Sum. This schedule, when approved by the Architect, shall be used as a basis for the Contractor's Applications for Payment and it may be used for determining the cost of the Work in deductive change orders, when a specific item of Work listed on the Schedule of Values is to be removed. Once the Schedule of Values is submitted at the Pre-Construction Conference, the schedule shall not be modified without approval from the Owner and Architect.

#### **§ 9.3 Applications for Payment**

**§ 9.3.1** Monthly, the Contractor shall submit to the Architect the Application and Certification for Payment form, supported by any additional data substantiating the Contractor's right to payment as the Owner or the Architect may require. Application for Payment shall be submitted on or about the first of each month for the value of labor and materials incorporated into the Work and of materials, suitably stored, at the site as of the twenty-fifth day of the preceding month, less normal retainage as follows, per La R.S. 38:2248:

**§ 9.3.1.1** Projects with Contract price up to \$500,000.00 – 10% of the Contract price.

**§ 9.3.1.2** Projects with Contract price of \$500,000.00, or more – 5% of the Contract price.

§ 9.3.1.3 No payment shall be made until the revised schedule required by Section 3.10.1 is received.

§ 9.3.1.4 The normal retainage shall not be due the Contractor until after substantial completion and expiration of the forty-five day lien period and submission to the Architect of a clear lien certificate, consent of surety, and invoice for retainage.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, including applicable insurance.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

#### § 9.4 Certificates for Payment

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

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

#### § 9.5 Decisions to Withhold Certification

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

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;



- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 failure to carry out the Work in accordance with the Contract Documents.

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

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

*(Paragraph deleted)*

## § 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment within thirty days except for projects funded fully or in part by a Federal reimbursement program. For such projects the Owner will make payment in a timely manner consistent with reimbursement.

§ 9.6.2 The Contractor shall pay each Subcontractor, after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner. La R.S. 9:2784 (A) and (C) require a Contractor or Subcontractor to make payment due to each Subcontractor and supplier within fourteen (14) consecutive days of the receipt of payment from the Owner. If not paid, a penalty in the amount of ½ of 1% per day is due, up to a maximum of 15% from the expiration date until paid. The contractor or subcontractor, whichever is applicable, is solely responsible for payment of a penalty

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

§ 9.6.4 Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law. Pursuant to La. R.S. 38:2242 and La. R.S. 38:2242.2, when the Owner receives any claim of nonpayment arising out of the Contract, the Owner shall deduct 125% of such claim from the Contract Sum. The Contractor, or any interested party, may deposit security, in accordance with La. R.S. 38:2242.2, guaranteeing payment of the claim with the recorder of mortgages of the parish where the Work has been done. When the Owner receives original proof of such guarantee from the recorder of mortgages, the claim deduction will be added back to the Contract Sum

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

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

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

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

*(Paragraphs deleted)*

## **§ 9.8 Substantial Completion**

*(Paragraph deleted)*

**§ 9.8.1.** Substantial Completion is the stage in the progress of the Work when the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The Architect shall determine if the project is substantially complete in accordance with this Section. In order to satisfy this definition of Substantial Completion, Acceptance of Substantial Completion shall be executed in writing by the Owner and approved by the CPSB Board (if necessary). All insurance requirements shall remain in place until such written execution and formal approval occurs.

**§ 9.8.2** When the Contractor considers that the Work is Substantially Complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**§ 9.8.3** Upon receipt of the Contractor's list, the Architect shall make an inspection to determine whether the Work is substantially complete. A prerequisite to the Work being considered as substantially complete is the Owner's receipt of the executed Roofing Contractor's and Roofing Manufacturer's guarantees, where roofing Work is part of the Contract. Prior to inspection by the Architect, the Contractor shall notify the Architect that the project is ready for inspection by the State Fire Marshal's office. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use, the Contractor shall, before the Work can be considered as Substantially Complete, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

**§ 9.8.4** When the Architect determines that the project is Substantially Complete, he shall prepare a punch list of exceptions and the dollar value related thereto. The monetary value assigned to this list will be the sum of the cost estimate for each particular item of Work the Architect develops based on the mobilization, labor, material and equipment costs of correcting the item and shall be retained from the monies owed the contractor, above and beyond the standard lien retainage. The cost of these items shall be prepared in the same format as the schedule of values. At the end of the forty-five day lien period payment shall be approved for all punch list items completed up to that time. After that payment, none of the remaining funds shall be due the contractor until all punch list items are completed and are accepted by the Architect. If the dollar value of the punch list exceeds the amount of funds, less the retainage amount, in the remaining balance of the Contract, then the Project shall not be considered as substantially complete. If funds remaining are less than that required to complete the Work, the Contractor shall pay the difference.

**§ 9.8.5** When the preparation of the punch list is complete the Architect shall prepare a Recommendation of Acceptance incorporating the punch list and submit it to the Owner. Upon approval of the Recommendation of Acceptance, the Owner may issue a Notice of Acceptance of Building Contract which shall establish the Date of Substantial Completion. The Contractor shall record the Notice of Acceptance with the Clerk of Court in the Parish in which the Work has been performed. If the Notice of Acceptance has not been recorded seven (7) days after issuance, the Owner may record the Acceptance at the Contractor's expense. All additive change orders must be processed before issuance of the Recommendation of Acceptance. The Owner shall not be responsible for payment for any Work associated with change orders that is not incorporated into the contract at the time of the Recommendation of Acceptance.

**§ 9.8.6** Warranties required by the Contract Documents shall commence on the date of Acceptance of the Work unless otherwise agreed to in writing by the Owner and Contractor. Unless otherwise agreed to in writing by the Owner and Contractor, security, maintenance, heat, utilities, damage to the Work not covered by the punch list and insurance shall become the Owner's responsibility on the Date of Substantial Completion.

**§ 9.8.7** If all punch list items have not been completed by the end of the forty-five (45) day lien period, through no fault of the Architect or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within forty-five (45) days after notification, the Surety has not completed the punch list, through no fault of the Architect or Owner, the Owner may, at his option, contract to have the balance of the Work completed and pay for such Work with the unpaid funds remaining in the Contract sum. Finding the Contractor

in default shall constitute a reason for disqualification of the Contractor from bidding on future state contracts. If the surety fails to complete the punch list within the stipulated time period, the Owner may not accept bonds submitted, in the future, by the surety

### **§ 9.9 Partial Occupancy or Use**

**§ 9.9.1** Partial Occupancy is that stage in the progress of the Work when a designated portion of the Work is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the designated portion of the Work for its intended use. The Owner may occupy or use any substantially completed portion of the Work so designated by separate agreement with the Contractor and authorized by public authorities having jurisdiction over the Work. Such occupancy or use may commence provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. Consent to occupy must be obtained in writing from Contractor's and/or Owner's insurer (whichever is deemed by Owner as the appropriate insurer), and the appropriate insurances must be confirmed in writing. When the Contractor considers the designated portion substantially complete the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld.

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

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

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

**§ 9.10.1** Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

**§ 9.10.3** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to



certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

**§ 9.10.4** The making of final payment shall not constitute a waiver of Claims by the Owner for the following:

- .1 Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 Failure of the Work to comply with the requirements of the Contract Documents irrespective of when such failure is discovered;
- .3 Terms of special warranties required by the Contract Documents; or
- .4 Audits performed by the Owner, after final payment.

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

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

### **§ 10.1 Safety Precautions and Programs**

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

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

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

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

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

**§ 10.2.3** The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

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

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

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

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

**§ 10.2.8 Injury or Damage to Person or Property**

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

**§ 10.3 Hazardous Materials and Substances**

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

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. The Contract Time shall be extended appropriately.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

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

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

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

**§ 10.4 Emergencies**

In an emergency affecting the safety of persons or property, the Contractor shall notify the Owner and Architect immediately of the emergency, simultaneously acting at his discretion to prevent damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency Work shall be determined as provided in Article 15 and Article 7.

## ARTICLE 11 INSURANCE AND BONDS

**NOTE:** The following Article 11 contemplates Owner using a custom Owner-Contractor Agreement; AIA Document A101-2017 Exhibit A is not part of these documents.

### § 11.1 Contractor's Liability Insurance

The Contractor shall purchase and maintain without interruption for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, employees or subcontractors. The duration of the contract shall be from the inception of the contract until the date of final payment.

*(Paragraphs deleted)*

### § 11.2 Minimum Scope and Limits of Insurance

#### § 11.2.1 Worker's Compensation

Worker's Compensation insurance shall be in compliance with the Louisiana Worker's Compensation law and shall be statutory. Employers Liability is included with a minimum limit of \$1,000,000 per accident/per disease/per employee. If Work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act or other maritime law coverage shall be included. A.M. Best's insurance company rating requirement may be waived for Worker's compensation coverage only with prior approval from the Owner.

#### § 11.2.2 Commercial General Liability.

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and On-going and Completed Operations Liability, shall have a minimum limit per occurrence based on the project value. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable. The aggregate loss limit must apply to each project and be reflected in the Certificate of Insurance. ISO form CG 25 03 (current form approved for use in Louisiana), or equivalent, shall also be submitted. The Owner's Project number and Project name shall be included on this endorsement. The Additional Insured endorsement for General Liability shall include coverage for on-going and completed operations. A waiver of subrogation in favor of the Owner shall be provided.

### COMBINED SINGLE LIMIT (CSL) PER OCCURRENCE

| Type of Construction                                                  | Projects up to \$1,000,000 | Projects over \$1,000,000 up to \$10,000,000 | Projects over \$10,000,000 |
|-----------------------------------------------------------------------|----------------------------|----------------------------------------------|----------------------------|
| <b>New Buildings:</b>                                                 |                            |                                              |                            |
| Each Occurrence Minimum Limit                                         | \$1,000,000                | \$2,000,000                                  | \$4,000,000                |
| Per Project Aggregate                                                 | \$2,000,000                | \$4,000,000                                  | \$8,000,000                |
| <b>Renovations:</b> The building(s) value for the Project is \$_____. |                            |                                              |                            |
| Each Occurrence Minimum Limit                                         | \$1,000,000**              | \$2,000,000**                                | \$4,000,000**              |
| Per Project Aggregate                                                 | 2 times per occur limit**  | 2 times per occur limit**                    | 2 times per occur limit**  |

\*\*While the minimum Combined Single Limit of \$1,000,000 is required for any renovation, the limit is calculated by taking 10% of the building value and rounding it to the nearest \$1,000,000 to get the insurance limit. Example: Renovation on a \$33,000,000 building would have a calculated \$3,000,000 combined single limit of coverage (33,000,000 times .10 = 3,300,000 and then rounding down to \$3,000,000). If the calculated limit is less than the minimum limit listed in the above chart, then the amount needed is the minimum listed in the chart. Maximum per occurrence limit required is \$10,000,000 regardless of building value. The per project aggregate limit is then calculated as twice the per occurrence limit. If the Contractor maintains higher limits than the minimums shown above, the Owner requires and shall be entitled to coverage for the higher limits maintained by the Contractor.

Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the Owner.

### § 11.2.3 Automobile Liability

Automobile Liability Insurance shall have a minimum combined single limit per occurrence of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles. Such coverage shall eliminate any employee versus employee exclusion. Symbol 1 is preferred. The Owner shall be named as an Additional Insured and a waiver of subrogation in favor of the Owner shall be included.

### § 11.2.4 Excess Umbrella

Excess Umbrella Insurance may be used to meet the minimum requirements for General Liability, Employer's Liability and Automobile Liability only. Excess umbrella should follow form over the underlying coverage.

### § 11.2.5 Builder's Risk

§ 11.2.5.1 Builder's Risk Insurance shall be in an amount equal to the amount of the construction contract including any amendments and shall be upon the entire Work included in the contract. The policy shall provide coverage equivalent to the ISO form number CP 10 20, Broad Form Causes of Loss (extended, if necessary, including but not limited to: the perils of wind, earthquake, collapse, flood, convective storms, vandalism/malicious mischief, and theft, including theft of materials whether or not attached to any structure). The policy must include architects' and engineers' fees necessary to provide plans, specifications and supervision of Work for the repair and/or replacement of property damage caused by a covered peril, not to exceed 10% of the cost of the repair and/or replacement.

§ 11.2.5.2 Flood coverage shall be provided by the Contractor on the first floor and below for all projects, except as otherwise noted. The builder's risk insurance policy, sub-limit for flood coverage shall not be less than ten percent (10%) of the total contract cost per occurrence. If flood is purchased as a separate policy, the limit shall be ten percent (10%) of the total contract cost per occurrence (with a max of \$500,000 if NFIP). Coverage for roofing projects (only) shall **not** require flood coverage.

§ 11.2.5.3 With Owner's project-specific written approval, a Specialty Contractor may provide an installation floater in lieu of a Builder's Risk policy, with the similar coverage as the Builder's Risk policy, upon the system to be installed in an amount equal to the amount of the contract including any amendments. Flood coverage is not required.

§ 11.2.5.4 The policy must include coverage for the Owner, Contractor and any subcontractors as their interests may appear.

§ 11.2.6 Pollution Liability (*required when asbestos or other hazardous material abatement is included in the contract*) Pollution Liability insurance, third party and first party coverage, including gradual release as well as sudden and accidental, shall have a minimum limit of not less than \$1,000,000 per claim. A claims-made form will be acceptable. A policy period inception date of no later than the first day of anticipated Work under this contract and an expiration date of no earlier than 30 days after anticipated completion of all Work under the contract shall be provided. There shall be an extended reporting period of at least 24 months, with full reinstatement of limits, from the expiration date of the policy if the policy is not renewed. The policy shall not be cancelled for any reason, except non-payment of premium.

### § 11.2.7 Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and accepted by the Owner. The Contractor shall be responsible for all deductibles and self-insured retentions.

### § 11.3 Other Insurance Provisions

§ 11.3.1 The policies are to contain, or be endorsed to contain, the following provisions:

#### § 11.3.1.1 Worker's Compensation and Employers Liability Coverage

§ 11.3.1.1.1 To the fullest allowed by law, the insurer shall agree to waive all rights of subrogation against the Owner, its officers, agents, employees and volunteers for losses arising from Work performed by the Contractor for the Owner.

### § 11.3.1.2 Commercial General Liability Coverage

§ 11.3.1.2.1 The Owner, its officers, agents, employees and volunteers are to be added as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor; including ongoing and completed operations of the Contractor. ISO Form CG 20 10 (for ongoing work) AND CG 20 37 (for completed work) (current forms approved for use in Louisiana), or equivalent, are to be used.

§ 11.3.1.2.2 The Contractor's insurance shall be primary as respects the Owner, its officers, agents, employees and volunteers for any and all losses that occur under the contract. The coverage shall contain no special limitations on the scope of protection afforded to the Owner, its officers, officials, employees or volunteers. Any insurance or self-insurance maintained by the Owner shall be excess and non-contributory of the Contractor's insurance.

### § 11.3.1.3 Builder's Risk

The policy must include an endorsement providing the following:

In the event of a disagreement regarding a loss covered by this policy, which may also be covered by the Owner, Contractor and its insurer agree to follow the following procedure to establish coverage and/or the amount of loss:

Any party to a loss may make written demand for an appraisal of the matter in disagreement. Within 20 days of receipt of written demand, the Contractor's insurer and either Owner or its commercial insurance company shall each select a competent and impartial appraiser and notify the other of the appraiser selected. The two appraisers shall select a competent and impartial umpire. The appraisers shall then identify the policy or policies under which the loss is insured and, if necessary, state separately the value of the property and the amount of the loss that must be borne by each policy. If the two appraisers fail to agree, they shall submit their differences to the umpire. A written decision by any two shall determine the policy or policies and the amount of the loss. Each insurance company agrees that the decision of the appraisers and the umpire if involved shall be binding and final and that neither party will resort to litigation. Each of the two parties shall pay its chosen appraiser and bear the cost of the umpire equally.

### § 11.3.1.4 All Coverages

§ 11.3.1.4.1 All policies must be endorsed to require Notice of Cancellation in accordance with Policy Provisions. Notifications shall comply with the standard cancellation provisions in the Contractor's policy. In addition, Contractor is required to also notify Owner of policy cancellations or reductions in limits as soon as the action is known.

§ 11.3.1.4.2 Neither the acceptance of the completed Work nor the payment thereof shall release the Contractor from the obligations of the insurance requirements or indemnification agreement.

§ 11.3.1.4.3 The insurance companies issuing the policies shall have no recourse against the Owner for payment of premiums or for assessments under any form of the policies.

§ 11.3.1.4.4 Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Owner, its officers, agents, employees and volunteers.

### § 11.3.2 Acceptability of Insurers

All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with a current A.M. Best's rating of **A- VII or higher**. This rating requirement may be waived for Worker's Compensation coverage only, but only if prior approval is received from the Owner. If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another certificate of insurance within 30 days.

### § 11.3.3 Verification of Coverage

Contractor shall furnish the Owner with certificates of insurance, evidencing required amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and evidence of endorsements are to be received and approved by the Owner including renewal evidence prior to expiration. Failure to provide and maintain the required insurance coverage throughout the term of the Agreement shall be a material breach



of the Agreement, and shall entitle Owner to all remedies provided for in the Agreement, any Amendment(s) thereto, or by operation of law. The Certificate Holder must be listed as follows:

Calcasieu Parish School Board  
3310 Broad Street  
Lake Charles, LA 70615  
Attn: Project # HL-XXX-XXX (obtain Owner's Project Number from Architect).

Owner's Program Manager is to be included as an additional-insured, listed as follows:

CSRS, Inc  
1304 Enterprise Blvd, Suite B  
Lake Charles, LA 70601

The Owner reserves the right to request complete certified copies of all required insurance policies at any time.

Upon failure of the Contractor to furnish, deliver and maintain required insurance, this contract, at the election of the Owner, may be suspended, discontinued, or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

If the Contractor does not meet the insurance requirements at policy renewal, at the option of the Owner, payment to the Contractor may be withheld until the requirements have been met, OR the Owner may pay the renewal premium and withhold such payment from any monies due the Contractor, OR the contract may be suspended or terminated for cause.

*(Paragraphs deleted)*

#### **§ 11.3.4 Subcontractors**

Contractor shall include all subcontractors as insureds under its policies OR shall be responsible for verifying and maintaining the certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Owner reserves the right to request copies of subcontractor's certificates at any time. If Contractor does not verify subcontractors' insurance as described above, Owner has the right to withhold payments to the Contractor until the requirements have been met.

#### **§ 11.3.5 Indemnification/Hold Harmless Agreement**

Contractor agrees to protect, defend, indemnify, save, and hold harmless, the Calcasieu Parish School Board, its officers, agents, servants, employees and volunteers, from and against any and all claims, damages, expenses and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits or causes of action arising out of the negligence of the Calcasieu Parish School Board, its officers, agents, servants, employees and volunteers.

Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent. The Owner may, but is not required to, consult with the Contractor in the defense of claims, but this shall not affect the Contractor's responsibility for the handling and expenses of all claims.

#### **§ 11.4 Performance and Payment Bond**

**§ 11.4.1** The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

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

#### **§ 11.4.3 Recordation of Contract and Bond [La R.S. 38:2241 thru 38:2241.1]**

The Contractor shall record within thirty (30) days the executed Contract Between Owner and Contractor and Performance and Payment Bond with the Calcasieu Parish Clerk of Court and promptly deliver documentation of such recordation to Owner.

### **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

#### **§ 12.1 Uncovering of Work**

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

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

#### **§ 12.2 Correction of Work**

##### **§ 12.2.1 Before Substantial Completion**

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense. If the Contractor fails to correct Work identified as defective within a thirty (30) day period, through no fault of the Designer, the Owner may hold the Contractor in default. If the Owner finds the Contractor in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the nonconforming Work, through no fault of the Architect or Owner, the Owner may contract to have nonconforming Work corrected and hold the Surety and Contractor responsible for the cost, including architectural fees and other indirect costs. If the Surety fails to correct the Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may elect not to accept bonds submitted in the future by the Surety. Finding the Contractor in default shall constitute a reason for disqualification of the Contractor from bidding on future state contracts.

##### **§ 12.2.2 After Substantial Completion**

**§ 12.2.2.1** In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work, or Work covered by warranties, within a thirty (30) day period, through no fault of the Architect or Owner, the Owner may hold the Contractor in default. If the Owner finds the Contractor is in default, the Surety shall be notified. If within thirty (30) days after notification, the Surety has not corrected the non-conforming or warranty Work, through no fault of the Architect or Owner, the Owner may contract to have the nonconforming or warranty Work corrected and hold the Surety responsible for the cost including architects fees and other indirect costs. Corrections by the Owner shall be in accordance with Section 2.4. If the Surety fails to correct the nonconforming or warranty Work within the stipulated time period and fails to meet its obligation to pay the costs, the Owner may not accept bonds submitted, in the future, by the Surety.

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

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

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

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

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

### § 12.3 Acceptance of Nonconforming Work

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

## ARTICLE 13 MISCELLANEOUS PROVISIONS

### § 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located.

### § 13.2 Successors and Assigns

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

*(Paragraph deleted)*

### § 13.3 Rights and Remedies

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

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

§ 13.3.3 The Fourteenth Judicial Court in and for the Parish of Calcasieu, State of Louisiana shall have sole jurisdiction and venue in any action brought under this contract.

### § 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. The Contractor shall make arrangements for such tests, inspections and approvals with the Testing Laboratory provided by the Owner, and the Owner shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or



approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

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

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

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

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

*(Paragraphs deleted)*

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

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

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

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or

*(Paragraph deleted)*

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit for Work completed prior to stoppage.

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

### **§ 14.2 Termination by the Owner for Cause**

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.
- .5 **failure to complete the punch list within the lien period as provided in 9.8.7.**

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

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

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished. Termination by the Owner shall not suspend assessment of liquidated damages against the Surety.

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

§ 14.2.5 If an agreed sum of liquidated damages has been established, termination by the Owner under this Article shall not relieve the Contractor and/or Surety of his obligations under the liquidated damages provisions and the Contractor and/or Surety shall be liable to the Owner for per diem liquidated damages.

#### § 14.3 Suspension by the Owner for Convenience

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

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

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

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

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

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

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed.

### ARTICLE 15 CLAIMS AND DISPUTES

#### § 15.1 Claims

##### § 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes

and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

**§ 15.1.2 Time Limits on Claims** (See La R.S. 38:2189, and 38:2189.1).

**§ 15.1.3 Notice of Claims**

**§ 15.1.3.1** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. A Reservation of Rights and similar stipulations shall not be recognized under this contract as having any effect. A party must make a claim as defined herein within the time limits provided.

**§ 15.1.3.2** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

**§ 15.1.4 Continuing Contract Performance**

**§ 15.1.4.1** Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**§ 15.1.4.2** The Contract Sum and Contract Time shall be adjusted in accordance with the Architect's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with his/her decision.

**§ 15.1.5 Claims for Additional Cost**

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

**§ 15.1.6 Claims for Additional Time**

**§ 15.1.6.1** If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

*(Paragraph deleted)*

**§ 15.1.6.2** If adverse weather conditions are the basis for a claim for additional time, the Contractor shall document that weather conditions had an adverse effect on the scheduled construction. An increase in the contract time due to weather shall not be cause for an increase in the contract sum. At the end of each month, the Contractor shall make one Claim for any adverse weather days occurring within the month. The Claim must be accompanied by sufficient documentation evidencing the adverse days and the impact on construction. Failure to make such Claim within **twenty-one (21) days** from the last day of the month shall prohibit any future claims for adverse days for that month. No additional adverse weather days shall be granted after the original or extended contract completion date, except those adverse weather days associated with a National Weather Service named storm or federally declared weather related disaster directly affecting the project site

**§ 15.1.6.3** The following are considered reasonably anticipated days of adverse weather on a monthly basis:

|          |         |           |        |
|----------|---------|-----------|--------|
| January  | 11 days | July      | 6 days |
| February | 10 days | August    | 5 days |
| March    | 8 days  | September | 4 days |
| April    | 7 days  | October   | 3 days |
| May      | 5 days  | November  | 5 days |

June

6 days

December

8 days

The Contractor shall ask for total adverse weather days. The Contractor's request shall be considered only for days over the allowable number of days stated above.

*Note: Contract is on a calendar day basis.*

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

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

#### **§ 15.2 Initial Decision**

**§ 15.2.1** Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect shall always serve as the Initial Decision Maker. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to litigation of any Claim arising prior to the date final payment is due. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

**§ 15.2.2** The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

**§ 15.2.3** In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

**§ 15.2.4** If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

**§ 15.2.5** The Initial Decision Maker will render an initial decision approving or rejecting the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties except that the Owner may reject the decision or suggest a compromise, or both.

#### **§ 15.2.6 Not Used.**

*(Paragraph deleted)*

Init.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.



## SECTION 01 10 00 – SUMMARY OF WORK

## A. GENERAL

## 1.01 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.

## 1.02 SUMMARY

- A. Section Includes:
1. Project information.
  2. Work covered by Contract Documents.
  3. Work under separate contracts.
  4. Salvage requirements.
  5. Access to site.
  6. Work restrictions.
  7. Specification and drawing conventions.

## 1.03 PROJECT INFORMATION

- A. Project Identification: **WHS GYMNASIUM HURRICANE LAURA REPAIRS REBID.**  
KAI Project Number: 2032B3  
CPSB Project Number: **HL-064-06**  
1. Project Location: 1000 Garden Drive, Westlake, Louisiana 70669.
- B. Owner: Calcasieu Parish School Board  
3310 Broad Street  
Lake Charles, Louisiana 70615
1. Owner's Representative/PM: \_\_\_\_\_, Senior PM  
CSRS, Inc  
1304 Enterprise Blvd, Suite B  
Lake Charles, Louisiana 70601  
[gavin.abshire@csrsinc.com](mailto:gavin.abshire@csrsinc.com)  
[www.csrsinc.com](http://www.csrsinc.com)
- C. Architect: King Architects, Inc  
1. Project Architect: Barry D. King, AIA  
1312 Sampson Street  
Westlake, Louisiana 70669  
[office@kingarchitects.net](mailto:office@kingarchitects.net)  
[www.kingarchitects.net](http://www.kingarchitects.net)
- D. Architect's Consultants: The Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:  
1. Civil Engineer: Jason Duhon, PE  
Duhon & Pleasant Consulting Engineers  
5393 Big Lake Road  
Lake Charles, Louisiana 70605  
[jason@dandpengineers.com](mailto:jason@dandpengineers.com)  
[www.dandpengineers.com](http://www.dandpengineers.com)
- E. Contractor: unknown at time of execution of this Project Manual.



## 1.04 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
1. Repairs due to Hurricane Laura damages to Westlake High School Field House & Gymnasium.
    - a. FIELD HOUSE:
      - 1) Occupancy Type: Educational, Group E.
      - 2) Construction Type: II-B / II(000) (non-rated steel/concrete)
      - 3) Floor Area:
 

|               |             |
|---------------|-------------|
| First Floor:  | 7,548 ± sf  |
| Second Floor: | 7,477 ± sf  |
| Stairwell:    | 209 ± sf    |
| Total:        | 15,234 ± sf |
    - b. GYMNASIUM:
      - 1) Occupancy Type: Educational, Group E
      - 2) Construction Type: II-B / II(000) (non-rated steel/concrete)
      - 3) Floor Area: 39,477 ± sf
- B. Type of Contract:
1. Project will be constructed under a single prime contract.
    - a. Contract Between Owner and Contractor, see Section 00 52 00.

## 1.05 WORK UNDER SEPARATE CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.
- B. Concurrent Work: Owner has awarded separate contract(s) for the following construction operations at Project site. Those operations will be conducted simultaneously with work under this Contract.
1. **Additions to Westlake High School:** GC is Ryder & Ryder, Ltd for Six (6) classrooms additions and covered canopy addition to Westlake High School.

## 1.06 SALVAGE REQUIREMENT

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

## 1.07 ACCESS TO SITE

- A. Site Utilization Plan: Prepare and submit a site utilization plan demonstrating the requirements provided by the Owner's Project representative. Do not commence mobilization on the Project site prior to written approval of the site utilization plan.
1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  2. Coordinate with school officials, at their convenience, for roof work scheduling and access to Gymnasium.
- B. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

## 1.02 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.



1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than **14** days' notice to Owner of activities that will affect Owner's operations.

### 1.03 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
  1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
  1. Notify **Architect** not less than **14** days in advance of proposed utility interruptions.
  2. Obtain **Architect's** written permission before proceeding with utility interruptions.
- C. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
  1. Notify **Architect** not less than **14** days in advance of proposed disruptive operations.
  2. Obtain **Architect's** written permission before proceeding with disruptive operations.
- D. Controlled Substances: Use of controlled substances is prohibited.
- E. Contractor Identification:
  1. All Contractor and subcontractor personnel must wear company badges, uniform shirts, and/or similar apparel that identifies their employer while on Project Site.
  2. Contractor and subcontractor will be required to submit list of personnel and digital photos of each for Owner (CPSB) to create badges that must be worn while on Project Site.

### 1.04 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
  3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers and titles found in this Project Manual.

### 1.11 MISCELLANEOUS PROVISIONS: Without force and effect on requirements of Contract Documents, the description of the work of the Contract can be summarized as follows:

- A. The Contract documents and applicable design drawings describe all architectural, electrical, mechanical, and structural work required for the construction of this project.
- B. Contractor will be responsible for obtaining and abiding by any and all City, Parish, and other applicable permits, and

- requirements for demolition. All work shall comply with OSHA and all other applicable Federal, State and Local codes.
- C. This work will be accomplished in an operating manufacturing facility planned, scheduled, organized, and coordinated in such a manner that operations will not be restricted, disrupted, or hindered in any manner.
  - D. Maintain existing utilities indicated to remain, keep in service, and protect against damage during construction operation.
  - E. Conduct all construction operations to ensure minimum interference with roads, streets-walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, and other adjacent occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
  - F. Promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.
  - G. Notify utility companies having jurisdiction to remove and relocate lines which may interfere with construction operation.
    - 1. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
    - 2. Maintain, reroute, or extend as required, existing utility lines which pass through the work area.

PRODUCTS (Not Used)

EXECUTION (Not Used)

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**END OF SECTION 01 10 00**

KING ARCHITECTS, INC

SECTION 01 21 00

## SECTION 01 23 00 - ALLOWANCES

## PART 1 - GENERAL

## 1.01 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.

## 1.02 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
  - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to the Contractor. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
  - 1. Unit-cost allowances.

## 1.03 SUBMITTALS

- A. Submit reports from the Owner's Independent Testing Agency to document actual quantities of materials delivered to or removed from the site for use in fulfillment of each allowance.

## 1.04 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

## 1.05 UNIT-COST ALLOWANCES

- A. Allowance shall include all costs to Contractor of specific products, materials and work under allowance and shall include taxes, freight, and delivery to Project Site.

PART 2 - PRODUCTS *(not applicable)*

## PART 3 - EXECUTION

## 3.01 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

## 3.02 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.03 SCHEDULE OF ALLOWANCES

A. Allowance No. One (1): Door Hardware

1. **Allowance: \$1,000.00 per door for ALL door hardware.**
2. The above allowance shall be included in the Base Bid.

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**END OF SECTION 01 23 00**

## SECTION 01 23 00 - ALTERNATES

## PART 1 - GENERAL

## 1.01 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.

## 1.02 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

## 1.03 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems or installation methods described in the Contract Documents.
  - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
  - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

## 1.04 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternates into the Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following receipt of the Notice to Proceed, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected or deferred for later consideration.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

## PART 3 - EXECUTION

## SECTION 01 25 00 - SUBSTITUTION PROCEDURES

## PART 1 - GENERAL

## 1.01 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.

## 1.02 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Section 00 63 11 "Request for Information Form" for clarification and/or Project information.
  - 2. Section 01 21 00 "Allowances" for products selected under an allowance.
  - 3. Section 01 23 00 "Alternates" for products selected under an alternate.
  - 4. Section 01 31 00 "Project Management & Coordination" for Requests for Information.
  - 5. Section 01 33 00 "Submittal Procedures" for requirements for submitting comparable product submittals for products.
  - 6. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

## 1.03 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, change in performance data, product dimensions or other design criteria.
  - 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. --No substitutions for convenience are allowed.
- B. "Or Equal": When a product, material or equipment specified by brand or trade name is followed by the words "or equal," a substitution may be permitted if the substitution is equal to or superior to the first-named product, material or equipment in quality, utility, and appearance, and if the substitution complies with all other requirements of the plans and specifications.
- C. Procurement (Bidding) Substitution Requests: Requests for changes in products, materials, equipment, and methods of construction from those indicated in the Procurement and Contracting Documents, submitted **seven (7)** days prior to receipt of bids.
- D. During Construction Substitution Requests: Not allowed.

## 1.04 ACTION SUBMITTALS

- A. Substitution Requests: Submit to Architect. Substitution Request shall be made in writing and in compliance with the following requirements. 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 **form provided in Division 00 – Bidding & Contract Requirements, Sections 00 43 25 –Substitution Request Form.**
  - 2. Submittal Format: Submit via hand delivery, mail or preferably email. Email submissions shall be made in .pdf format. Sheet size shall be no larger than 8½ inch x 11 inch. Email submission to [office@kingarchitects.net](mailto:office@kingarchitects.net).
  - 3. Required Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.

- b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
    - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - e. Samples, where applicable or requested.
    - f. Certificates and qualification data, where applicable or requested.
    - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
    - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
    - j. **Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.**
    - k. Cost information, including a proposal of change, if any, in the Contract Sum.
    - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
    - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
  4. Architect's Action During Bidding Phase: If necessary, Architect will request additional information or documentation for evaluation within **three (3)** days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within **seven (7)** days of receipt of request.
    - a. Forms of Acceptance: Addenda. Architect will notify all bidders of accepted substitution.
    - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.
- B. Architect's approval of substitute does not relieve Contractor of the responsibility to submit required shop drawings and to comply with all other requirements of the Contract Documents.
- C. Architect's approval of a particular manufacturer does not suggest or imply any deviation from the Contract Documents. All products shall comply with the drawings and specifications. The Contractor shall note that prior approval will be by manufacturer's name only. The Contractor shall ensure that the products used in preparation of proposal and proposed to be used on this project, is equivalent to that specified in all aspects. Any material, product, or component found to not be equivalent to that specified will be rejected. Approval of one manufacturer does not automatically approve any subsidiary, parent, and/or sister company, and their associated products.

#### 1.05 QUALITY ASSURANCE

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

#### 1.07 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.



## PART 2 - PRODUCTS

## 2.01 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
  - b. Substitution request is **fully** documented and **properly** submitted.
  - c. Submitted within **seven (7)** days of Bid date.
  - d. Requested substitution will not adversely affect Contractor's construction schedule.
  - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
  - f. Requested substitution is compatible with other portions of the Work.
  - g. Requested substitution has been coordinated with other portions of the Work.
  - h. Requested substitution provides specified warranty.
  - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed.

## PART 3 - EXECUTION

## 3.01 REQUESTING A SUBSTITUTION DURING BIDDING

- A. In the event that a substitution is requested during the Bidding Phase, in order to be considered, the Contractor or Supplier shall submit it to the Architect no later than **ten (10)** days prior to bid opening. In general, this procedure shall be as follows:
- 1. Submit a Substitution Request form for each individual product.
  - 2. Support your request with required documentation as previously addressed.
- B. Requests for Substitutions submitted and approved during Bidding Phase shall be announced by the Architect by Addenda prior to the bid due date.

## 3.02 UNAUTHORIZED SUBSTITUTIONS

- A. Any Contractor who substitutes products without proper authorization by the Architect will be required to immediately remove and replace the product and all costs required to conform to the Contract Documents shall be borne by the General Prime Contractor.

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**END OF SECTION 01 25 00**

SECTION 01 26 00 - 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. Architect shall develop and implement a system acceptable to Owner for the preparation, review and processing of Change Order Requests, contingency and allowance expenditure authorizations, Change Orders, and requests for information.
- B. Related Requirements:
  - 1. Section 01 25 13 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 PROPOSAL REQUESTS

- A. 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. Work Change 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 14 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a Change Order Request to 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 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 01 25 00 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
  - 7. Change Order Request Form: Use form provided in this Project Manual. See Section 00 63 57 – Change Order Request form.

## 1.4 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 01 2100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 01 2200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

## 1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Contract Change Order for signatures of Owner and Contractor on Owner's standard form.

## 1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on form included in Project Manual. See Section 00 63 46 – Construction Change Directive form. 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.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
  - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS *(Not Used)*

PART 3 - EXECUTION *(Not Used)*

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**END OF SECTION 01 26 00**

## SECTION 01 29 00 - PAYMENT PROCEDURES

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

## 1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with continuation sheets.
    - b. Submittal schedule.
    - c. 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 14 days before the date scheduled for submittal of initial Application for Payment.
  - 3. Sub-schedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values coordinated with each phase of payment.
  - 4. Sub-schedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide sub-schedules showing values coordinated with each element.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one-line item for each Specification Section.
  - 1. Identification: Include the following Project identification on the schedule of values:
    - a. Project name and location.
    - b. Name of Architect.
    - c. Architect's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.
  - 2. Arrange schedule of values consistent with format of AIA Document G703.
  - 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
    - a. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
  - 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
  - 5. 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.
  - 6. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
  - 7. 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.
  - a. Include each Change Order as a new line item.

#### 1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
  1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
  1. Submit draft copy of Application for Payment two days prior to due date for review by Architect via email.
- C. Application for Payment Forms: Use form AIA Document G702 for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
  1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders completely executed before last day of construction period covered by application.
  4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
  1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit **four (4)** signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours.
  1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. 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.
- H. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. Punch List (provided by Architect)
  5. Recommendation of Acceptance
  6. Beneficial Occupancy
  7. AIA Document G704, "Certificate of Substantial Completion."
  8. Clear Lien Certificate
  9. Evidence that claims have been settled.
  10. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  11. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

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**END OF SECTION 01 29 00**

## SECTION 01 3100 - PROJECT MANAGEMENT AND COORDINATION

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. Requests for Information (RFIs).
  - 4. Project meetings.

## 1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

## 1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
  - 1. Post copies of list in in temporary field office or in life safety binder and by each temporary telephone. Keep list current at all times.

## 1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. 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. See other Sections for disposition of salvaged materials that are designated as Owner's property.



## 1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    - c. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    - d. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    - e. Indicate required installation sequences.
    - f. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations shall not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
  2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
  3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
  4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
  5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
  6. Mechanical and Plumbing Work: Show the following:
    - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
    - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
    - c. Fire-rated enclosures around ductwork.
  7. Electrical Work: Show the following:
    - a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
    - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
    - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
    - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
  8. Fire-Protection System: Show the following:
    - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
  9. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.
- C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:

1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.
2. File Submittal Format: Submit or post coordination drawing files using Portable Data File (PDF) format.
3. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
  - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
  - b. Contractor shall execute a data licensing agreement in the form of the Architect's In-house Digital Data Licensing Agreement.

#### 1.7 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
  1. Architect 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.
  3. Submit RFI electronically via email to [office@kingarchitects.net](mailto:office@kingarchitects.net) or to electronic project management software/site acceptable to Architect specifically established for Project.
- B. 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 suggested resolution 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: RFIs shall be submitted with the document found in specification Section 00 63 13 included in the Project Manual
  1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
  1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
  3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "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 10 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
  - 1. Identification of related Minor Change in the Work and Proposal Request, as appropriate.

## 1.8 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
  - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
  - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  - 3. Minutes: Entity responsible for conducting meeting shall record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 7 days before commencement of construction.
  - 1. Conduct the conference to review responsibilities and personnel assignments.
  - 2. Attendees: Attendance is mandatory for Owner's Project Manager, Architect, and their appropriate consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 3. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Tentative construction schedule.
    - b. Phasing.
    - c. Critical work sequencing and long-lead items.
    - d. Designation of key personnel and their duties.
    - e. Lines of communications.
    - f. Procedures for processing field decisions and Change Orders.
    - g. Procedures for RFIs.
    - h. Quality control plan.
    - i. Procedures for testing and inspecting.
    - j. Procedures for processing Applications for Payment.
    - k. Distribution of the Contract Documents.
    - l. Submittal procedures.
    - m. Preparation of record documents.
    - n. Site logistics plan.
    - o. Use of the premises and access.
    - p. Work restrictions.
    - q. Working hours.
    - r. Owner's occupancy requirements.
    - s. Responsibility for temporary facilities and controls.
    - t. Procedures for moisture and mold control.
    - u. Procedures for disruptions and shutdowns.
    - v. Construction waste management and recycling.
    - w. Parking availability.
    - x. Office, work, and storage areas.
    - y. Equipment deliveries and priorities.
    - z. Site-specific safety plan.
    - aa. First aid.
    - bb. Security.
    - cc. Progress cleaning.
  - 4. Minutes: Entity responsible for conducting meeting shall record and distribute meeting minutes.

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- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Submit proposed dates of preinstallation conferences for Owner's approval.
  2. Submit a list of planned preinstallation conferences and list Work to be discussed by relevant specification section(s) to Owner and Architect.
  3. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting.
  4. Advise Owner and Architect of scheduled meeting dates at least 7 days in advance.
  5. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
    - a. Contract Documents.
    - b. Schedules
    - c. Options.
    - d. Related RFIs.
    - e. Related Change Orders.
    - f. Purchases.
    - g. Deliveries.
    - h. Submittals.
    - i. Review of mockups.
    - j. Coordination with other work
    - k. Possible conflicts.
    - l. Compatibility requirements.
    - m. Weather limitations.
    - n. Manufacturer's written instructions.
    - o. Warranty requirements.
    - p. Compatibility of materials.
    - q. Acceptability of substrates.
    - r. Temporary facilities and controls.
    - s. Space and access limitations.
    - t. Regulations of authorities having jurisdiction.
    - u. Testing and inspecting requirements.
    - v. Installation procedures.
    - w. Required performance results.
    - x. Protection of adjacent work.
    - y. Protection of construction and personnel.
  6. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  7. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
  8. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Owner's PM, Architect, Contractor Meetings: Conduct Owner, Architect, Contractor meetings at regular intervals.
1. Coordinate dates of meetings with preparation of payment requests.
  2. Attendees: In addition to Owner' PM, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Review and correct or approve minutes of previous Owner, Architect, Contractor 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 shall 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 Owner, Architect, Contractor 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)

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**END OF SECTION 01 31 00**

## SECTION 01 32 16 – CONSTRUCTION SCHEDULING

## PART 1 – GENERAL

## 1.01 OVERVIEW

It is expressly understood and agreed by the Contractor that the rate of progress and the time of completion of the Work is of the essence for this Contract. The contractor shall execute the Work with such progress as required to prevent delay to Contract and to other contractors working on other contracts at Site.

The section includes preparation and submittal of Baseline Schedule, maintenance schedule during the execution of the Work, preparation and submittal of monthly schedule updates, and preparation and submittal of final As Delivered Schedule.

Baseline Schedule shall conform to time provisions specified in Contract Documents and to requirements of other specified work sequence constraints set forth in the Contract Documents. The contractor shall demonstrate its intent to safely execute the Work by preparing and submitting the Baseline Schedule and monthly schedule updates.

Develop Baseline Schedule to a reasonable level of detail and follow work breakdown structure and execution strategy correlating to the Schedule of Values (SOV). Maintain schedule according to instructions and requirements set forth in this Specification. Upon completion of the Work, the Contractor shall prepare and submit a final As Delivered Schedule.

## 1.02 PURPOSE

This Specification sets forth requirements and procedures for Baseline Schedule and related reports:

- A. Purpose of Baseline Schedule is to allow Contractor to prepare an orderly plan of execution with logically sequenced activities to successfully accomplish timely completion of Project and to identify, via Critical Path Method, which chain of activities drives completion date of Project.
- B. Purpose of schedule and related reports is to:
  - 1. Ensure adequate planning and timely execution of the Work.
  - 2. Establish a Baseline Schedule to which subsequent monthly schedule updates shall be compared to determine overall progress and performance towards satisfactory completion of the Contract.
  - 3. Identify interdependencies and facilitate coordination of Contractor's work with others as needed.
  - 4. Assist the Architect and Owner Representative in monitoring progress.
  - 5. Evaluate proposed changes to the Contract and subsequent impacts to the schedule.
  - 6. Effectively determine impacts of time extensions and Change Order costs to overall Project completion.
  - 7. Identify and mitigate risks early in the Project's lifecycle and during each period of progress.

## 1.03 DEFINITIONS

The following definitions apply to this Specification:

- A. Baseline Schedule: Accepted schedule for Contract, demonstrating planned activities, activity sequencing, and activity durations.
- B. Project Critical Path: One or more continuous sequences of activities (Critical path shall not pass solely through any lag relationships) with zero total float, spanning a portion of, or entire remaining duration of Project, which ends at Project completion milestone and delineates remaining duration of Project.
- C. Critical Path Method (CPM): Schedule development technique that starts with a network of work activities logically sequenced from beginning to end according to their interdependencies, followed by time-driven forward and backward pass calculation to establish Critical Path and Total Float.

- D. Early Finish: Earliest a schedule activity is planned to finish based on its logical relationship to other activities in Project.
- E. Early Start: Earliest a schedule activity is planned to start based on its logical relationship to other activities in Project.
- F. Fragnet (Methodology): A template building utility that can be used to model work outside of a project and then plugged into the Project's logic network.
- G. Free Float: Amount of time an activity can be delayed before it affects other activities in the schedule.
- H. Late Finish: Latest a schedule activity can finish based on its logical relationship to other activities on Project and still permits the Project to be completed on time.
- I. Late Start: Latest a schedule activity can start based on its logical relationship to other activities on Project and still permits the Project to be completed on time.
- J. Milestone: A significant event that is important for timely completion of the Project. Milestones occur at a particular point in time. Milestones have no duration and do not contain work, cost loading, or resource loading.
- K. Original Duration: Amount of time an activity was expected to take to complete at beginning of Project as shown on Baseline Schedule in calendar days or workdays depending upon software calendar assigned to a given task.
- L. Recovery Schedule: When the Project is not meeting its planned goals and becomes necessary to re-arrange the remaining work to represent the Work more accurately and how the work will be performed. The method indicates how the Project will either get back on track to finish on time, or to depict a new project finish date.
- M. Task: Element of the Work Breakdown Structure (WBS) that may represent a work package, assembly, sub-assembly, component, phase, or deliverable.
- N. Time Impact Analysis: Analytical process of adding a Fragnet or similar method of adding activities within a Project's existing set of activities in a CPM schedule network with corresponding appropriate logical relationship ties to be used as an analytical tool to effectively assess the impact that a given event, series of events, or delay has had on a Project's critical path.
- O. Total Float: Amount of time a given activity or path of activities may be delayed before it will affect the Project's completion date. Total Float is calculated as the difference between early and late dates.
- P. Work Activity: Activity that requires time and resources to complete and shall be performed before the Contract is considered complete. Activities are the detailed steps necessary to complete or deliver a Task.
- Q. Work Breakdown Structure (WBS): Hierarchical structure that decomposes and subdivides, into smaller and more manageable pieces, the Work required to deliver the scope of a Contract. Each descending level of the WBS represents an increasing level of detail of Project work. Typically, the lowest level WBS groups the Work activities of the Contract into tasks and subtasks, which may represent work packages, assemblies, subassemblies, components, phases, and deliverables. Work activities are assigned to WBS elements. Guidance on development can be obtained from Project Management Institute Practice Standard for Work Breakdown Structures if needed.

#### 1.04 PROJECT SCHEDULER QUALIFICATIONS

Employ or retain services of a qualified Scheduler.

- A. Project Scheduler shall meet the following minimum requirements:
  - 1. Understanding of construction process to the extent that a logical CPM schedule can be developed, maintained, and progressed which accurately represents the scope of work to be performed.



2. Must possess knowledge of the Critical Path Method of scheduling and the ability to analyze schedules for determining reasonable durations and logical relationships.

- B. Project Scheduler shall attend meetings, including monthly progress and special meetings pertaining to scheduling of the Work. The project scheduler and the Contractor's management team are expected to collaborate closely with the Architect and Owner Representative to deliver acceptable products outlined in this section.

#### 1.05 SOFTWARE

Prepare and maintain Project's schedule according to the following requirements:

- A. Use Primavera Project Management version 19.1 (P6) or Microsoft Project version 2016 or the latest version of either software at the time of award of the Contract.
- B. The Architect shall approve the contractor's use of alternative software.

#### 1.06 SUBMITTALS

- A. Submit electronic schedule files in PDF format and the native file format (Primavera Project Management or Microsoft Project file Format [.xer or .mpp]) for the chosen software platform in accordance with submittal specifications as specified herein. The Architect shall approve the contractor's use of alternative software.

#### 1.07 BASIS OF PAYMENT

The schedule shall be utilized as the relative basis for progress payments:

- A. The Contractor's first payment application will be processed when the initial Baseline Schedule has been submitted and accepted by the Architect.
- B. If the Baseline Schedule has been submitted but has not been accepted at the time of the first payment application, only mobilization costs will be paid by the Owner, as established in the Contract Document, and to an extent otherwise supported by the Contractor.
- C. The contractor's monthly progress payment applications shall not be accepted for payment without monthly schedule updates submitted in time and manner required by this specification and is accepted by the Architect.
- D. Failure to maintain the schedule in an accepted status may result in the Owner withholding payment until the schedule is accepted.

#### PART 2 – PRODUCTS *not used*

#### PART 3 – EXECUTION

##### 3.01 BASELINE SCHEDULE

- A. Upon receipt of the Notice to Proceed, prepare and submit the Baseline Schedule for the Work included under the scope of Contract. Submittal of Baseline Schedule shall comply with the following requirements:

##### 3.02 CRITICAL PATH METHOD

- A. Use the Critical Path Method (CPM) scheduling technique as the basis for preparing schedules and for monitoring job progress.
- B. Provide information concerning sequencing, logic, and duration of activities as well as providing the CPM logic network diagram and tabular schedule data.

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3.03 INITIAL BASELINE SCHEDULE

- A. Submit Initial Baseline Schedule in accordance with requirements of this section and Section 01 33 00, Submittals, ten (10) days before Preconstruction Conference.
- B. Architect will schedule and conduct a Preconstruction Scheduling Meeting to initiate the development of the required Baseline Schedule. At the meeting, requirements will be reviewed with the Contractor. The Contractor shall present the proposed methodology utilized for the development of the Baseline Schedule, including the proposed methodology for sequencing, or segregating the work. Baseline Schedule shall comply with requirements set forth in these Specifications and in the rest of the Contract Documents.
- C. Within ten (10) days after Notice to Proceed, submit Final Baseline Schedule. Submittal shall be accompanied by a narrative report describing general project execution strategy, perceived risks, and identification of coordination efforts with the Architect or third parties required to effectively deliver the Project on time.
- D. Architect will accept or reject the Baseline Schedule within ten (10) days after receipt of the required information. If the Baseline Schedule is not accepted, Architect will provide comments to the Contractor stating reasons why the submission was not accepted.
- E. Following receipt of the Architect's review comments, the Contractor shall correct the Baseline schedule to identify missing activities and relationships relevant to the scope of work; resubmit the Baseline Schedule within seven (7) days. Time extensions will not be granted to complete this process.
- F. Comments made by Architect during review shall not relieve Contractor from compliance with requirements of the Contract Documents.
- G. To the extent that there are any conflicts between the accepted Baseline Schedule and requirements of the Contract Documents, the Contract Documents shall prevail.
- H. Once Baseline Schedule is accepted it becomes the schedule of record and basis for future schedule updates and performance metrics calculations. After acceptance of the Baseline Schedule, no changes shall be made therein without the approval of the Architect.

## 3.04 BASELINE SCHEDULE REQUIREMENTS

- A. General Requirements:
  - 1. Use software as prescribed within Section 1.05.
  - 2. Do not use mandatory constraints in development and avoid, or minimize, use of other types of constraints within the schedule.
  - 3. Demonstrate the final level of detail for each activity; include required relationships and durations of each activity based on work quantities and planned resources to accomplish the Work.
  - 4. Contain no changes or delays which may have been incurred during the Initial Baseline Schedule development period. At first schedule update after Baseline Schedule has been accepted, include changes which have been approved via Change Order.
  - 5. Data date shall be Notice to Proceed date.
  - 6. Indicate the longest critical path of activities from Notice to Proceed to the Contract completion date. The contractor shall provide a narrative defining the critical path and potential schedule risks to activity along the critical path.
- B. Subcontractor Work:
  - 1. Collect information from Subcontractors, suppliers, and equipment manufacturers for incorporation into the Baseline Schedule, including the estimated durations for each separable work activity and material lead times.

2. Coordinate with major lower-tier Subcontractors and with the Architect representative to comply with scheduling requirements.
  3. Major lower-tier Subcontractors shall provide schedule requirements specified herein to Contractor so that Contractor can prepare a fully coordinated Baseline Schedule.
  4. Submit certification that accepted Baseline Schedule has been reviewed and discussed with Subcontractors, Suppliers, and vendors as it relates to their work prior to commencement of their work.
- C. Work Breakdown Structure:
1. Develop the Baseline Schedule within a single project in Primavera P6 or Microsoft Project. The Project schedule shall only contain WBS elements that correspond to the scope of this Contract.
  2. The first level WBS node shall represent the appropriate lifecycle phase of the Project, such as Design, Procurement, or Construction.
  3. Other levels of the WBS below the first level may be used to group the Work in a logical way that represents lower-level phases, locations, deliverables, work packages, components, assemblies, or other scope elements.
- D. Milestones:
1. Milestone dates are defined in calendar days following the date set forth in Notice to Proceed or listed in the Contract Documents.
  2. Include as a minimum the following:
    - a. Notice to Proceed
    - b. Critical Submittals / Procurement
    - c. Construction Start
    - d. Substantial Completion
    - e. Final Completion
    - f. Specified Contract Milestones as identified in Contract Documents
- E. Project Duration and Scheduled Project Completion
1. Show sequence and interdependence of activities required for the complete performance of the Work, beginning with the date specified in Notice to Proceed and concluding with the date of Final Completion of the Contract:
    - a. The schedule duration from the early start to late finish for a subphase, phase, or entire Project shall not exceed the Contract times specified.
    - b. Lag durations shall not have a negative value unless specifically approved by the Architect.
    - c. Project float, total float, slack time, or time contingency within schedule (i.e., the difference in time between projected early completion date and required Contract completion date), and free float or critical path float within the overall schedule is not for the exclusive use of Owner or Contractor but is jointly owned and is an expiring resource available to and shared by both as needed to meet Contract milestones and the Contract completion date.
  2. Comply with limits imposed by the scope of Work, with contractually specified intermediate milestones and completion dates, and with constraints, restraints, or sequences included in Contract Documents.
- F. Project Calendar:
1. Defined within schedule and accurately reflect the work plan.
  2. Each activity within the schedule shall possess an assigned calendar.
  3. Weather conditions shall be anticipated and planned.
  4. If work crews are to work a schedule different from the rest of the Project, then a separate calendar shall be defined for that work crew and the Work shall be scheduled utilizing that specific calendar.
  5. Use of, or requirement for, special work schedules or calendars shall be communicated to Architect in Narrative Report as part of Baseline Schedule submission.
- G. Activity Duration and Level of Detail:
1. Schedule shall include an appropriate level of detail. Failure to develop or update the Schedule shall result in nonacceptance of the Schedule.

2. The Work activities shall be of sufficient detail to ensure adequate planning and execution of the Work and provide a basis for forecasting, monitoring, and evaluating the progress of the Work.
  3. Work activities shall conform to the following requirements:
    - a. Describe Work activities using consistent terminology such that the Work is readily identifiable for assessment of completion. Activity descriptions shall be stand-alone and not rely on WBS or activity codes for identification.
    - b. One day shall be the smallest time unit shown unless otherwise directed by Architect.
    - c. Subdivide the Work into activities of duration no longer than twenty (20) working days, except as to non-construction activities (such as procurement of materials, delivery of materials, and delivery of equipment) and any other activities for which Architect may approve a longer duration.
    - d. Activity descriptions shall be written in English, start with a verb, clearly describe the Work to be performed, and be used in a consistent manner throughout the Schedule.
  4. Activity durations shall be appropriate for the Work to be performed by crew size and major equipment assigned to the tasks.
- H. Procurement Activities and Submittals:
1. Prepare in chronological order of submittals. Show Specification section of submittal and submittal name. Include activities to cover the procurement process such as submittal preparation, review, approval, procurement, fabrication, delivery, permits, and similar preconstruction work. Submittal timeframes shall not be on the critical path, and sufficient time shall be included in the Schedule to allow for resubmittal if necessary.
  2. Activity ID numbers for submittals shall be coded to clearly identify each submittal number. Submittals shall be appropriately tied in the logic of the Schedule. Resubmittals shall be coded with the same Activity ID number as originally submitted submittal with the addition of one additional alpha character starting with the letter "A" and progressing subsequent letters for each resubmittal of the same submittal until approved to make each Activity ID unique.
  3. Resubmitted submittals shall be logically tied to appropriate Activities in the network logic model.
- I. Work Areas:
1. Code activities to show each major area of construction.
  2. Activities shall not be allowed to span more than one work area.
- J. Other Baseline Schedule Requirements:
1. Include the following items as appropriate to this Contract:
    - a. Purchases, submittals, submittal reviews, fabrication, deliveries, manufacturer factory tests, field tests, readiness tests, and installation activities for materials and equipment for which Contractor intends to seek payment, including stored materials.
    - b. Delivery, installation, check out/testing, and startup of Owner furnished equipment and materials in accordance with Schedule dates set forth in the Specifications or furnished by the Architect.
    - c. Approvals required by regulatory agencies or other third parties.
    - d. Connection to existing systems and equipment.
    - e. Temporary utilities and construction.
    - f. Interruption and shut down requests of facilities or utilities to allow for new connections.
    - g. Start up, testing, training, and assistance required under Contract Documents.
    - h. Contractor activities that will be coordinated with the Owner or Architect through ongoing activities.
    - i. Contractor obtained permits.
    - j. Preparation of coordination and layout drawings.
    - k. Punchlists.
    - l. Final cleanup.
    - m. Monthly updating of Record Drawings and final submittal of as-built drawings at project completion, or as directed by Architect.
    - n. Required inspections by Architect.
    - o. Other specific information required by Architect.

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3.05 BASELINE SCHEDULE SUBMITTAL

Submit Baseline Schedule according to the following requirements:

- A. Baseline Schedule Narrative Report:
  - 1. Include the following information:
    - a. Transmittal letter.
    - b. Description of critical path as well as near critical paths with a total float of less than ten (10) days.
    - c. Listing of each Contract milestone showing its planned completion date.
    - d. Proposed number of working days per week for each calendar assigned within the Baseline Schedule.
    - e. Planned holidays to be observed during the life of the Contract (by day, month, and year).
    - f. Planned number of shifts per day.
    - g. Number of hours per shift.
    - h. Planned versus actual equipment productivity where applicable.
  - 2. Failure to include this information will delay review of the Schedule until Architect is in receipt of sufficient detail to validate the intent.
- B. Baseline Schedule Network Diagram:
  - 1. Depict schedule network diagram in Gantt chart format, showing schedule activities grouped according to the WBS and sorted by start date. The diagram shall show activity relationships and be formatted for tabloid-size paper (11" x 17").
- C. Baseline Schedule
  - 1. In accordance with Baseline Schedule Requirements.
  - 2. Submit in XER or MPP format as well as PDF format; include transmittal letter, Baseline Schedule Narrative Report, and Baseline Schedule Network Diagram.
- D. Accepted Baseline Schedule
  - 1. Basis for progress and performance measurement. No changes shall be allowed to the accepted Baseline Schedule.

## 3.06 MONTHLY SCHEDULE UPDATES

Once the Baseline Schedule is accepted, prepare, and submit a Monthly Schedule Update in compliance with the following requirements:

- A. Process for submittal of monthly schedule update:
  - 1. Prepare and submit with accurate information on logic, status, physical percent complete, percent complete, actual start and finish dates, remaining duration changes, and related reports, diagrams, and schedules based on periodic progress payment cycle.
  - 2. On date provided by Architect, meet with Architect to review monthly schedule update. The contractor and Architect will review the updated schedule and discuss the content of the Narrative Report.
  - 3. Allow Architect seven (7) days after meeting to review and accept or reject schedule updates.
  - 4. Rejected schedule updates shall be resubmitted to Architect within seven (7) days. Requested changes shall be included in resubmittal. Submittal of Monthly Schedule Update to Architect shall be a condition precedent to making of payments, which are due or may become due under terms of the Contract.
  - 5. Subsequent Monthly Schedule Updates shall be compared to the accepted Baseline Schedule. In addition, each current monthly update shall be compared to last month's update. Each update shall be labeled by a period with a data date.
- B. Monthly schedule update requirements:

Update schedule every month with accurate progress and status information. Update according to the following requirements:

1. Updated Schedule Data Date
  - a. Accurately portray the Work performed as of the last day of the month, which will be considered the monthly schedule update cutoff date unless otherwise specified by the Architect.
  - b. Change Project's data date to correspond to Monthly Schedule Update cutoff date.
2. Updating Progress and Status Information
  - a. Cutoff date to accurately reflect the Work performed during the month.
  - b. Actual start and finish dates for activities that started or finished during the month.
  - c. Activity remaining duration shall accurately reflect the time required to complete each activity.
3. Default Progress Data and Retroactive Changes Disallowed
  - a. Default progress data provided from the scheduling system shall not be allowed.
  - b. Actual start and finish dates shall not be automatically updated by default mechanisms that may be included in scheduling software.
  - c. Ensure software settings prevent percent complete and remaining duration from being related so that Contractor evaluates activity remaining duration at each Monthly Schedule Update without affecting progress measurement.
  - d. Do not retroactively change progress data provided on previous Monthly Schedule Updates including, but not limited to, actual start and finish dates, and percent complete.
4. Conditions Relating to Float
  - a. Extensions of time for the performance required under Contract Documents pertaining to equitable time adjustment will be granted only to extent that equitable time adjustment exceeds total float in the activity or path of activities affected at time approval was issued for the change.
  - b. Pursuant to float sharing requirements of the Contract, use of float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended activity times, or imposed dates shall be cause for rejection of schedule and revisions or updates.
  - c. Owner initiated changes that extend or shorten Contract Times shall be the sole basis to adjust the Contract completion date. Delays in the critical path not associated with proper requests for time extensions in accordance with General Conditions and General Requirements shall be deemed to be the responsibility of the Contractor.
  - d. Delays to early completion date shall be non-compensable and considered Project Float.
5. Out of Sequence Progress
  - a. Defined as activities that have reported progress without predecessor activities being completed. Or in the case of Start-to-Start relationships, where predecessor activities have not begun.
  - b. A written explanation of each out-of-sequence activity shall be described in the monthly Narrative Report update. The architect may direct changes in schedule logic be made to correct significant out-of-sequence Work.
6. Approval of Changes
  - a. Execute the Work in accordance with the accepted Baseline Schedule.
  - b. Only schedule changes that have been previously accepted by Architect through a Change Order shall be included in the Monthly Schedule Update. Narrative Report shall specifically reference on activity-by-activity basis changes made since previous period and relate each change to accepted Change Order.
  - c. Upon approval of change order request or issuance of a unilateral change order by Architect the agreed upon Change Order activities, activity duration, logic, and impacts shall be reflected in the next Monthly Schedule Update and in subsequent schedule updates.
  - d. No change to accepted activities, original activity durations, logic, interdependencies, resource loading of the Baseline Schedule shall be made without prior notification to and acceptance from the Architect.
  - e. If Contractor desires to make a change to accepted Baseline Schedule, request permission from Architect in writing stating reasons for change as well as specifics, such as the proposed changes in activities, original activity durations, logic, interdependencies, milestones, the planned sequence of operations of Baseline Schedule.
  - f. Architect will respond within seven (7) days after receipt of the request.

- g. If Architect considers Baseline Schedule change requested to be a major change, Contractor may be required to submit a revised Baseline Schedule for acceptance, without additional cost to Owner, including reports deemed necessary by Architect to show the probable effect of change on Project.
  - h. Submit proposed schedule revision and required reports within seven (7) days after Architect notifies Contractor that requested revision is a major change.
  - i. Change shall be considered of a major nature if time estimated for activity or sequence of activities is varied from the original plan to the degree there is reasonable doubt that Contract milestones will be met, or if the change impacts the Work of other lower-tier Subcontractors at Site.
  - j. Only upon acceptance of the requested change by the Architect shall it be reflected in the next scheduled update.
  - k. Changes to activities having adequate float shall be considered as minor changes, except that an accumulation of minor changes may be considered a major change when such changes affect the Contract Completion date or milestones.
  - l. Activity that is added or modified by Change Order shall be identified by Change Order code that changed the activity. Activities shall not belong to more than one Change Order. Scope introduced through change orders shall remain independent from the base contract scope.
  - m. Change order requests and Requests for Information shall reference which schedule activity they potentially impact to properly assess time impacts. A time impact analysis shall be required if requested by Architect.
7. Delays and Recovery
- a. If the Architect determines the Contractor is not maintaining anticipated planned progress, the Architect may require a Recovery Schedule from the Contractor.
  - b. Failure to deliver an acceptable Recovery Schedule to the Architect within seven (7) days of written notification may result in Owner withholding progress payments until an acceptable Recovery Schedule is delivered.
  - c. Recovery Schedule is defined as a revised plan of execution supported by a revised schedule, workforce/staffing plan, project calendar, workweek requirements, and graphic analysis that are required to recover from current deficient progress or schedule deficit.
  - d. Whenever it becomes apparent from the Monthly Schedule Update that milestones will not be met, take any or all the following actions:
    - 1) Increase construction workforce in such quantities and crafts as shall eliminate the backlog of the Work.
    - 2) Increase number of working hours per shift, shifts per day, workdays per week, or amount of construction equipment, or combination of foregoing sufficiently to eliminate Work backlog.
    - 3) Reschedule work activities that were scheduled sequentially so that they occur in parallel.
  - e. Under no circumstances shall addition of equipment or construction forces, increasing working hours, or other methods, manner, or procedures shall be considered cause for Contract Modification or treated as acceleration.
  - f. Requests for contract timeline extensions due to adverse conditions, delays, events outside the control of Contractor, or for other reason shall be submitted within same pay period in which purported impact was incurred unless otherwise directed by Architect.

### 3.07 MONTHLY SCHEDULE UPDATE SUBMITTAL

According to the following requirements:

- A. Schedule Update Narrative Report:
  - 1. Include the following:
    - a. Transmittal letter.
    - b. Listing of each activity on the schedule that was completed or in progress during the reporting period, as well as a list of activities scheduled for next reporting period.



- c. Analysis, by critical path, of each negative path describing nature of critical path, its impact on other activities, milestones, and completion dates; and recommendations for recovery of delay.
  - d. Current and anticipated delays, including cause of delay, corrective action and schedule adjustments to correct delay, and impact of delay on other activities, milestones, and completion dates.
  - e. Description of significant changes in construction sequence, logic changes, relationship changes, or duration changes, and rationale associated with each change.
  - f. List of pending issues and their status including, but not limited to, permits, contract modifications, time extension requests, and long lead procurement items.
  - g. Listing of each Contract milestone showing its planned completion date according to the Baseline Schedule, its current planned completion date, and its status.
- B. Updated Schedule Network Diagram
  - 1. Depict the entire schedule network diagram in Gantt chart format, showing schedule activities grouped according to the WBS and sorted by start date. The diagram shall show activity relationships formatted for tabloid-size paper (11" x 17").
- C. Monthly Updated Schedule
  - 1. In accordance with the section, Monthly Schedule Update Requirements.
  - 2. Submit in XER or MPP format as well as PDF format; include transmittal letter, Monthly Update Schedule Narrative Report, Baseline Schedule Network.

### 3.08 SUBMITTAL OF FINAL AS DELIVERED SCHEDULE

- A. As a condition precedent to release of retainage, the last update to schedule submitted shall be identified as the As-Delivered Schedule.
- B. Reflect the manner in which Project was actually delivered, including start and finish dates.
- C. Architect will have fourteen (14) days to accept or reject the As-Delivered Schedule. Schedule rejection will be accompanied by instructions on corrective action required for resubmittal.

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**END OF SECTION 01 32 16**

## SECTION 01 33 00 – SUBMITTAL PROCEDURES

## PART ONE – GENERAL

## 1.01 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.

## 1.02 SUMMARY

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

## 1.03 GENERAL

- A. General Provisions:
  - 1. Provisions in this section are mandatory procedures for review, approval and submitting samples, shop drawings and product data in accordance with the General Conditions.
  - 2. **Submittals which are received directly from sources other than through the General Contractor's office will be returned to the General Contractor "without action".**
  - 3. Job delays occasioned by requirement of re-submission of samples, shop drawings and product data not in accord with Contract Documents and/or submittals sequenced contrary to the agreed schedule are Contractor's responsibility and will not be considered valid justification for extension of contract time or increase in the contract sum.
  - 4. **All submittals shall be electronic where possible.**

## 1.04 DEFINITIONS

- A. 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."
- B. 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."
- C. Submittals: General term including samples, shop drawings and product data, as applicable and as defined by the General Conditions.
- D. 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.
- E. 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.

## 1.05 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 revisions to submittals noted by 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. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.

3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
  - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
4. Format: Arrange the following information in a tabular format:
  - a. Scheduled date for first submittal.
  - b. Specification Section number and title.
  - c. Submittal category: Action; informational.
  - d. Name of subcontractor.
  - e. Description of the Work covered.
  - f. Scheduled date for Architect's final release or approval.
  - g. Scheduled date of fabrication.

#### 1.06 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
  1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings via email for use in preparing Shop Drawings and Project record drawings.
    - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
    - b. Digital Drawing Software Program: The Contract Drawings are available in .DWG format.
    - c. Contractor shall execute a data licensing agreement in the form of the Architect's In-house Digital Data Licensing Agreement.
    - d. The following digital data files will be furnished for each appropriate discipline:
      - 1) Floor plans.
      - 2) Reflected ceiling plans.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of 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 reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  1. Initial Review: Allow **15** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow **15** days for review of each resubmittal.
  4. Consultant Review: Where the Contract Documents indicate that submittals may be transmitted to Architect's consultants via the Architect **ONLY (All submittals must be sent to the Architect; the Architect will in turn distribute to the consultant)**, allow **15** days for review of each submittal. Submittal will be returned to Architect before being returned to the Contractor.
- D. Paper Submittals: NOT ALLOWED.
- E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
  1. Assemble complete submittal package into **one single** indexed PDF file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  2. Name file with submittal number or other unique identifier, including revision identifier.

- a. File name shall use KAI project identifier and three-digit sequential number followed by a decimal point and then the Specification number (e.g., 2032B-001.061000).
  - 1) Resubmittals shall include the letter "R" followed by the resubmittal number after another decimal point (e.g., 2032B-001.061000.R1).
  - 2) Color samples of a given section shall include the letter "C" followed by the submittal number after another decimal point (e.g., 2012-001.061000.C1).
3. Provide means for insertion to permanently record Contractor's review and approval markings.
4. Transmittal Form for Electronic Submittals: **Transmit each submittal using a PDF version of the transmittal form located in these specifications (Section 00 62 11)**, containing the following filled in information.
  - a. Project name.
  - b. Date.
  - c. Submittal Number, as described above.
  - d. Name and address of Architect.
  - e. Name of Contractor.
  - f. Name of firm or entity that prepared submittal.
  - g. Names of subcontractor.
  - h. Category and type of submittal.
  - i. Submittal purpose and description.
  - j. Specification Section number and title.
  - k. Drawing number and detail references, as appropriate.
  - l. Location(s) where product is to be installed, as appropriate.
  - m. Related physical samples submitted directly.
  - n. Indication of full or partial submittal.
  - o. Submittal and transmittal distribution record.
  - p. Other necessary identification.
  - q. Remarks
- F. Options: Identify options requiring selection by Architect.
- G. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- H. 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.
- I. 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.
- J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

## PART 2 – PROCEDURES

### 2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
  1. Post/submit electronic submittals as PDF electronic files via email to [office@kingarchitects.net](mailto:office@kingarchitects.net) or to electronic project management software/site acceptable to Architect specifically established for Project.
    - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

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2. Action Submittals: Submit one electronic copy of each submittal unless otherwise indicated. Architect will return one copy.
  3. Informational Submittals: Submit one electronic copy of each submittal unless otherwise indicated. Architect will not return copies.
  4. 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.
- B. 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:
    - a. Manufacturer's catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Standard color charts.
    - d. Statement of compliance with specified referenced standards.
    - e. Testing by recognized testing agency.
    - f. Application of testing agency labels and seals.
    - g. Notation of coordination requirements.
    - h. Availability and delivery time information.
  4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams showing factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  5. Submit Product Data before or concurrent with Samples.
  6. Submit Product Data in the following format:
    - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect's digital data drawing files is otherwise permitted.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer, if specified.
  2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least **8-1/2 by 11 inches (215 by 280 mm)**, but no larger than **24 by 36 inches (610 by 915 mm)**.
  3. Submit Shop Drawings in the following format:
    - a. PDF electronic file.
      - 1) If it is impracticable to submit a Shop Drawing in PDF format, paper format may be allowed. Submit three opaque copies of each submittal. Architect will retain one copy; remainder will be returned.
- D. 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 submittal package.
  2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of applicable Specification Section.
  3. Provide corresponding electronic submittal of Sample transmittal via email to [office@kingarchitects.net](mailto:office@kingarchitects.net) or to electronic project management software/site acceptable to Architect specifically established for Project, digital image file illustrating Sample characteristics, and identification information for record.
  4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
  5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit one full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
  6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured, and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
    - a. Number of Samples: Submit three sets of Samples. Architect will retain one Sample set; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
      - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
      - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Coordination Drawing Submittals: Comply with requirements specified in Section 01 31 00 "Project Management and Coordination."
- F. Application for Payment and Schedule of Values: Comply with requirements specified in Section 01 29 00 "Payment Procedures."
- G. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 01 40 00 "Quality Requirements."
- H. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 77 00 "Closeout Procedures."
- I. 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.

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- J. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- K. 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.
- L. 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.
- M. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- N. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- O. 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.
- P. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- Q. 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.
- R. 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.
- S. 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.
- T. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- U. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

## 2.02 DELEGATED-DESIGN SERVICES



- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file of certificate, signed, and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

### PART 3 – EXECUTION

#### 3.01 CONTRACTOR'S REVIEW

- A. 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.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 77 00 "Closeout Procedures."
- C. 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.

#### 3.02 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, or the action may be recorded in a separate transmittal.
- B. 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.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals or submittals not following these guidelines are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Architect without action.

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**END OF SECTION 01 33 00**

## SECTION 01 42 00 – REFERENCES

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "accepted," "approved," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar subsequent operations.
- G. "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.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities, either exclusively or to be shared with separate Contractors, for performance of work. 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.
- J. "Installer": Entity (*firm or person*) engaged to install work by Contractor, Subcontractor, or Sub-subcontractor. Installers are required to be skilled and experienced in work they are engaged to install.
- K. "Specification Text Format": Underscoring facilitates scan reading, no other meaning. Imperative language is directed at Contractor, unless otherwise noted.
- L. "Overlapping/Conflicting Requirements": Most stringent (generally most costly) applies and will be enforced, unless more detailed language written directly into contract documents clearly indicates that a less stringent requirement is acceptable. Refer uncertainties to Architect/Engineer for decision before proceeding.  
  
Where optional requirements are specified in a parallel manner, option is intended to be Contractor's unless otherwise indicated.
- M. "Minimum Requirements": Indicated requirements are for a specific minimum acceptable level of quality/quantity, as recognized in the industry. Actual work must comply within specified tolerance or may exceed minimums within reasonable limits. Refer uncertainties within reasonable limits. Refer uncertainties to Architect/ Engineer before proceeding.
- N. "Abbreviations, Plural Words": Abbreviations, where not defined in contract documents, will be interpreted to mean the normal construction industry terminology, determined by recognized grammatical rules, by the Architect/Engineer. Plural words will be interpreted as plural where applicable for context of contract documents.

## 1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents.
1. IBC 2021 / ASCE 7-16
  2. IEBC 2021
  3. IFC 2021
  4. IPC 2021
  5. IMC 2021
  6. IFGC 2021
  7. NFPA 101 2021
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

## 1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. 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.

|        |                                                                                 |                                  |
|--------|---------------------------------------------------------------------------------|----------------------------------|
| IAPMO  | International Association of Plumbing and Mechanical Officials<br>www.iapmo.org | (909) 472-4100                   |
| ICC    | International Code Council<br>www.iccsafe.org                                   | (888) 422-7233                   |
| ICC-ES | ICC Evaluation Service, Inc.<br>www.icc-es.org                                  | (800) 423-6587<br>(562) 699-0543 |

- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. 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.

|      |                                                     |                                  |
|------|-----------------------------------------------------|----------------------------------|
| COE  | Army Corps of Engineers<br>www.usace.army.mil       | (202) 761-0011                   |
| CPSC | Consumer Product Safety Commission<br>www.cpsc.gov  | (800) 638-2772<br>(301) 504-7923 |
| DOC  | Department of Commerce<br>www.commerce.gov          | (202) 482-2000                   |
| DOD  | Department of Defense<br>http://dodssp.daps.dla.mil | (215) 697-6257                   |
| DOE  | Department of Energy<br>www.energy.gov              | (202) 586-9220                   |

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|       |                                                                                                        |                                  |
|-------|--------------------------------------------------------------------------------------------------------|----------------------------------|
| EPA   | Environmental Protection Agency<br><a href="http://www.epa.gov">www.epa.gov</a>                        | (202) 272-0167                   |
| FAA   | Federal Aviation Administration<br><a href="http://www.faa.gov">www.faa.gov</a>                        | (866) 835-5322                   |
| FCC   | Federal Communications Commission<br><a href="http://www.fcc.gov">www.fcc.gov</a>                      | (888) 225-5322                   |
| FDA   | Food and Drug Administration<br><a href="http://www.fda.gov">www.fda.gov</a>                           | (888) 463-6332                   |
| GSA   | General Services Administration<br><a href="http://www.gsa.gov">www.gsa.gov</a>                        | (800) 488-3111                   |
| HUD   | Department of Housing and Urban Development<br><a href="http://www.hud.gov">www.hud.gov</a>            | (202) 708-1112                   |
| LBL   | Lawrence Berkeley National Laboratory<br><a href="http://www.lbl.gov">www.lbl.gov</a>                  | (510) 486-4000                   |
| NCHRP | National Cooperative Highway Research Program<br>(See TRB)                                             |                                  |
| NIST  | National Institute of Standards and Technology<br><a href="http://www.nist.gov">www.nist.gov</a>       | (301) 975-6478                   |
| OSHA  | Occupational Safety & Health Administration<br><a href="http://www.osha.gov">www.osha.gov</a>          | (800) 321-6742<br>(202) 693-1999 |
| PBS   | Public Buildings Service<br>(See GSA)                                                                  |                                  |
| PHS   | Office of Public Health and Science<br><a href="http://www.hhs.gov/ophs/">http://www.hhs.gov/ophs/</a> | (202) 690-7694                   |
| RUS   | Rural Utilities Service<br>(See USDA)                                                                  | (202) 720-9540                   |
| SD    | State Department<br><a href="http://www.state.gov">www.state.gov</a>                                   | (202) 647-4000                   |
| TRB   | Transportation Research Board<br><a href="http://gulliver.trb.org">http://gulliver.trb.org</a>         | (202) 334-2934                   |
| USDA  | Department of Agriculture<br><a href="http://www.usda.gov">www.usda.gov</a>                            | (202) 720-2791                   |
| USP   | U.S. Pharmacopeia<br><a href="http://www.usp.org">www.usp.org</a>                                      | (800) 227-8772                   |
| USPS  | Postal Service<br><a href="http://www.usps.com">www.usps.com</a>                                       | (202) 268-2000                   |
| FEMA  | Federal Emergency Management Agency<br><a href="http://www.fema.gov">www.fema.gov</a>                  | (800) 745-0243                   |

- D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. 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)<br>Architectural Barriers Act (ABA)<br>Accessibility Guidelines for Buildings and Facilities<br>Available from U.S. Access Board<br><a href="http://www.access-board.gov">www.access-board.gov</a>                                                                                                                                                                                                                                                              | (800) 872-2253<br>(202) 272-0080                                           |
| CFR     | Code of Federal Regulations<br>Available from Government Printing Office<br><a href="http://www.gpoaccess.gov/cfr/index.html">www.gpoaccess.gov/cfr/index.html</a>                                                                                                                                                                                                                                                                                                                                    | (866) 512-1800<br>(202) 512-1800                                           |
| DOD     | Department of Defense Military Specifications and Standards<br>Available from Department of Defense Single Stock Point<br><a href="http://dodssp.daps.dla.mil">http://dodssp.daps.dla.mil</a>                                                                                                                                                                                                                                                                                                         | (215) 697-2664                                                             |
| FED-STD | Federal Standard<br>(See FS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                            |
| FS      | Federal Specification<br>Available from Department of Defense Single Stock Point<br><a href="http://dodssp.daps.dla.mil/">http://dodssp.daps.dla.mil/</a><br><br>Available from Defense Standardization Program<br><a href="http://www.dsp.dla.mil">www.dsp.dla.mil</a><br><br>Available from General Services Administration<br><a href="http://www.gsa.gov">www.gsa.gov</a><br><br>Available from National Institute of Building Sciences<br><a href="http://www.wbdg.org/ccb">www.wbdg.org/ccb</a> | (215) 697-2664<br><br><br><br><br><br>(202) 619-8925<br><br>(202) 289-7800 |
| FTMS    | Federal Test Method Standard<br>(See FS)                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                            |
| MIL     | (See MILSPEC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                            |
| MIL-STD | (See MILSPEC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                            |
| MILSPEC | Military Specification and Standards<br>Available from Department of Defense Single Stock Point<br><a href="http://dodssp.daps.dla.mil">http://dodssp.daps.dla.mil</a>                                                                                                                                                                                                                                                                                                                                | (215) 697-2664                                                             |
| UFAS    | Uniform Federal Accessibility Standards<br>Available from Access Board<br><a href="http://www.access-board.gov">www.access-board.gov</a>                                                                                                                                                                                                                                                                                                                                                              | (800) 872-2253<br>(202) 272-0080                                           |
| ASCE    | American Society of Civil Engineers<br><a href="http://www.asce.org">www.asce.org</a>                                                                                                                                                                                                                                                                                                                                                                                                                 | (800)548-2723                                                              |
| IBC     | International Building Code<br><a href="http://www.codes.iccsafe.org">www.codes.iccsafe.org</a>                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                            |
| IECC    | International Energy Conservation Code<br><a href="http://www.codes.iccsafe.org">www.codes.iccsafe.org</a>                                                                                                                                                                                                                                                                                                                                                                                            |                                                                            |

NEC            National Electrical Code  
                 [www.nfpa.org](http://www.nfpa.org)

NFPA           National Fire Protection Association (NFPA 101 Life Safety Code)            (800) 344-3555  
                 [www.nfpa.org](http://www.nfpa.org)

E.            State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. 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.

OSFM    Office of State Fire Marshal  
                 [www.sfm.dps.louisiana.gov](http://www.sfm.dps.louisiana.gov)

LDH       Louisiana Department of Health  
                 [www.ldh.la.gov](http://www.ldh.la.gov)

DEQ       Louisiana Department of Environmental Quality  
                 [www.deq.louisiana.gov](http://www.deq.louisiana.gov)

LDI       Louisiana Department of Insurance  
                 [www.lidi.state.la.gov](http://www.lidi.state.la.gov)

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

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**END OF SECTION 01 42 00**

## SECTION 01 45 00 – QUALITY CONTROL

## PART 1 - GENERAL

## 1.01 REQUIREMENTS INCLUDED:

- A. General Quality Control
- B. Mock-ups
- C. Manufacturer's Field Services
- D. Testing Laboratory

## 1.02 RELATED WORK

- A. Requirements, abbreviations and acronyms for reference standard are defined in Division 01.
- B. ASTM C945 - Test for Compressive Strength of Lightweight Insulating Concrete.
- C. ASTM 329 - Standard Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as used in construction.

## 1.03 QUALITY CONTROL, GENERAL

- A. Maintain quality control over supplies, manufacturers, products, services, site conditions and workmanship to produce work of specified quality.

## 1.04 MOCK-UP

- A. Erect field samples and mock-ups at project site in accordance with requirements of the applicable specification section.

## 1.05 MANUFACTURER'S FIELD SERVICES

- A. When specified in respective specification sections, require supplier and/or manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment as applicable and to make appropriate recommendations.

## PART 2 - TESTING LABORATORY

## 2.01 GENERAL REQUIREMENTS

- A. An independent testing laboratory will be employed by Owner. Owner shall pay for laboratory services to perform specified testing.
  - 1. Contractor shall cooperate with the laboratory to facilitate the execution of its required services.
  - 2. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the work of the Contract.

## 2.02 QUALIFICATIONS OF LABORATORY

- A. Laboratory shall meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.
- B. Laboratory shall be authorized to operate in the State of Louisiana.

## 2.03 LABORATORY DUTIES



- A. Cooperate with Architect and Contractor. Provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
  - 1. Comply with specified reference standards.
  - 2. Ascertain compliance of materials with requirements of contract documents.
- C. Promptly notify Architect of observed irregularities or deficiencies of work.
- D. Promptly submit four copies of written report of each test and inspection to Architect. Each report shall include:
  - 1. Date issued.
  - 2. Project title and number.
  - 3. Testing lab name, address and telephone number.
  - 4. Name and signature of laboratory inspector.
  - 5. Welder's identification number.
  - 6. Date and time of sampling or inspection.
  - 7. Record of temperature and weather conditions.
  - 8. Date of test.
  - 9. Identification of specification section.
  - 10. Location of sample or test in the project.
  - 11. Member tested for structural steel testing.
  - 12. Type of inspection or test
  - 13. Results of tests and compliance with contract documents.
  - 14. Interpretation of test results, when requested by Architect.
  - 15. Perform additional tests as required by Architect.

#### 2.04 LIMITATION OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to release, revoke, alter or enlarge on requirements of contract documents.
- B. Laboratory is not authorized to approve or accept any portion of the work.
- C. Laboratory is not authorized to perform any duties of the Contractor.

#### 2.05 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel, provide access to the work.
- B. Secure and deliver to the lab adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the lab the design mix proposed to be used for concrete and other material mixes which require control by the testing laboratory.
- D. Furnish incidental labor and facilities:
  - 1. To provide access to work to be tested.
  - 2. To obtain and handle samples at the project site.
  - 3. To facilitate inspections and tests.
  - 4. For storage and curing of test samples.
- E. Notify laboratory 24 hours in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
  - 1. When test or inspections cannot be performed after such notice, Contractor shall notify the laboratory.
  - 2. If Contractor does not notify laboratory before laboratory personnel are scheduled for this work, Contractor shall reimburse Owner for laboratory personnel and travel expenses.

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**END OF SECTION 01 45 00**

## SECTION 01 45 13 - PROCEDURES AND CONTROLS

## PART 1 - GENERAL

- 1.01 SUPERINTENDENT: Provide competent qualified supervision to expedite, coordinate and ensure quality in the work.
- 1.02 REPORTING ACCIDENTS: Prepare and submit reports of significant accidents at site and anywhere else where work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained or property loss of substance is or where the event posed a significant threat of loss or personal injury.
- 1.03 TRADE PERSON AND WORKMANSHIP STANDARDS: Instigate and maintain procedure to ensure that persons performing work at site are skilled and knowledgeable in methods and craftsmanship needed to produce required quality levels for workmanship standards as specified and as recognized in the construction industry for applications indicated. Remove and replace other work damaged or deterioration by faulty workmanship or its replacement.
- 1.04 INSPECTION, TEST, AND REPORTS: Required inspection and testing services are intended to assist in determination of probable compliance of work with requirements, but do not relieve Contractor of responsibility for those compliance, or for general fulfillment or requirements of contract documents. Specified inspection and test are not intended to limit Contractor's quality control program. Afford reasonable access to agencies performing tests and inspection.
- The Owner has as his option to retain qualified testing laboratory to perform sampling and testing during or after the placement of materials in order to determine the quality of the work. All tests to herein will be paid for by the Owner. All costs of testing, removal and replacement of materials which fail to meet or exceed the limits and a standard specified or referred to herein will be paid for by the Contractor.
- The testing laboratory shall provide the Owner, Contractor, and Architect a copy of all test results as expediently as possible.
- 1.05 INSTALLER'S INSPECTION OF CONDITIONS: Require installer of each major unit of work to inspect substrate to receive work, and conditions under which work will be performed, and to report (*in writing to Contractor*) unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to installer.
- 1.06 MANUFACTURER'S INSTRUCTION: Where installations include manufactured products, comply with manufacturer's applicable instructions and recommendations for installation to extent these are more explicit or more stringent than requirements indicated in contract documents.
- 1.07 INSPECT EACH ITEM of materials or equipment immediately prior to installation and reject damaged and defective items.
- 1.08 PROVIDE ATTACHMENT and connect devices and methods for securing work properly as it is installed; true to line and level, and within recognized industry tolerances if not otherwise indicated. Allow for expansions and building movements. Provide uniform joint widths in exposed work, organized for best possible visual effect. Refer questionable visual-effect choices to Architect for final decision.
- 1.09 RECHECK MEASUREMENTS and dimensions of the work as in integral step of starting each installation.
- 1.10 INSTALL WORK DURING CONDITIONS of temperature, humidity, exposure, forecasted weather, and status of project completion which will ensure best possible results for each unit of work in coordination with entire work. Isolate each unit of work from non-compatible work as required to prevent deterioration.
- 1.11 COORDINATE ENCLOSURE (*closing-in*) of work with required inspection and tests, so as to minimize necessity of uncovering work for that purpose.
- 1.12 MOUNTING HEIGHTS: Where mounting heights are not indicated, mount individual units of work at industry recognized standard mounting height choices to Architect/Engineer for final decision.

PART 2 - PRODUCTS (*not applicable*)

## PART 3 - EXECUTION

- 3.01 STRUCTURAL WORK: Do not cut and patch structural work in a manner resulting in a reduction of load deflection ratio. Submit proposal and request and obtain Architect's/Engineer's approval before proceeding with cut and patch of structural.
- 3.02 OPERATION/SAFETY LIMITATIONS: Do not cut and patch operational elements and safety components in a manner resulting in a decreased performance, shortened useful or increased maintenance. Submit proposals and request and obtain Architect's approval before proceeding with cut and patch.
- 3.03 VISUAL/QUALITY LIMITATIONS: Do not cut and patch work exposed to view (*exterior and interior*) in a manner resulting in noticeable reduction of visual qualities and similar qualities as judged by Architect.
- 3.04 LIMITATIONS ON APPROVALS: Architect's/Engineer's approval to proceed with cutting and patching does not waive right to later require removal replacement of work found to be cut and patched in an unsatisfactory manner, as judged by Architect.
- 3.05 TEMPORARY SUPPORT AND PROTECTION: Provide adequate temporary support for work to be cut to prevent failure. Do not endanger other work. Provide adequate protection of other work during cutting and patching to prevent damage; and provide protection of the work from adverse weather exposure.
- 3.06 TREE AND PLANT PROTECTION: Install temporary fencing to protect vegetation from damage from construction operations. Protect tree root systems from damage.
- 3.07 CLEANING AND PROTECTION: During handling and installation of work at project site, clean and protect work in progress and adjoining work on a basis of perpetual maintenance. Apply suitable protective covering on newly installed work where reasonable required to ensure freedom from damage or deterioration at time of substantial completion; otherwise, clean and perform maintenance on new installed work as frequently as necessary through remainder of construction period. Adjust and lubricate operable components to ensure operation without damaging effects. To extent possible through reasonable control and protection methods, supervise performance of work in a manner and by means which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure to include (*where applicable, but not by way of limitation*) static loading, dynamic loading, internal pressures, external pressures, high or low temperature, thermal shock, high or low humidity, air contamination or pollution, water, ice, solvents, chemicals, light, radiation, puncture, abrasion, heavy traffic, soiling.

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**END OF SECTION 01 45 13**

## SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
  - 1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.

## 1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the General Conditions cost unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction. Per 3.3.I.1, Hoisting equipment and permanent elevators are exempted from this provision.
- B. Sewer Service: Owner will pay sewer-service use charges for sewer usage by all entities for construction operations.
- C. Water Service: Owner will pay water-service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Owner will pay electric-power-service use charges for electricity used by all entities for construction operations.

## 1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
  - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
  - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
  - 3. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- D. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. HVAC system isolation schematic drawing.
  - 3. Location of proposed air-filtration system discharge.
  - 4. Waste handling procedures.
  - 5. Other dust-control measures.

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1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the ADA.

## 1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

## PART 2 - PRODUCTS

## 2.1 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, lockable entrances, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
  - 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
  - 2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- (1.2-m-) square tack and marker boards.
  - 3. Keep in office at all times complete sets of Contract Documents and Architect reviewed submittals.
  - 4. Drinking water and private toilet.
  - 5. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F (20 to 22 deg C).
  - 6. Lighting fixtures capable of maintaining average illumination of 20 fc (215 lx) at desk height.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
  - 1. Store combustible materials apart from building.
  - 2. Provide weatherproof coverage for outdoor storage of materials and equipment needing only limited protection.
  - 3. Shed may be open shelters or fully enclosed spaces.

## 2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction and marked for intended location and application.
  - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 01 77 00 "Closeout Procedures".

- C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.
- D. First Aid Supplies: Comply with governing regulations.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  - 1. Locate facilities to limit site disturbance as specified in Section 01 10 00 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

#### 3.2 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.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
  - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. 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.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Use of building toilet, wash facilities and drinking water fixtures will not be permitted. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- F. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
  - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
    - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    - b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
  - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- G. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
  - 1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
- H. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

- I. Water Service:
  1. Contractor shall provide piping, hoses, backflow preventers, valves, and other items necessary to conduct water from connection point to the construction location.
  2. Contractor shall supervise use of water to prevent waste and prevent damage due to leaking and uncontrolled discharge.
  3. Contractor shall provide sanitary drinking supply and paper cups for workers.
- J. Lighting: Whenever natural light is inadequate and existing or new overhead lighting is not in operation, provide temporary lighting and local switching as necessary for operations under way.
  1. Install and operate temporary lighting that will provide adequate illumination for construction operations and traffic conditions.
  2. Provide sufficient temporary lighting to ensure proper workmanship. Finishing work will not be permitted in areas which are not adequately lighted.
  3. Provide and maintain lights and signs to prevent damage or injury. Keep safety lights burning from dusk to dawn.
  4. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
  5. Install lighting for Project identification sign.
- K. Telephone Numbers:
  1. Post a list of important telephone numbers.
    - a. Police and fire departments.
    - b. Ambulance service.
    - c. Contractor's home office.
    - d. Contractor's emergency after-hours telephone number.
    - e. Architect's office.
    - f. Engineers' offices.
    - g. Owner's office.
    - h. Principal subcontractors' field and home offices.

### 3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
  1. Provide construction for temporary offices, shops, and sheds located within construction area or within **30 feet (9 m)** 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: Use designated areas of Owner's existing parking areas for construction personnel.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
  1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
  2. Remove snow and ice as required to minimize accumulations.
- E. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
  1. Identification Signs: Provide Project identification signs as indicated in Specification Section 01 58 13.
  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 touchup signs so they are legible at all times.



- F. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
  - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- G. Existing Elevator Use: Use of Owner's existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.
  - 1. Do not load elevators beyond their rated weight capacity.
  - 2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.
- H. 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.
- I. Temporary Use of Permanent Stairs: Use of stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

#### 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings, requirements of 2003 EPA Construction General Permit, or authorities having jurisdiction, whichever is more stringent.
  - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
  - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
  - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
  - 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection: Install temporary fencing to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- G. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.



- H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
1. Install a 6' tall temporary construction fence prior to beginning any work, encompassing the entire area of work from adjacent school facilities where students may be present. The fence shall be chain link (orange plastic fencing is not acceptable), free of openings or breaks, with fence posts at 8' O/C maximum. Gates are to be avoided if possible; if not they must be capable of being padlocked from school side. The fence shall be secured to withstand prevailing wind loads. The fence shall be maintained in place throughout the construction phase of the project.
    - a. If physical isolation from students of Work Area(s) by fencing is not attainable, Calcasieu Parish School Board badges must be obtained by Contractor prior to commencing work. For such projects, Contractor and subcontractors will be required to submit list of personnel along with a digital photo of each to Calcasieu Parish School Board (Owner) in order to create badges.
- I. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- J. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- K. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.
1. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
  2. Protect air-handling equipment.
  3. Provide walk-off mats at each entrance through temporary partition.
- L. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
1. Prohibit smoking in construction areas.
  2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
  3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
  4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

### 3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
  2. Protect stored and installed material from flowing or standing water.
  3. Keep porous and organic materials from coming into prolonged contact with concrete.
  4. Remove standing water from decks.
  5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
  2. Keep interior spaces reasonably clean and protected from water damage.

3. Periodically collect and remove waste containing cellulose or other organic matter.
  4. Discard or replace water-damaged material.
  5. Do not install material that is wet.
  6. Discard, replace, or clean stored or installed material that begins to grow mold.
  7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
  2. Use permanent HVAC system to control humidity.
  3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
    - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
    - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
    - c. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

### 3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

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**END OF SECTION 01 50 00**

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SECTION 01 58 13 – TEMPORARY PROJECT SIGNAGE

## 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 SECTION INCLUDES

- A. Official Project Identification Sign.
- B. Project informational signs.

## 1.3 SUMMARY

- A. The Contractor shall install an official Project Identification Sign at a location, constructed and with the graphic content as directed by the Architect.
- B. The Project Identification Sign shall show the name of the Project, the names of the Owner, Architect, Engineers and General Contractor.
- C. Project informational signs maybe required in order to direct traffic.
- D. Excepting for required signage, no additional Contractor, Subcontractor, or supplier signs may be installed on the site without prior authorization. It is the intent of the Owner to not allow signs that advertise for the Architect, Contractor, Subcontractors or Suppliers.

## 1.4 QUALITY ASSURANCE

- A. Sign Manufacturer to have experience in manufacturing signage with references on similar projects.
- B. Finishes, (Vinyl): Adequate to withstand weathering, fading, and chipping for duration of construction project.
- C. Excepting for required signage, no additional Contractor, Subcontractor, or supplier signs may be installed on the site without prior authorization. It is the intent of the Owner to not allow signs that advertise for the Architect, Contractor, Subcontractors or Suppliers.

## 1.5 SUBMITTALS

- A. Refer to Section 01 33 00 – Submittal Procedures.
- B. Shop Drawing: Show content, layout, lettering styles, color choices, foundation, structure, sizes, and grades of members.

## PART 2 – PRODUCTS

## 2.1 SIGN MATERIALS

- A. Structure and Framing: New, wood, structurally adequate.
- B. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4" thick, standard large sixes to minimum joints.
- C. Rough Hardware: Galvanized.
- D. Material: As selected by Architect.

E. Background: As selected by Architect.

F. Lettering: As selected by Architect.

## 2.2 PROJECT IDENTIFICATION SIGN

A. One graphic sign, 4' x 8', in the location, constructed and with the graphic content as directed by the Architect.

B. Graphic Design, Colors, Style of Lettering: Designated by Architect.

## 2.3 PROJECT INFORMATIONAL SIGNS

A. Vinyl informational signs with size lettering to provide legibility at 100-foot distance.

B. Provide at field office, and directional signs to direct traffic into and within the site. Relocate as Work progress requires.

## PART 3 – EXECUTION

### 3.1 INSTALLATION

A. Install project identifications sign within 14 days after date fixed by Notice to Proceed.

B. Erect at designated location, as directed by Architect.

C. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.

D. Install sign surface plumb and level. Anchor securely.

E. Exposed surfaces of sign, supports and, framing to be treated lumber.

### 3.2 MAINTENANCE

A. Maintain sign and supports clean, repair deterioration and damage.

### 3.3 REMOVAL

A. Remove sign, framing, supports, and foundations at completion of Project and restore area.

**END OF SECTION 01 58 13**

SECTION 01 60 00 – PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for products selected under an allowance.
  - 2. Section 01 23 00 "Alternates" for products selected under an alternate.
  - 3. Section 01 25 00 "Product Substitution Procedures" for requests for substitutions.
  - 4. Section 01 42 00 "References Standards" for applicable industry standards for products specified.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. 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.
- B. 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

- A. 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. Note that no substitutions for convenience are allowed per Section 01 25 00.
  - 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 week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
    - a. Form of Approval: As specified in Section 01 33 00 "Submittal Procedures."
    - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 33 00 "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

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

## 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
  - 1. Store products to allow for inspection and measurement of quantity or counting of units.
  - 2. Store materials in a manner that will not endanger Project structure.
  - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  - 6. Protect stored products from damage and liquids from freezing.
  - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

## 1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  - 1. Manufacturer's Warranty: Written 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.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
  - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
  - 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 01 77 00 "Closeout Procedures."

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
  - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  - 4. Where products are accompanied by the term "as selected," Architect will make selection.
  - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- 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:
    - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
  4. Manufacturers:
    - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
  5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers and/or products, provide the specified or indicated product or a comparable product by one 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 of the other named manufacturers.
- C. 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 01 25 00 "Product Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or 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. Note that substitutions for convenience are not allowed per Section 01 25 00. 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 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 Applicable)*

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**END OF SECTION 01 60 00**



## SECTION 01 73 00 - EXECUTION

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Field engineering and surveying.
  - 3. Installation of the Work.
  - 4. Cutting and patching.
  - 5. Coordination of Owner-installed products.
  - 6. Progress cleaning.
  - 7. Starting and adjusting.
  - 8. Protection of installed construction.
  - 9. Correction of the Work.
- B. Related Requirements:
  - 1. Section 01 10 00 "Summary" for limits on use of Project site.
  - 2. Section 01 33 00 "Submittal Procedures" for submitting surveys.
  - 3. Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.
  - 4. Section 02 41 19 "Selective Structure Demolition" for demolition and removal of selected portions of the building.
  - 5. Section 07 84 13 "Penetration Firestopping" for patching penetrations in fire-rated construction.

## 1.3 DEFINITIONS

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

## 1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor.
- B. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.
- C. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.
- D. Certified Surveys: Submit two copies signed by land surveyor.
- E. Final Property Survey: Submit 10 copies showing the Work performed and record survey data.

## 1.5 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. 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 Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
  2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
    - a. Primary operational systems and equipment.
    - b. Fire separation assemblies.
    - c. Air or smoke barriers.
    - d. Fire-suppression systems.
    - e. Mechanical systems piping and ducts.
    - f. Control systems.
    - g. Communication systems.
    - h. Fire-detection and -alarm systems.
    - i. Conveying systems.
    - j. Electrical wiring systems.
    - k. Operating systems of special construction.
  3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
    - a. Water, moisture, or vapor barriers.
    - b. Membranes and flashings.
    - c. Exterior curtain-wall construction.
    - d. Sprayed fire-resistive material.
    - e. Equipment supports.
    - f. Piping, ductwork, vessels, and equipment.
    - g. Noise- and vibration-control elements and systems.
  4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- C. 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

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
  1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
  2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - 1. Description of the Work.
  - 2. List of detrimental conditions, including substrates.
  - 3. List of unacceptable installation tolerances.
  - 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 01 31 00 "Project Management and Coordination."

### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
  - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
  - 2. Establish limits on use of Project site.
  - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  - 4. Inform installers of lines and levels to which they must comply.
  - 5. Check the location, level and plumb, of every major element as the Work progresses.
  - 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
  - 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

### 3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
  - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect or Construction Manager. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect and Construction Manager before proceeding.
  - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
  - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
  - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
  - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- C. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- D. Final Property Survey: Engage a land surveyor to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.
  - 1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.

### 3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
  - 4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### 3.6 CUTTING AND PATCHING

- A. 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.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 01 10 00 "Summary."
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 6. Proceed with patching after construction operations requiring cutting are complete.

- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. 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.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
  4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.7 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction personnel.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
  2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

### 3.8 PROGRESS CLEANING

- A. 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 days during normal weather or three 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. Use containers intended for holding waste materials of type to be stored.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
  2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 74 19 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to 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.

### 3.9 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 01 91 13 "General Commissioning Requirements."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Section 01 40 00 "Quality Requirements."

### 3.10 PROTECTION OF INSTALLED CONSTRUCTION

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

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**END OF SECTION 01 73 00**



## SECTION 01 77 00 - 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. Recommendation of Acceptance procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.
- B. Related Requirements:
  - 1. Division 01 Specification Sections

## 1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Recommendation of Acceptance.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

## 1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

## 1.5 RECOMMENDATION OF ACCEPTANCE PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Recommendation of Acceptance: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Recommendation of Acceptance. List items below that are incomplete at time of request.
  - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
  - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.

- a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
5. Submit test/adjust/balance records.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Recommendation of Acceptance: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Recommendation of Acceptance. List items below that are incomplete at time of request.
  1. Advise Owner of pending insurance changeover requirements.
  2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  3. Complete startup and testing of systems and equipment.
  4. Perform preventive maintenance on equipment used prior to Recommendation of Acceptance.
  5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 01 79 00 "Demonstration and Training."
  6. Advise Owner of changeover in heat and other utilities.
  7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
  8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  9. Complete final cleaning requirements, including touchup painting.
  10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Recommendation of Acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Recommendation of Acceptance form 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.

## 1.6 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
  1. Submit a final Application for Payment according to Section 01 29 00 "Payment Procedures."
  2. Punch List: Submit Recommendation of Acceptance and inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Submit pest-control final inspection report.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. 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.

## 1.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, 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:
  - a. Project name.
  - b. Date.
  - c. Name of Architect.
  - d. Name of Contractor.
  - e. Page number.
4. Submit list of incomplete items in the following format:
  - a. MS Excel electronic file. Architect will return annotated file.

#### 1.8 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Recommendation of Acceptance is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
  1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) 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. **Must also provide a scanned or digitally generated copy of the binder in locked PDF format on medium acceptable to the Owner.**
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
  1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

### PART 3 - EXECUTION

#### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  1. Complete the following cleaning operations before requesting inspection for Recommendation of Acceptance for entire Project or for a designated portion of Project:

- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
  - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
  - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
  - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
  - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
  - g. Sweep concrete floors broom clean in unoccupied spaces.
  - h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
  - i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
  - j. Remove labels that are not permanent.
  - k. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - l. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - m. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  - n. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
    - 1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.
  - o. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
  - p. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 01 50 00 "Temporary Facilities and Controls." Prepare written report.

### 3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Recommendation of Acceptance.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
  1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
  2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
  3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
  4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

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**END OF SECTION 01 77 00**

## SECTION 01 78 39 – PROJECT RECORD DOCUMENTS

## PART 1 - GENERAL

## 1.01 REQUIREMENTS INCLUDED

- A. Maintain at the site for the Owner one record copy of **(ALL of which are to be in both physical and locked .pdf formats)**:
  - 1. Drawings (one complete set of stamped prints).
  - 2. Specifications.
  - 3. Addenda, Construction Change Directives, Change Orders and other modifications to the contract.
  - 4. Architect's written instructions.
  - 5. Approved shop drawings, product data and samples.
  - 6. Field test reports,.
  - 7. Construction photographs, if applicable.

## 1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
  - 1. Provide locked cabinet or secure storage space for storage of samples.
  - 2. File samples in accordance with the numbering system used for specifications.
- B. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- C. Make documents and samples available at all times for inspection by Architect.

## 1.03 MARKING DEVICES

- A. Label each document "Project Record" in neat large printed letters.
- B. Record information concurrently with construction progress.
  - 1. Do not conceal any work until the required information is recorded.
  - 2. Project record documents shall be jointly inspected for accuracy and completeness by Architect and Contractor prior to submission of each monthly request for partial payment.
- C. Drawings: Legibly mark the drawings to record actual construction.
  - 1. Indicate depths of various elements of foundation in relation to finish first floor datum.
  - 2. Indicate horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - 3. Indicate location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
  - 4. Indicate field changes of dimension and detail.
  - 5. Indicate changes made by Change Order.
  - 6. Indicate details not on original contract drawings.
- D. Specifications and Addenda: Legibly mark each section to record.
  - 1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
  - 2. Changes made by Change Order.

## 1.04 REVIEWS AND SUBMITTALS

- A. Architect and Contractor shall jointly review Project Record Documents for accuracy and completeness prior to submission of each monthly partial payment request.
  - 1. Before final application for payment is submitted, deliver the completed project record documents to Architect upon completion and acceptance of the work and deliver one copy of the project record documents to the Owner.

- B. Accompany the submittal with transmittal letter in duplicate containing:
  - 1. Date
  - 2. Project title and number
  - 3. Contractor's name and address
  - 4. Title and number of each Record Document
  - 5. Signature of Contractor or his authorized representative

#### 1.06 ORIGINAL DOCUMENTS

- A. There are to be **four (4)** originals (for the Architect, the Owner (2), and the General Contractor) of the following documents:
  - 1. Applications for Payment
  - 2. Recommendation of Acceptance (and Punch List)
- B. There are to be **four (4)** originals (for the Architect, the Owner, the General Contractor and the Clerk of Court) of the following documents:
  - 1. Change Orders
- C. There are to be **six (6)** originals of the following documents:
  - 1. Post Bid Documents (10-day Forms)
  - 2. Contracts and Bonds

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**END OF SECTION 01 78 39**

## SECTION 02 41 00 – DEMOLITION WORK

## PART 1 - GENERAL

## 1.01 SCOPE

- A. This section together with the contract documents and applicable design drawings covers all architectural, electrical, mechanical, and structural demolition.
- B. Contractor will be responsible for obtaining and abiding by any and all City, Parish, and other applicable permits, and requirements for demolition. All work shall comply with OSHA and all other applicable Federal, State and Local codes.

## 1.02 OPERATIONS

- A. Demolition area will be vacated.
- B. Do not interfere with use of adjacent spaces. Maintain free and safe passage to and from the adjacent spaces.

## 1.03 UTILITY SERVICES

- A. Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.

## 1.04 TRAFFIC

- A. Conduct demolition operations and removal of debris to ensure minimum interference with roads, streets walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

## 1.05 PROTECTIONS

- A. Ensure safe passage of persons around area of demolition. Conduct operation to prevent injury to adjacent buildings, structures, other facilities, and persons. Erect temporary covered passageways as required by authorities having jurisdiction. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement or collapse of structures to be demolished and adjacent facilities to remain.

## 1.06 DAMAGES

- A. Promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.
- B. Prevent movement or settlement of structure (s). Provide and place bracing or shoring and be responsible for safety and support of structure. Assume liability for such movement, settlement, damage, or injury.
- C. Cease operations and notify the Architect immediately if safety of structure appears to be endangered. Take precautions to properly support structure. Do not resume operations until safety is restored.
- D. Be responsible for initiating, maintaining, and supervising all safety precautions and programs as required by applicable regulatory advisory to protect occupants of building and workers.

## 1.07 EXISTING UTILITY SERVICES

- A. Before starting excavation, establish location and extent of underground utilities occurring in work area.
- B. Notify utility companies having jurisdiction to remove and relocate lines which are in the way of excavation.
- C. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing



authorities.

- D. Maintain, reroute, or extend as required, existing utility lines to remain which pass through work area.
- E. Protect active utility services uncovered by excavation.
- F. Remove abandoned utility service lines from areas of excavation. Cap, plug, or seal such lines and identify at grade.
- G. Accurately locate and record abandoned, and active utility lines re-routed or extended, on project record documents.

#### 1.08 MATERIALS

- A. Except where noted otherwise, maintain possession of materials being demolished. Immediately remove from site and store as directed by Owner.
- B. Items Required for Reinstallation:
  - 1. Carefully remove, store, and protect materials and equipment scheduled for reinstallation.
- C. The User Agency shall have priority for the selection of salvaged equipment and materials.
- D. Items to be retained by User Agency:
  - 1. Carefully remove materials and equipment to be retained by the User Agency. Deliver and store where directed by User Agency. All items not retained by the User Agency shall be legally disposed of by the Contractor.
  - 2. User Agency shall maintain possession of all existing materials, equipment, etc. at the site; unless the Contractor is directed by the User Agency or Architect to legally dispose of such items or materials.

#### 1.09 ASBESTOS

- A. Should the Contractor discover what appears to be asbestos or asbestos-containing material on the Project, he shall cease work immediately in the area where this material is found and notify the Architect as soon as possible, after which the following steps will be taken.
    - 1. The Owner will employ a testing company to determine if the suspect material contains asbestos.
    - 2. If the testing company determines that the material is asbestos and must be removed, the Owner will select an asbestos abatement company to remove the material.
    - 3. The abatement company will be paid by the Contractor, and a Change Order will be issued to add the cost of the abatement to the Contract, or
    - 4. The Owner will directly contract with the abatement company.
- NOTE: At its option, the Owner, may declare the material as asbestos without testing and proceed as noted in parts 1.05.A.2.a. and b. above.

#### 1.10 DEMOLITION WORK

- A. Architectural and Structural Demolition must be closely coordinated with Electrical and mechanical demolition to ensure that power and all other services are de-energized and locked out and that all items requiring removal or relocation including, but not limited to, wall switches, outlets, panels, control devices, security, and alarm devices, lighting, grounding fixtures, HVAC components, thermostats, plumbing fixtures, vents and the like, are removed, relocated, tied in, tested and placed back in service as required, all in a timely manner and appropriate sequence.
- B. Carry out demolition work to cause as little inconvenience to adjacent occupied building areas as possible.
- C. Demolish in an orderly and careful manner as required to accommodate new work including that required for connection to the existing building. Protect existing foundations and supporting structural members.

- D. Burning of materials on site is not permitted.
- E. Remove from site, without delay, all contaminated, vermin infested and dangerous materials encountered and dispose of by safe means so as not to endanger health of workers and public.
- F. Remove demolished materials, tools, and equipment from site on a regular basis. Do not allow them to accumulate. Upon completion of work leave building and site in a condition acceptable to the Architect.
- G. Contractor is to remove any debris, organic matter, frozen material that would not be considered good subsurface material. This determination would be made by the Architect.
- H. Contractor is to refer to the proposed finish grade contours on plans. When excavation extends into the limits of the proposed finish grade, Contractor shall place and compact fills to rough grade elevations.

#### 1.11 RESTORATION

- A. Repair all demolition performed in excess of that required or where limits of demolition will be exposed at no cost to the Owner. Leave in as good condition as existing before commencement of work.
  - 1. Materials and workmanship used in restoring work shall conform in type and quality to that of original existing construction except as otherwise shown or specified.

#### 1.12 TEMPORARY PARTITIONS

- A. Erect weatherproof closures for exterior openings. Maintain exit requirements.
- B. Erect and maintain noise abatement and dustproof partitions as required in order to suppress noise and spread of dust, fumes, and smoke to other parts of the building. Upon completion, remove partitions and repair damaged surfaces to match adjacent surfaces.
  - 1. Minimum construction of dust partitions: 4 mil polyethylene film full height on one side of 2 x 4 wood studs full height of space being closed off. Studs to be 48" o.c. with 2 x 4 horizontal block-in at third points between every stud. Secure polyethylene film to top and bottom plates with 1 x 2 wood strips nailed 16" o. c. Back partition with fiberglass batt insulation for noise abatement as required.
  - 2. Dust partitions shall be maintained "puncture-free" for duration of construction.

#### 1.13 TERMITE DAMAGE

- A. If Contractor finds evidence of existing termite infestation or damage, he shall notify Architect as soon as possible.

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**END OF SECTION 02 41 00**

## SECTION 05 05 00 – COMMON WORK RESULTS FOR METALS

## PART 1 - GENERAL

The extend of this work is as shown on the drawings, specified, and required by the general construction.

## 1.01 QUALITY ASSURANCE

- A. Codes and Standards: Comply with the provisions of the following codes, standards, and specifications, except as otherwise shown and specified:
  - 1. AISC "Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings," including "Commentary of the AISC Specification."
  - 2. AISC "Specifications for the Design of Cold-Formed Steel Structural Members."
  - 3. AWS "Structural Welding Code."
- B. Qualification For Welding Work: Qualify welding processes and welding operators in accordance with AWS "Standard Qualifications Procedure."
- C. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible, to insure proper fittings of the work. However, do not delay job progress; allow for trimming and fitting wherever the taking of field measurements before fabrication might delay the work.
- D. Shop Assembly: Preassemble items in the shop to the greatest extent possible, so as to minimize field splicing and assembly of unit at the project site. Disassemble units only to the extent necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

## 1.02 DESIGN / PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
  - 1. Metals shall meet a minimum of 140 mph rating.
  - 2. Impact Resistance shall be in compliance with IBC 2021, ASCE 7-16, Risk Category III.

## 1.03 SUBMITTALS

- A. Submit under the provisions of Section 01 33 00.
- B. Manufacturer's Data; Miscellaneous Metal, General: For information only, submit copies of manufacturer's specifications, load tables, dimension diagrams, anchor details and installation instructions for products to be used in miscellaneous metal work, including paint products. Indicate by transmittal that copy of instructions has been distributed to the installer.
- B. Shop Drawing; Miscellaneous Metal, General: Submit shop drawings for the fabrications and erection of all assemblies of miscellaneous metal work, which are not completely shown by the manufacturer's data sheets. Include plans, elevations, and details of sections and connections. Show anchorage and accessory items. Include setting drawings and templates for location and installation of miscellaneous metal items and anchorage devices.

## PART 2 - PRODUCTS

## 2.01 MATERIALS

- A. Metal Surfaces: For the fabrication of miscellaneous metal work items which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness. Remove such blemishes by grinding, or by welding and grinding, prior to cleaning, treating and application of surface finishes including zinc coatings:
- B. General Metal Materials:

1. Rolled Steel Plates, Shapes, and Bars: *ASTM A 36.*
  2. Cold-Formed Steel Tubing: *ASTM A 500, Grade B.*
  3. Hot-Formed Steel Tubing: *ASTM A 501.*
  4. Steel Pipe: *ASTM A 53, Type E or S, Grade B.*
  5. Steel Castings: *ASTM A 27, Grade 65-35, medium strength carbon steel.*
  6. Unfinished Bolts and Nuts: *ASTM A 307, Grade A.*
  7. High-Strength Bolts and Nuts: *ASTM A 325 or A 490.*
  8. Electrodes for Welding: *Comply with AWS Code.*
- C. Anchors:
1. Threaded-Type Concrete Inserts: Galvanized ferrous castings, internally threaded to receive 3/4" diameter machine bolts, either malleable iron complying with *ASTM A 47* or cast steel complying with *ASTM A 27*; hot-dip galvanized.
  2. Wedge-Typed Concrete Inserts: Galvanized box-type ferrous casting, designed to accept 3/4" diameter bolts having special wedge-shaped heads; either malleable iron complying with *ASTM A 47* or cast steel complying with *ASTM A 27*; hot-dip galvanized.
  3. Provide carbon steel bolts having special wedge-shaped head, nuts, washers and shims; all galvanized in compliance with *ASTM A 153.*
  4. Slotted-Typed Concrete Inserts: *Galvanized 1/8" thick pressed steel plate complying with ASTM A 283*; box-type welded construction with slot designed to receive 3/4" diameter square head bolt and with knockout cover; hot-dip galvanized.
- D. Fasteners: Provide zinc-coated fasteners, with galvanizing complying with *ASTM A 153*, for exterior use or where built into exterior walls. Select fasteners for the type, grade and class required for the installation of miscellaneous metal items.
1. Standard Bolts and Nuts: *ASTM A 307, Grade A, regular hexagon head.*
  2. Lag Bolts: *FS FF-B-561, square head type.*
  3. Wood Screws: *FS FF-S-111, Flat head carbon steel.*
  4. Machine Screws: *FS FF-S-92, Cadmium plate steel.*
  5. Plain Washers: *FS FF-W-92, round, general assembly grade carbon steel.*
  6. Lock Washers: *FS FF-W-84, helical spring type carbon steel.*
  7. Masonry Anchorage Devices: Expansion shields: *FS FF-S-325.*
  8. Toggle Bolts: Tumble-wing type: *FS FF-B-588, type, class, and style as required.*
- E. Non-metallic Shrinkage-Resistant Grout: Pre-mixed, non-metallic, non-corrosive, none-staining product containing selected silica sands, portland cement, shrinkage compensating agents, plasticizing and water reducing agents, complying with *CRD-C621.*

## 2.02 FABRICATION, GENERAL

- A. Workmanship: Use materials of the size and thicknesses shown, or if not shown, of the required size and thickness to produce adequate strength and durability in the finished product for the intended use. Work to the dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use the type of materials shown or specified for the various components of work. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32" unless otherwise shown. Form bent metal corners to the smallest radius possible without causing grain separation or otherwise impairing the work.
1. Weld corners and seams continuously and in accordance with the recommendations of AWS. At exposed connections, grind exposed welds smooth and flush to match and blend with adjoining surfaces.
  2. Form exposed connections with hairline joints which are flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of the type shown or, if not shown, use Phillips flathead (*countersunk*) screws or bolts. Provide for anchorage of the type shown, coordinated with the supporting structure and the progress schedule. Fabricate and space anchoring devices to provide adequate support for the intended use of the work. Cut, reinforce, drill and tap miscellaneous metal work indicated to receive finish hardware and similar items of work.
  3. Galvanizing: Provide a zinc coating for those items shown on the drawings or specified to be galvanized, using the hot-dip process after fabrication.

ASTM A 153 for galvanizing of iron and steel hardware.

ASTM A 123 for galvanizing of rolled, pressed and forged steel shapes, plates, bars and strip 1/8" thick and heavier.

ASTM A 386 for galvanizing of assembled steel products.

- B. Fabrication: Fabricate items of steel in accordance with AISC Specifications and as indicated on the final shop drawings. Properly mark and match-mark all materials for field assembly. Fabricate for delivery sequence which will expedite erection and minimize field handling.
1. Connections: Combinations of bolts and welds in the same connections are not permitted, unless otherwise detailed. Weld or bolt shop connections, unless otherwise shown. Bolt field connections, except where welded connections or other connections are indicated. Provide high-strength bolts and nuts if required.
  2. Welded Constructions: Comply with AWS Code for procedures, appearance, and quality of welds, and for methods used in correcting welding work.
  3. Build up welded door frames attached to structural steel framing. Weld exposed joints continuously and grind smooth. Plug weld steel bar stops to frames, except where shown removable. Secure removable stops to frames with countersunk, cross-recessed head machine screws, uniformly spaced not more than 10" o.c., unless otherwise shown.
  4. Holes for Other Work: Provide holes required for securing other work to structural steel framing, and for the passage of other work through steel framing members as indicated. Provide threaded nuts welded to framing, and other specialty items as shown to receive other work. Cut, drill, or punch holes perpendicular to metal surfaces. Do not flame cut holes or enlarge holes by burning. Drill holes in bearing plates.

## 2.03 PAINT:

- A. Metal Primer Paint: Zinc yellow iron oxide primer complying with *SF TT-P-57, Type II*. Primer paint selected must be compatible with the required finish coats of paint. Coordinate selection of metal primer with finish paint requirements specified in *Division 9* of these specifications.
- B. Galvanizing Repair Paint: High zinc dust content paint for re-galvanizing welds in galvanized steel, complying with *Military Specifications MIL-P-21035 (Ships)*.
- C. Shop Painting: Shop paint all structural steel work, except members or portions of members to be embedded in concrete or mortar. Paint embedded steel on exposed portions and initials 2" of embedded areas only. Do not paint contact surfaces which are to be welded or high strength bolted. Do not paint surfaces which are scheduled to receive sprayed-on fireproofing. Apply 2 coats of paint to surfaces which are inaccessible after assembly or erection. Change color of second coat to distinguish it from the first.
1. Surface Preparation: After inspection and before shipping, clean steelwork to be painted complying with *Steel Structures Painting Council (SSPC) SP-2 "Hand Tool Cleaning," or SSPC SP-3 "Power Tool Cleaning," or SSPC SP-7 "Brush Off Cleaning."* Remove oil, grease and similar contaminants, complying with *SSPC SP-1 "Solvent Cleaning."*
  2. Application: Immediately after surface preparation, apply structural steel primer paint in accordance with manufacturer's instructions and at a rate to provide a uniform dry film thickness of 2.0 mils.

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END OF SECTION 05 05 00

SECTION 051200 - STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Structural steel.

B. Scope:

1. Provide, fabricate, and erect all structural steel, including anchor bolts, baseplates, hangers, framed openings, etc. as indicated on the plans or otherwise specified herein.
2. Frames for all roof openings shall be provided under this section. Refer to Architectural, Mechanical, and Electrical plans for sizes and locations. All openings over 12" square shall be framed unless noted otherwise on the plans.

1.2 DEFINITIONS

- A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in ANSI/AISC 303.

1.3 COORDINATION

- A. Coordinate selection of shop primers with topcoats, to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

1.4 ACTION SUBMITTALS

A. Product Data:

1. Structural-steel materials.
2. High-strength, bolt-nut-washer assemblies.
3. Anchor rods.
4. Threaded rods.
5. Galvanized repair paint.
6. Shrinkage-resistant grout.



B. Shop Drawings: Show fabrication of structural-steel components.

1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
2. Include embedment Drawings.
3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical, high-strength bolted connections.
5. Identify members not to be shop primed.
6. Identify members to be galvanized.
7. Identify members to be painted.
8. Transmit and maintain shop drawing submittals in PDF format.
9. Manually generated ("hand / board") drawings are not acceptable.

1.5 INFORMATIONAL SUBMITTALS

A. Welding certificates.

1.6 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.1/D1.1M.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.

1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.

1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.
2. Clean and relubricate bolts and nuts that become dry or rusty before use.
3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F3125/F3125M, Grade F1852 bolt assemblies and for retesting bolt assemblies after lubrication.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Comply with applicable provisions of the following specifications and documents:
  - 1. ANSI/AISC 303.
  - 2. ANSI/AISC 360.
  - 3. RCSC's "Specification for Structural Joints Using High-Strength Bolts."
- B. Connection Design Information:
  - 1. Connection designs have been completed and connections indicated on the Drawings.

### 2.2 STRUCTURAL-STEEL MATERIALS

- A. W-Shapes: ASTM A992/A992M ASTM or A572/A572M, Grade 50
- B. Channels, Angles: ASTM A36/A36M or ASTM A572/A572M, Grade 50 where specifically indicated-
- C. Plate and Bar: ASTM A36/A36M ASTM or A572/A572M, Grade 50 where specifically indicated-
- D. Cold-Formed Hollow Structural Sections: ASTM A1085/ASTMA1085M structural tubing.
- E. Welding Electrodes: Comply with AWS requirements.

### 2.3 BOLTS AND CONNECTORS

- A. High-Strength A325 Bolts, Nuts, and Washers: ASTM F3125/F3125M, Grade A325, Type 1, heavy-hex steel structural bolts; ASTM A563, Grade DH, heavy-hex carbon-steel nuts; and ASTM F436/F436M, Type 1, hardened carbon-steel washers; all with plain finish.
- B. Zinc-Coated High-Strength A325 Bolts, Nuts, and Washers: ASTM F3125/F3125M, Grade A325, Type 1, heavy-hex steel structural bolts; ASTM A563, Grade DH, heavy-hex carbon-steel nuts; and ASTM F436/F436M, Type 1, hardened carbon-steel washers.
  - 1. Finish: Hot-dip or mechanically deposited zinc coating.

### 2.4 PRIMER

- A. Steel Primer:
  - 1. Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer compatible with topcoat if specified.



B. Galvanized-Steel Primer:

1. Compatible with topcoat if specified.
2. Galvanizing Repair Paint: ASTM A780/A780M.

2.5 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate in accordance with ANSI/AISC 303 and to ANSI/AISC 360.
1. Mark and match-mark materials for field assembly.
  2. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.
- B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.
- C. Bolt Holes: Cut, drill, or punch standard bolt holes perpendicular to metal surfaces.
- D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.
- E. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel members.
1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
  2. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.6 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts in accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts" for type of bolt and type of joint specified.
1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
1. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in ANSI/AISC 303 for mill material.

2.7 SHOP PRIMING

- A. Shop prime steel surfaces, except the following:
1. Galvanized surfaces unless indicated to be painted.

- B. Surface Preparation of Steel: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces in accordance with the following specifications and standards:
  - 1. SSPC-SP 2.
- C. Priming: Immediately after surface preparation, apply primer in accordance with manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
  - 1. Stripe paint corners, crevices, bolts, welds, and sharp edges.
  - 2. Apply two coats of shop paint to surfaces that are inaccessible after assembly or erection. Change color of second coat to distinguish it from first.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
  - 1. Prepare a certified survey of existing conditions. Include bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated on Drawings.

#### 3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and in accordance with ANSI/AISC 303 and ANSI/AISC 360.
- B. Baseplates Bearing Plates and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
  - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
  - 2. Weld plate washers to top of baseplate.

3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
  4. Promptly pack shrinkage-resistant grout solidly between bearing surfaces and plates, so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for grouting.
- C. Maintain erection tolerances of structural steel within ANSI/AISC 303.
- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that are in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
1. Level and plumb individual members of structure. Slope roof framing members to slopes indicated on Drawings.
  2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.
- E. Splice members only where indicated.
- F. Do not use thermal cutting during erection.
- G. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.
- H. The structural system and individual members are designed to be self-supporting only after all structural members are in place and fully connected. Bracing, falsework, sequencing of erection, and all effort necessary to achieve the final conditions are the responsibility of the contractor.

### 3.4 FIELD CONNECTIONS

- A. High-Strength Bolts: Install high-strength bolts in accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts" for bolt and joint type specified.
1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
1. Comply with ANSI/AISC 303 and ANSI/AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.
  2. Remove backing bars or runoff tabs, back gouge, and grind steel smooth.
  3. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in ANSI/AISC 303 for mill material.

### 3.5 REPAIR

- A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing, and repair galvanizing to comply with ASTM A780/A780M.

B. Touchup Painting:

1. Immediately after erection, clean exposed areas where primer is damaged or missing, and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
  - a. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.
2. Cleaning and touchup painting are specified in **Section 099123 "Interior Painting."**

C. Touchup Priming: Cleaning and touchup priming according to manufacturer's directions.

3.6 FIELD QUALITY CONTROL

A. Testing Agency: **Owner will engage** a qualified testing agency to perform tests and inspections.

1. Bolted Connections: Inspect and test bolted connections in accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts."
2. Welded Connections: Visually inspect field welds in accordance with AWS D1.1/D1.1M.
  - a. In addition to visual inspection, test and inspect field welds in accordance with AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
    - 1) Liquid Penetrant Inspection: ASTM E165/E165M.
    - 2) Magnetic Particle Inspection: ASTM E709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
    - 3) Ultrasonic Inspection: ASTM E164.
    - 4) Radiographic Inspection: ASTM E94/E94M.



## SECTION 053100 - STEEL DECKING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Roof deck.
- B. Related Requirements:
  - 1. Section 051200 "Structural Steel Framing" for shop- and field-welded shear connectors.
  - 2. Section 054400 "Cold-Formed Metal Trusses"

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of deck, accessory, and product indicated.
- B. Shop Drawings:
  - 1. Include layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Welding certificates.
- B. Product Certificates: For each type of steel deck.
- C. Product Test Reports: For tests performed by a qualified testing agency, indicating that each of the following complies with requirements:
  - 1. Power-actuated mechanical fasteners.
- D. Field quality-control reports.

#### 1.5 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.
- B. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. AISI Specifications: Comply with calculated structural characteristics of steel deck according to AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members."
- B. Fire-Resistance Ratings: Comply with ASTM E119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 ROOF DECK

- A. Manufacturers: Subject to compliance with requirements, providers include, but are not limited to, the following:
  - 1. Epic Metals Corporation.
  - 2. New Millennium Building Systems, LLC.
  - 3. Nucor Corp.
- B. Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 31, and with the following:
  - 1. Galvanized-Steel Sheet: ASTM A653, Structural Steel (SS), Grade 80, G90 zinc coating.
  - 2. Deck Profile: Type IR, intermediate rib.
  - 3. Profile Depth: 1-1/2 inches.
  - 4. Design Uncoated-Steel Thickness: Min. 0.0295 inch.
  - 5. Span Condition: Double span.
  - 6. Side Laps: Overlapped.

2.3 ACCESSORIES

- A. General: Provide manufacturer's standard accessory materials for deck that comply with requirements indicated.

- B. Mechanical Fasteners: Corrosion-resistant, low-velocity, power-actuated or pneumatically driven carbon-steel fasteners; or self-drilling, self-threading screws (#12-14 Tek screws).
- C. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 10 minimum diameter.
- D. Flexible Closure Strips: Vulcanized, closed-cell, synthetic rubber.
- E. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi, not less than 0.0359-inch design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.
- F. Pour Stops and Girder Fillers: Steel sheet, minimum yield strength of 33,000 psi; of same material and finish as deck, and of thickness and profile indicated or otherwise as recommended by SDI Publication No. 31 for overhang and slab depth.
- G. Column Closures, End Closures, Z-Closures, and Cover Plates: Steel sheet, of same material, finish, and thickness as deck unless otherwise indicated.
- H. Weld Washers: Uncoated steel sheet, shaped to fit deck rib, 0.0747 inch thick, with factory-punched hole of 3/8-inch minimum diameter.
- I. Galvanizing Repair Paint: ASTM A780.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 31, manufacturer's written instructions, and requirements in this Section.
- B. Install temporary shoring before placing deck panels if required to meet deflection limitations.
- C. Locate deck bundles to prevent overloading of supporting members.
- D. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.
- E. Place deck panels flat and square and fasten to supporting frame without warp or deflection.

- F. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.
- G. Provide additional reinforcement and closure pieces at openings as required for strength, continuity of deck, and support of other work.
- H. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.

### 3.3 ROOF-DECK INSTALLATION

- A. Fasten roof-deck panels to supporting light gauge steel truss members by mechanical fasteners (#12-14 tek screws) spaced as indicated.
- B. Side-Lap and Perimeter Edge Fastening: Fasten side laps and perimeter edges of panels between supports, at intervals not exceeding the lesser of one third of the span or 16 inches, and as follows:
  - 1. Mechanically fasten with self-drilling, No. 10 diameter or larger, carbon-steel screws.
  - 2. Mechanically clinch or button punch.
- C. End Bearing: Install deck ends over supporting frame with a minimum end bearing of 1-1/2 inches, with end joints as follows:
  - 1. End Joints: Lapped 2 inches minimum.
- D. Miscellaneous Roof-Deck Accessories: Install ridge and valley plates, finish strips, end closures, and reinforcing channels according to deck manufacturer's written instructions. Weld or mechanically fasten to substrate to provide a complete deck installation.
  - 1. Provide cover plates at changes in direction of roof-deck panels unless otherwise indicated.

### 3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Field welds will be subject to inspection.
- C. Prepare test and inspection reports.

### 3.5 PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A780 and manufacturer's written instructions.

END OF SECTION 053100



SECTION 054000 - COLD-FORMED METAL FRAMING

PART 1 - GENERAL



1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
  - 1. Exterior non-load-bearing wall framing.
- B. Related Requirements:
  - 1. Section 092116.23 "Gypsum Board Shaft Wall Assemblies" for interior non-load-bearing, metal-stud-framed, shaft-wall assemblies, with height limitations.
  - 2. Section 092216 "Non-Structural Metal Framing" for standard, interior non-load-bearing, metal-stud framing, with height limitations and ceiling-suspension assemblies.

1.3 ACTION SUBMITTALS

- A. Product Data: For the following:
  - 1. Cold-formed steel framing materials.
  - 2. Exterior non-load-bearing wall framing.
  - 3. Vertical deflection clips.
  - 4. Single deflection track.
  - 5. Post-installed anchors.
  - 6. Power-actuated anchors.
- B. Shop Drawings:
  - 1. Include layout, spacings, sizes, thicknesses, and types of cold-formed steel framing; fabrication; and fastening and anchorage details, including mechanical fasteners.
  - 2. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing agency.
- B. Welding certificates.
- C. Product Certificates: For each type of code-compliance certification for studs and tracks.

- D. Product Test Reports: For each listed product, for tests performed by **manufacturer and witnessed by a qualified testing agency**.
1. Steel sheet.
  2. Expansion anchors.
  3. Power-actuated anchors.
  4. Mechanical fasteners.
  5. Vertical deflection clips.
  6. Miscellaneous structural clips and accessories.

## 1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM E329 for testing indicated.
- B. Product Tests: Mill certificates or data from a qualified independent testing agency indicating steel sheet complies with requirements, including base-metal thickness, yield strength, tensile strength, total elongation, chemical requirements, and metallic-coating thickness.
- C. Code-Compliance Certification of Studs and Tracks: Provide documentation that framing members are certified according to the product-certification program of [**the Certified Steel Stud Association**] [**the Steel Framing Industry Association**] [**or**] [**the Steel Stud Manufacturers Association**].
- D. Welding Qualifications: Qualify procedures and personnel according to the following:
1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
  2. AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel."
- E. Comply with AISI S230 "Standard for Cold-Formed Steel Framing - Prescriptive Method for One and Two Family Dwellings."

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. **Manufacturers:** Subject to compliance with requirements, **available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:**
1. AllSteel & Gypsum Products, Inc.
  2. CEMCO; California Expanded Metal Products Co.
  3. CRACO Mfg., Inc.
  4. ClarkDietrich.
  5. Consolidated Fabricators Corp.; Building Products Division.
  6. Design Shapes in Steel.
  7. Formetal Co. Inc. (The).
  8. Jaimes Industries, Inc.
  9. MBA Metal Framing.

10. [MRI Steel Framing, LLC.](#)
11. [Marino\WARE.](#)
12. [Mill Steel Framing; Mill Steel Company.](#)
13. [Olmar Supply, Inc.](#)
14. [Quail Run Building Materials, Inc.](#)
15. [SCAFCO Steel Stud Company; Stone Group of Companies.](#)
16. [State Building Products, Inc.](#)
17. [Steel Construction Systems; Stone Group of Companies.](#)
18. [Steel Network, Inc. \(The\).](#)
19. [Steeler, Inc.](#)
20. [Super Stud Building Products Inc.](#)
21. [TELLING Industries.](#)
22. The Mill Steel Co.
23. US Frame Factory.

## 2.2 COLD-FORMED STEEL FRAMING MATERIALS

- A. Steel Sheet: ASTM A1003/A1003M, Structural Grade, Type H, metallic coated, of grade and coating designation as follows:
1. Grade: 50 ksi.
  2. Coating: **G90 or equivalent.**

## 2.3 EXTERIOR NON-LOAD-BEARING WALL FRAMING

- A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, and as follows:
1. Minimum Base-Metal Thickness: **0.0538 inch.**
  2. Flange Width: **1-5/8 inches.**
  3. Section Properties:  $S_x = \text{Min. } 1.990 \text{ in}^3 \text{ effective.}$
- B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, and as follows:
1. Minimum Base-Metal Thickness: **0.0677 inch.**
  2. Minimum Flange Width: **1-1/4 inches.**
- C. Single Deflection Track: Manufacturer's single, deep-leg, U-shaped steel track; unpunched, with unstiffened flanges, of web depth to contain studs while allowing free vertical movement, with flanges designed to support horizontal loads and transfer them to the primary structure, and as follows:
1. Minimum Base-Metal Thickness: **0.0677 inch.**
  2. Flange Width: **1 inch plus twice the design gap for other applications.**

## 2.4 FRAMING ACCESSORIES

- A. Fabricate steel-framing accessories from ASTM A1003/A1003M, Structural Grade, Type H, metallic coated steel sheet, of same grade and coating designation used for framing members.
- B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows:
  - 1. Supplementary framing.
  - 2. Bracing, bridging, and solid blocking.
  - 3. Web stiffeners.
  - 4. Anchor clips.
  - 5. End clips.
  - 6. Foundation clips.
  - 7. Gusset plates.
  - 8. Stud kickers and knee braces.
  - 9. Joist hangers and end closures.
  - 10. Hole-reinforcing plates.
  - 11. Backer plates.

## 2.5 ANCHORS, CLIPS, AND FASTENERS

- A. Steel Shapes and Clips: ASTM A36/A36M, zinc coated by hot-dip process according to ASTM A123/A123M.
- B. Anchor Bolts: ASTM F1554, **Grade 55**, threaded carbon-steel **hex-headed bolts**, carbon-steel nuts, and flat, hardened-steel washers; zinc coated by **hot-dip process according to ASTM A153/A153M, Class C**.
- C. Post-Installed Anchors: Fastener systems with bolts of same basic metal as fastened metal, if visible, unless otherwise indicated; with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on **ICC-ES AC193** as appropriate for the substrate.
  - 1. Uses: Securing cold-formed steel framing to structure.
  - 2. Type: **Torque-controlled expansion anchor**.
- D. Power-Actuated Anchors: Fastener systems with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- E. Mechanical Fasteners: ASTM C1513, corrosion-resistant-coated, self-drilling, self-tapping, steel drill screws.
  - 1. Head Type: Low-profile head beneath sheathing; manufacturer's standard elsewhere.
- F. Welding Electrodes: Comply with AWS standards.

## 2.6 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: **ASTM A780/A780M**.
- B. Shims: Load-bearing, high-density, multimonomer, nonleaching plastic; or cold-formed steel of same grade and metallic coating as framing members supported by shims.
- C. Sill Sealer Gasket: Closed-cell neoprene foam, **1/4 inch** thick, selected from manufacturer's standard widths to match width of bottom track or rim track members as required.

## 2.7 FABRICATION

- A. Fabricate cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, manufacturer's written instructions, and requirements in this Section.
  - 1. Fabricate framing assemblies using jigs or templates.
  - 2. Cut framing members by sawing or shearing; do not torch cut.
  - 3. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, pneumatic pin fastening, or riveting as standard with fabricator. Wire tying of framing members is not permitted.
    - a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
    - b. Locate mechanical fasteners and install according to Shop Drawings, with screws penetrating joined members by no fewer than three exposed screw threads.
  - 4. Fasten other materials to cold-formed steel framing by welding, bolting, pneumatic pin fastening, or screw fastening, according to Shop Drawings.
- B. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies by means that prevent damage or permanent distortion.
- C. Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable variation of **1/8 inch in 10 feet** and as follows:
  - 1. Spacing: Space individual framing members no more than plus or minus **1/8 inch** from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
  - 2. Squareness: Fabricate each cold-formed steel framing assembly to a maximum out-of-square tolerance of **1/8 inch**.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, conditions, and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Before sprayed fire-resistive materials are applied, attach continuous angles, supplementary framing, or tracks to structural members indicated to receive sprayed fire-resistive materials.
- B. After applying sprayed fire-resistive materials, remove only as much of these materials as needed to complete installation of cold-formed framing without reducing thickness of fire-resistive materials below that required to obtain fire-resistance ratings indicated. Protect remaining fire-resistive materials from damage.
- C. Install sill sealer gasket at the underside of wall bottom track or rim track and at the top of foundation wall or slab at stud or joist locations.

### 3.3 INSTALLATION, GENERAL

- A. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled.
- B. Install cold-formed steel framing according to AISI S200, AISI S202, and manufacturer's written instructions unless more stringent requirements are indicated.
- C. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened.
  - 1. Cut framing members by sawing or shearing; do not torch cut.
  - 2. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, or riveting. Wire tying of framing members is not permitted.
    - a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
    - b. Locate mechanical fasteners, install according to Shop Drawings, and comply with requirements for spacing, edge distances, and screw penetration.
- D. Install framing members in one-piece lengths unless splice connections are indicated for track or tension members.
- E. Install temporary bracing and supports to secure framing and support loads equal to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.
- F. Do not bridge building expansion joints with cold-formed steel framing. Independently frame both sides of joints.
- G. Install insulation, specified in Section 072100 "Thermal Insulation," in framing-assembly members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work.

- H. Fasten hole-reinforcing plate over web penetrations that exceed size of manufacturer's approved or standard punched openings.

### 3.4 INSTALLATION OF EXTERIOR NONLOADBEARING WALL FRAMING

- A. Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure.
- B. Fasten both flanges of studs to bottom track unless otherwise indicated. Space studs as follows:
  - 1. Stud Spacing: **As indicated on Drawings.**
- C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar requirements.
- D. Isolate non-load-bearing steel framing from building structure to prevent transfer of vertical loads while providing lateral support.
  - 1. Install single deep-leg deflection tracks and anchor to building structure.
- E. Install horizontal bridging in wall studs, spaced vertically in rows indicated **on Shop Drawings** but not more than **48 inches** apart. Fasten at each stud intersection.
  - 1. Channel Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs.
- F. Top Bridging for Single Deflection Track: Install row of horizontal bridging within **12 inches** of single deflection track. Install a combination of bridging and stud or stud-track solid blocking of width and thickness matching studs, secured to stud webs or flanges.
  - 1. Install solid blocking at **96-inch centers.**
- G. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.

### 3.5 INSTALLATION TOLERANCES

- A. Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of **1/8 inch in 10 feet** and as follows:
  - 1. Space individual framing members no more than plus or minus **1/8 inch** from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

3.6 REPAIR

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanized repair paint according to ASTM A780/A780M and manufacturer's written instructions.

3.7 FIELD QUALITY CONTROL

- A. Testing: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Field and shop welds will be subject to testing and inspecting.
- C. Testing agency will report test results promptly and in writing to Contractor and Architect.
- D. Cold-formed steel framing will be considered defective if it does not pass tests and inspections.
- E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.8 PROTECTION

- A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that cold-formed steel framing is without damage or deterioration at time of Substantial Completion.

END OF SECTION 054000



## SECTION 05 40 13 – LIGHT GAUGE STEEL FRAMING

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Exterior wall framing.
- B. Related Sections include the following:
  - 1. Division 5, Section "05 12 00 - Structural Steel"

## 1.03 DEFINITIONS

- A. Minimum Uncoated Steel Thickness: Minimum uncoated thickness of cold-formed framing delivered to the Project site shall be not less than 95 percent of the thickness used in the cold-formed framing design. Lesser thicknesses shall be permitted at bends due to cold forming.
- B. Producer: Entity that produces steel sheet coil fabricated into cold-formed members.

## 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect cold-formed metal framing from corrosion, deformation, and other damage during delivery, storage, and handling.
- B. Store cold-formed metal framing, protect with a waterproof covering, and ventilate to avoid condensation.

## 1.05 DESIGN / PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
  - 1. Light gauge steel framing shall meet a minimum of 140 mph rating.
  - 2. Impact Resistance shall be in compliance with IBC 2021, ASCE 7-16, Risk Category III.

## 1.06 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Manufacturer's Certificates:
  - 1. Certify materials/products meet or exceed specified requirements.
  - 2. Must be stamped by an independent Engineering firm.

## PART 2 - PRODUCTS

## 2.01 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering cold-formed metal framing that may be incorporated into the Work include, but are not limited to the following:
  - 1. Allied American Studco, Inc.
  - 2. Angeles Metal Systems
  - 3. California Expanded Metal Products Co.
  - 4. California Metal Systems, Inc.
  - 5. Clark Steel Framing Industries

6. Consolidated Fabricators Corp.
7. Consolidated Systems, Inc.
8. Dale Industries, Inc.
9. Design Shapes in Steel
10. Dietrich Industries, inc.
11. Knorr Steel Framing Systems
12. MarinoWare; Div. of Ware Industries, Inc.
13. Scafco Corp.
14. Steel Construction Systems
15. Steel Developers, LLC
16. Steeler, Inc.
17. Studco of Hawaii, Inc.
18. Super Stud Building Products, Inc.
19. Unimast, Inc.
20. United Metal Products, Inc.
21. Western Metal Lath.

## 2.02 MATERIALS

- A. Steel Sheet: ASTM A 653A/ 653M, structural steel, zinc coated, of grade and coating as follows:
  1. Coating: G90

## 2.03 FRAMING ACCESSORIES

- A. Fabricate steel-framing accessories of the same material and finish used for framing members, with a minimum yield strength of 50,000 psi
- B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, to include but not limited to the following:
  1. Supplementary framing.
  2. Bracing, bridging, and solid blocking.
  3. Web stiffeners.
  4. End clips.
  5. Gusset plates.
  6. Stud kickers, knee braces, and girts.
  7. Joist hangers and end closures.
  8. Hole reinforcing plates.
  9. Backer plates.

## 2.04 ANCHORS, CLIPS, AND FASTENERS

- A. Expansion Anchors: Fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 5 times design load, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
- B. Power-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with capability to sustain without failure, a load equal to 10 times design load, as determined by testing per ASTM E 1190 conducted by a qualified independent testing agency.
- C. Mechanical Fasteners: Corrosion-resistant-coated, self-drilling, self-threading steel drill screws.
- D. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.
- E. Welding Electrodes: Comply with AWS standards.

## 2.05 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: [SSPC-Paint 20 or DOD-P-21035] [ASTM A 780].

## 2.06 FABRICATION

- A. Install cold-formed metal framing and accessories plumb, square, and true to line, and with connections securely fastened, according to manufacturer's written recommendations and requirements in this Section.
- B. Fabricate truss assemblies using jigs or templates. Cut framing members by sawing or shearing; do not torch cut.
- C. Fasten cold-formed metal framing members by welding or screw fastening, as standard with fabricator. Wire tying of framing members is not permitted.
- D. Comply with AWS D1.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.

## 2.07 FIELD QUALITY CONTROL

- A. Remove and replace Work that does not comply with specified requirements.

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**END OF SECTION 05 40 13**

**SECTION 054400 – ENGINEERED, COLD-FORMED METAL TRUSSES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes cold-formed steel framing in the form of the following:

1. Cold-formed steel trusses for roofs.

- B. Related Requirements:

1. Section 051200 “Structural Steel Framing”

**1.3 DELEGATED DESIGN SUBMITTAL**

- A. **Roof Truss system design and calculations shall be performed and prepared by the Roof Truss Manufacturer, based on empirical test data, applicable codes and standards, and project specific requirements. Design shall include bracing and connections to building structure.**
- B. **Design and Structural analysis data and calculations shall be prepared, signed, and sealed by a Registered Professional Engineer, licensed in the State of Louisiana, who is responsible for their preparation, to certify conformance with project specific design loads and governing code requirements as described herein and as indicated on the drawings.**
- C. **Both Approval Drawings and “For Construction” Drawings shall be prepared, signed, and sealed by a Registered Professional Engineer, licensed in the State of Louisiana, who is responsible for their preparation, to certify conformance with project specific design loads and governing code requirements as described herein, and as indicated on the drawings.**
- D. **At a minimum, Submittals/Approval Drawings shall include the following items Stamped by a Licensed Engineer in the State of Louisiana:**
1. **Truss Layout Drawings**
  2. **Truss Shop Drawings**
  3. **Truss Permanent Bracing Layout Drawings**
  4. **Truss Connection Details**
  5. **Truss Connection to Building Structure**



**NOTE: Submittals that are incomplete, or lacking Engineer's stamp, will be returned without review.**

- E. Design/Code Requirements: Roofing system shall be designed in accordance with the requirements of the following Codes, Standards, and other criteria:**
  - 1. IBC-2018**
  - 2. ASCE-7-16 – Design Requirements for Components & Cladding, and wind uplift requirements for based on the project's specific geographical location and topographical characteristics.**
  - 3. Design Wind Speed: 140 MPH**
  - 4. Risk Category: "III"**
  - 5. Exposure Category: "C"**
- F. Minimum Design Loads: The following shall establish the minimum loading to be utilized for this project.**
  - 1. Roof Live Load: Per IBC-2018**
  - 2. Roof Dead Load: 10 PSF**
  - 3. Bottom Chord Collateral Load: 10 PSF**
- G. Required minimum Truss Member sizes: The following shall establish the minimum size and gauge for truss members.**
  - 1. Truss Top Chord: 6" x 16 Gauge (50 KSI) Galvanized Steel, minimum.**
  - 2. Truss Bottom Chord: 6" x 16 Gauge (50 KSI) Galvanized Steel, minimum.**
  - 3. Truss Diagonal Chords: 3-5/8" x 18 Gauge (50 KSI) Galvanized Steel, minimum.**
- H. Truss Spacing:**
  - 1. 4'-0" Maximum.**
- I. Deflection Limits: Design trusses to withstand design loads without deflections greater than the following:**
  - 1. Vertical deflection shall be limited to 1/360 of the span**
- J. Special Requirements: Refer to Architectural Plans for Attic landings and service walkways, which must be accommodated in the Engineered Metal Truss System Design.**

#### 1.4 SUBMITTALS

- A. Product Data: Manufacturer's data for all materials, framing members, metal plates, hardware, and fabrication process shall be submitted for approval.
- B. Shop Drawings:
  - 1. Complete shop drawings, erection drawings, and design calculations for the engineered metal trusses and permanent bracing shall be submitted for approval. Submittals shall be approved prior to the start of fabrication.
  - 2. Shop drawings shall show the framing member sizes, profiles, and gauges for all trusses, including both temporary and permanent bracing members. Joint and connection details shall be provided.
  - 3. Shop drawings shall include a location plan that shows the location and identification of each truss.
  - 4. Calculations for the design of the trusses and bracing shall include a list of applied loads and load combinations, including fire sprinkler system if required, with the resulting member forces and member stresses.
  - 5. Include layout, spacings, sizes, thicknesses, and types of cold-formed steel trusses; fabrication; and fastening and anchorage details, including mechanical fasteners.
  - 8. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.
  - 9. Indicate truss layout and bearing points agree with truss layout and framing members on Contract Drawings.
  - 10. **The bolted truss connection to building structure as indicated on the Drawings shall establish the minimum acceptable truss connection design. Truss connections shall be indicated on the Metal Truss Shop Drawings and shall be included as part of the Engineered Metal Truss System Design. Exclusion of truss connections from the Engineered Metal Truss System Design shall be cause for rejection of the Engineered Metal Truss Submittal.**

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Material certifications.
- B. Fabrication quality-control reports.
- C. Welding certificates.

#### 1.6 QUALITY ASSURANCE

- D. Testing Agency Qualifications: Qualified according to ASTM E329 for testing indicated.
- E. Product Tests: Mill certificates or data from a qualified independent testing agency, or in-house testing with calibrated test equipment, indicating steel sheet complies with requirements, including base-metal thickness, yield strength, tensile strength, total elongation, chemical requirements, and metallic-coating thickness.
- F. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1, "Structural Welding Code - Steel."
2. AWS D1.3, "Structural Welding Code - Sheet Steel."

G. DELIVERY, STORAGE, AND HANDLING

1. Protect trusses and accessories from corrosion, deformation, and other damage during delivery, storage, and handling.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, providers include, but are not limited to, the following:
1. Aegis Metal Framing.
  2. MarinoWARE.
  3. USA Frametek.
  4. WESTCO Steel Systems, Inc.

2.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide cold-formed steel trusses capable of withstanding design loads within limits and under conditions indicated.
1. Design Loads and Load Combinations:
    - a. per IBC 2018 and ASCE 7-16
  2. Design trusses to provide for movement of truss members located outside the insulated building envelope without damage or overstressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change of 120 deg F.
- B. Cold-Formed Steel Truss Standards: Unless more stringent requirements are indicated, trusses shall comply with the following:
1. Floor and Roof Systems: AISI S210.
  2. Lateral Design: AISI S213.
  3. Roof Trusses: AISI S214.
- C. Fire-Resistance Ratings: Comply with ASTM E119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
1. Indicate design designations from UL or from the listings of another qualified testing

agency acceptable to authorities having jurisdiction.

## 2.3 COLD-FORMED STEEL TRUSS MATERIALS

- A. Steel Sheet: ASTM A1003/A1003M, Structural Grade, Type H, metallic coated, of grade and coating designation as follows:
  - 1. Grade: ST50H.
  - 2. Coating: G90 or equivalent.

## 2.4 ROOF TRUSSES

- A. Roof Truss Members: Manufacturer's standard steel sections.
  - 1. Connecting Flange Width: 1-5/8 inches, minimum, at top and bottom chords connecting to sheathing or other directly fastened construction.
  - 1. Minimum Base-Metal Thickness: 0.0538-inch (16 gauge) at top and bottom chords and 0.0428-inch (18 gauge) material at truss web members.
  - 2. Section Properties: Truss web member profile shall be a minimum of 3-5/8 inches x 1-5/8 inches; top and bottom chord member profile shall be a minimum of 6 inches by 1-5/8 inches.
  - 3. Ensure compatibility of truss fastening points with conditions indicated on drawings. Provide additional members / accessories as required to achieve conditions indicated on drawings.

## 2.5 TRUSS ACCESSORIES

- A. Fabricate steel-truss accessories from steel sheet, ASTM A1003, Structural Grade, Type H, metallic coated steel sheet, of same grade and coating designation used for truss members.
- B. Provide accessories of manufacturer's standard thickness and configuration unless otherwise indicated.

## 2.6 ANCHORS, CLIPS, AND FASTENERS

- A. Steel Shapes and Clips: ASTM A36, zinc coated by hot-dip process according to ASTM A123.
- B. Anchor Bolts: ASTM A307
- C. Power-Actuated Fasteners: Fastener systems with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Mechanical Fasteners: ASTM C1513, corrosion-resistant-coated, self-drilling, self-tapping steel drill screws.



1. Head Type: Low-profile head beneath sheathing; manufacturer's standard elsewhere.
- E. Welding Electrodes: Comply with AWS standards.

## 2.7 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: ASTM A780.
- B. Shims: Load-bearing, high-density multimonomer, non-leaching plastic; or cold-formed steel of same grade and metallic coating as truss members supported by shims.

## 2.8 FABRICATION

- A. Fabricate cold-formed steel trusses and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, manufacturer's written instructions, and requirements in this Section.
1. Fabricate trusses using jigs or templates.
  2. Cut truss members by sawing or shearing; do not torch cut.
  3. Fasten cold-formed steel truss members by welding, screw fastening, clinch fastening, pneumatic pin fastening, or riveting as standard with fabricator.
    - a. Comply with AWS D1.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
  4. Fasten other materials to cold-formed steel trusses by welding, bolting, pneumatic pin fastening, or screw fastening, according to Shop Drawings.
- B. Reinforce, stiffen, and brace trusses to withstand handling, delivery, and erection stresses. Lift fabricated trusses by means that prevent damage or permanent distortion.
- C. Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable variation of 1/8 inch in 10 feet (1:960) and as follows:
1. Spacing: Space individual truss members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
  2. Squareness: Fabricate each cold-formed steel truss to a maximum out-of-square tolerance of 1/8 inch.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, conditions, and abutting trusses and framing for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Pre-Approved Truss Installers:
  - 1. Alabama Steel Components
    - a. Contact - Jason Green
    - b. Phone – 1-205-792-5489
    - c. Email – Jasong@alabamasteelcomponents.com
  - 2. Boerne Steel
    - a. Contact – Mark Hernandez
    - b. Phone – 1-210-663-0011
    - c. Email – Hernandezmark9@gmail.com
  - 3. Noel Steel Homes
    - a. Contact - Jarvis Noel
    - b. Phone – 1-337-230-8326
    - c. Email – javis@noelsteelhomes.com
- B. Install bridging and brace cold-formed steel trusses according to AISI S200, AISI S202, AISI S214, and manufacturer's written instructions, unless more stringent requirements are indicated.
  - 1. Anchor trusses securely at all bearing points.
  - 2. Install continuous bridging and permanently brace trusses as indicated on Shop Drawings and designed according to CFSEI's Technical Note 551e, "Design Guide: Permanent Bracing of Cold-Formed Steel Trusses."
- C. Install cold-formed steel trusses and accessories true to line and location, and with connections securely fastened.
  - 1. Erect trusses with plane of truss webs plumb and parallel to each other. Align and accurately position trusses at required spacings.
  - 2. Erect trusses without damaging truss members or connections.
  - 3. Fasten cold-formed steel trusses by mechanical fasteners.
    - a. Locate mechanical fasteners, install according to Shop Drawings, and comply with requirements for spacing, edge distances, and screw penetration.
- D. Install temporary bracing and supports to secure trusses and support loads equal to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to trusses are secured.
- E. Truss Spacing: As indicated on Drawings.
- F. Do not alter, cut, or remove truss members or connections of trusses.

3.3 ERECTION TOLERANCES

- A. Install cold-formed steel trusses level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet (1:960) and as follows:
  - 1. Space individual trusses no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Cold-formed metal trusses will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

3.5 REPAIRS AND PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel trusses with galvanized repair paint according to ASTM A780 and manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that cold-formed steel trusses are without damage or deterioration at time of Substantial Completion.

**END OF SECTION 05440**

## SECTION 05 50 00 – METAL FABRICATIONS

## PART 1 - GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and *Division -1 Specification sections*, apply to work of this section.

## 1.02 DESCRIPTION OF WORK

- A. Definition: Metal fabrications include items made from iron and steel shapes, plates, bars, strips, tubes, pipes and castings which are not a part of structural steel or other metal systems specified elsewhere.
- B. Extent of metal fabrications is indicated on drawings and schedules.
- C. Types of work in this section include metal fabrications for:
  - 1. Miscellaneous framing and supports.
  - 2. Lavatory counter-top supports.
  - 3. Edge angles.
  - 4. Lintels.
  - 5. Pipe handrails and brackets.
  - 6. Metal Pan Stairs.

## 1.03 QUALITY ASSURANCE

- A. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

## 1.04 DESIGN / PERFORMANCE REQUIREMENTS

- A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
  - 1. Metal fabrications shall meet a minimum of 140 mph rating.
  - 2. Impact Resistance shall be in compliance with IBC 2021, ASCE 7-16, Risk Category III.

## 1.04 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Product Data: Submit manufacturer's specifications, anchor details and installation instructions for products used in miscellaneous metal fabrications, including paint products and grout.
- C. Shop Drawings: Submit shop drawings for fabrication and erection of miscellaneous metal fabrications. Include plans, elevations and details of sections and connections. Show anchorage and accessory items. Provide templates for anchor and bolt installation by others.
- D. Where materials or fabrications are indicated to comply with certain requirements for design loadings include structural computations, material properties and other information needed for structural analysis.
- E. Manufacturer's Certificates:
  - 1. Certify products meet or exceed specified requirements.

2. Must be stamped by an independent Engineering firm.

## PART II - PRODUCTS

### 2.01 MATERIALS

- A. Ferrous Metals:
- B. Steel Tubing: Cold formed, ASTM A 500; or hot rolled, ASTM A 501.
- C. Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either malleable iron, ASTM A 47, or cast steel, ASTM A 27. Provide bolts, washer and shims as required, hot dip galvanized, ASTM A 153.

### 2.02 FABRICATION, GENERAL

- A. Workmanship: Use materials of size and thickness indicated or, if not indicated, as required to produce strength and durability in finished product for use intended. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support. Use type of materials indicated or specified for various components of work.
- B. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately  $1/32"$  unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- C. Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush to match and blend with adjoining surfaces.
- D. Provide for anchorage of type shown, coordinated with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use.

### 2.03 MISCELLANEOUS FRAMING AND SUPPORTS

- A. Provide miscellaneous steel framing and supports which are not a part of structural steel framework, as required to complete work.
- B. Fabricate miscellaneous units to sizes, shapes and profiles indicated or, if not indicated, of required dimensions to receive adjacent other work to be retained by framing. Except as otherwise shown, fabricate from structural steel shapes and shapes and plates and steel bars, of welded construction using mitered joints for field connection. Cut, drill and tap units to receive hardware and similar items.

### 2.04 STEEL FRAMED STAIRS

- A. General: Provide stair units of sizes and arrangements shown. Design and construct entire assembly to support the specified loads. Provide metal framing, hangers, struts, clips, brackets, bearing plates, and other components as required for the support of stairs and platforms. Erect stair work to line, plumb, square and true with runs registering level with floor and platform levels. Fabricate units so that bolts and other fastenings do not appear on finish surfaces. Make joints true and tight and make connections between parts light-proof tight. Provide continuous welds ground smooth where exposed.
- B. Stair Framing: Fabricate stringers of structural steel channels or plates or a combination thereof. Provide closures for exposed ends of stringers. Construct platforms of structural steel channel headers and miscellaneous framing members.
- C. Metal Plan Units: Form metal pans of  $0.1045"$  thick (12 gage) minimum steel sheets complying with ASTM A 245, or ASTM A 570, Grade 30. Shape pans to conform to the configuration shown. Construct riser and sub-tread metal pans with steel angle supporting brackets welded to stringers. Weld metal pans to brackets. Weld sub-platform metal pans to platform frames.
- D. Steel Floor Plate Risers, Treads, and Platforms: Form risers, tread, and platforms from floor plate complying with FS

QQ-F-461, Class 1, thickness as required to support specified loads. Shape floor plate to conform to the configuration shown. Construct riser and tread floor plate with steel angle supporting brackets welded to stringers. Weld floor plate to brackets. Weld platform floor plate to platform frames.

## 2.05 STAIR RAILINGS, HANDRAILS AND GUARDRAILS

- A. Pipe Railings:
  - 1. Provide steel pipe railings: consisting of top rail, intermediate rails, and posts, and handrails at walls. Unless otherwise shown, provide 1-1/4" nominal size.
- B. Join posts, rails and corners by the following methods as indicated: Provide flush-type steel wall return and railing fittings, welded and ground smooth.
- C. Provide railing splice locks secured with 3/8" hexagonal-recessed-head set screws.
- D. Miter and weld joints made by fitting post to top rail and intermediate rail to post, groove weld joints, and grind smooth.
- E. Bend railings at corners with constant radius, and bend railings at curved radius indicated with constant radius, and with cylindrical cross-section of pipe maintained throughout the entire bend.
- F. Adjust railings prior to securing in place to insure proper matching at butting joints and correct alignment throughout their length. Plumb posts in each direction. Secure posts and rail-ends to building construction as indicated.
- G. Secure handrails to walls by means of wall brackets as indicated.
- H. Locate brackets not more than 60" o.c. Secure wall brackets to building construction as follow:
  - 1. For concrete and solid masonry anchorage, use bolt anchor expansion shields and lag bolts.
  - 2. For hollow masonry and stud partition anchorage, use toggle bolts having square heads.

## PART III - EXECUTION

### 3.01 PREPARATION

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible, do not delay job progress; allow for trimming and fitting where taking field measurements before fabrication might delay work.
- B. Coordinate and furnish anchorage, setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as concrete inserts, sleeves, anchor bolts and miscellaneous items having integral anchors, which are to be embedded in concrete or masonry construction. Coordinate delivery of such items to project site.

## PART IV - INSTALLATION

### 4.01 GENERAL

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction; including, threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws and other connectors as required.
- B. Cutting, Fitting and Placement: Perform cutting, drilling, and fitting required for installation of miscellaneous metal fabrications. Set work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels. Provide temporary bracing or anchors in formwork for items which are to be built into concrete masonry or similar construction.
- C. Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Grind exposed joints smooth and touch-up shop paint coat. Do not weld, cut or abrade the surfaces of exterior units which have been hot dip galvanized after fabrication, and are intended for bolted or screwed field connections.

- D. Field Welding: Comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of welds made, and methods used in correcting welding work.

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***END OF SECTION 05 50 00***

## SECTION 06 05 73.13 – FIRE-RETARDANT WOOD TREATMENT

## PART 1 – GENERAL

## 1.01 SUMMARY

- A. Section includes: Fire-retardant-treated wood products specified in other Division 6 Sections, including:
  - 1. Exterior fire-retardant-treated wood.
- B. Related Sections:
  - 1. Section 06 10 00 Rough Carpentry
  - 2. Section 06 20 00 Finish Carpentry

## 1.02 REFERENCES

- A. ASTM International (ASTM):
  - 1. ASTM D2898 Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing.
  - 2. ASTM D3201 Standard Test Method for Hygroscopic Properties of Fire-Retardant Wood and Wood-Based Products.
- B. Military Specification:
  - 1. MIL-L-19140E Lumber and Plywood, Fire-Retardant Treated.
- C. Underwriters Laboratories, Inc. (UL):
  - 1. UL 723 Standard for Test for Surface Burning Characteristics of Building Materials.

## 1.03 PERFORMANCE REQUIREMENTS

- A. Provide fire-retardant-treated wood that complies with the following when tested in accordance with UL 723:
  - 1. A listed flame spread index of 25 or less.
  - 2. No evidence of significant progressive combustion when the test is continued for an additional 20-minute period.
  - 3. A flame front that does not progress more than 10½ feet beyond the centerline of the burners at any time during the 30-minute test period.
- B. Provide fire-retardant-treated wood that is kiln dried after treatment (KDAT) to maximum moisture content of 19% for lumber and 15% for plywood.
- C. Provide interior fire-retardant-treated wood that has a moisture content less than 28% when tested in accordance with ASTM D3201 at 92% relative humidity.
- D. Provide exterior fire-retardant-treated wood that has no increase in the listed classification when subjected to the Standard Rain Test, ASTM D2898.

## 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Section 01 33 00 - Submittal Procedures.
- B. Product Data: Submit the following for specified products.
  - 1. Manufacturer's storage, handling, and installation recommendations.
  - 2. Manufacturer's finishing recommendations.
  - 3. Safety Data Sheets (SDS).



- C. Quality Assurance Submittals: Submit the following:
  - 1. DoD Qualified Product List (QPL) with Preamble.
  - 2. UL Classifications with Guide.
- D. Closeout Submittals:
  - 1. Warranty: Submit warranty documents specified.

#### 1.05 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Wood treatment qualified under MIL-L-19140E and listed on the Qualified Product List (QPL).
  - 2. Wood treatment plant with ongoing UL Classification and Follow-Up Service for fire-retardant-treated wood.

#### 1.06 WARRANTY

- A. Refer to Conditions of the Contract and Section 01 78 39 for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under the Contract Documents.

### PART 2 – PRODUCTS

#### 2.01 FIRE-RETARDANT TREATED WOOD

- A. Manufacturer: Any manufacturer listed in the UL Online Certifications Directory for Treated Lumber (BPVV) and Treated Plywood (BUGV) at the time set for opening of bids.
- B. Fire-Retardant Treatment: Any treatment listed in the Department of Defense (DoD) Qualified Product List (QPL) for MIL-L-19140E at the time set for opening of bids.
- C. Labeling: Fire-retardant-treated wood shall be labeled as required by the code and shall bear the UL Classification Mark.

#### 2.02 PRODUCT SUBSTITUTIONS

- A. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00 - Substitution Procedures.

#### 2.03 RELATED MATERIALS

- A. Wood Materials: Refer to Division 6 Sections for related wood materials required to be treated as specified herein.

### PART 3 – EXECUTION

#### 3.01 MANUFACTURER'S INSTRUCTIONS

- A. Comply with manufacturer's product data, including product literature, technical bulletins, and installation instructions.

#### 3.02 EXAMINATION

- A. Discard pieces with defects which might impair quality or work.

- B. Examine for wet conditions before installation. Do not install fire-retardant-treated wood that is wet or has been wet until it is dried to the original specified moisture content.

### 3.03 INSTALLATION

- A. Install fire-retardant-treated wood in accordance with code requirements and related Division 6 Sections.
- B. Install interior fire-retardant-treated wood where exterior type is not indicated.
- C. Install exterior fire-retardant-treated wood for weather-exposed surfaces and where indicated.
- D. Field cutting of fire-retardant-treated wood to length is allowed without end-treating. Do not rip or mill lumber after fire-retardant treatment; end cuts and drilling of holes are permitted. Fire-retardant-treated plywood may be cut in any direction.
- E. Install fire-retardant-treated wood using manufacturer's recommended fasteners.

### 3.04 CONSTRUCTION

- A. Allow fire-retardant-treated wood that has become wet during construction to dry to original specified moisture content before being enclosed.

### 3.05 FINISHING

- A. Prepare fire-retardant-treated wood surfaces to be finished in accordance with manufacturer's finishing recommendations.
- B. Apply paint or stain in accordance with Section 09 90 00 - Painting and Coating.

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**END OF SECTION 06 05 73.13**

## SECTION 06 10 00 – ROUGH CARPENTRY

## PART 1 - GENERAL

## 1.01 DESCRIPTION OF WORK

Definition: Carpentry includes carpentry work, which is generally not exposed, except as otherwise indicated on the drawings.

## 1.02 REFERENCES

- A. Lumber Standards: Comply with *PS 20* and with applicable rules of the respective grading and inspecting agencies and products indicated.
- B. Plywood Products Standards: Comply with *PS 1* (ANSI A 199.1) or, for products not manufactured under *PS 1* provisions, with applicable *APA* Performance Standard for type of panel indicated.

## 1.03 PRODUCT HANDLING

- A. Delivery and Storage: Keep materials dry at all times. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood and provide air circulation with stacks.

## 1.04 JOB CONDITIONS

- A. Coordination: Fit carpentry work to other work; scribe and cope as required for accurate tight fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow proper attachment of other work.

## PART 2 - PRODUCTS

## 2.01 MATERIALS

- A. Lumber, General: Factory mark each piece of lumber with type, grade, mill and grading agency, except omit marking from surfaces to be exposed with transparent finish or without finish. Nominal sizes are indicated, except as shown by detail dimensions. Provide actual size as required by *PS 20* for moisture content specified for each use. Provide dressed lumber with 15% maximum moisture content at time of dressing.
- B. For structural framing, provide the following grade and species or approved equal by Architect in writing.  
Select Structural Grade  
No.2 grade or better  
Southern Pine (SPIB)  
Fb (minimum extreme fiber stress in bending): 1500 PSI  
E (minimum modulus of elasticity); 1,500,000
- C. Miscellaneous Lumber: Provide wood for support or attachment or other work including cant strips, bucks, nails, blocking, furring, grounds, stripping and similar members. Provide lumber of sizes indicated, worked into shape shown and as follows:  
Moisture Content: 19% maximum for lumber items not specified to receive wood preservative treatment. Grade No. 2 S.Y.P. or better
- D. Plywood: Trademark: Identify each plywood panel with appropriate *APA* trademark. All plywood to be a face grade on exposed surface and have exterior glue rating.

## 2.02 MISCELLANEOUS MATERIALS

- A. Fasteners and Anchorages: Provide size, type, materials, and finish as indicated and as recommended by applicable standards, complying with applicable Federal Specifications for nails, staples, screws, bolts, nuts, and washer and anchoring devices. Provide metal hangers and framing anchors of the size and type recommended by the manufacturer for each use including recommending nails. Where rough carpentry work is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners and anchorages with a hot-dip zinc coating (*ASTM A 153*).

- B. Building Paper: Asphalt saturated felt, non-perforated, *ASTM 226*.

## 2.03 WOOD TREATMENT

- A. Preservative Treatment: Where lumber or plywood is indicated as "Treated" or is specified herein to be treated, comply with the applicable requirements of *AWPA Standard C2 (lumber) and C9 (plywood) and of AWPB Standards* listed below. Mark each treated item with *AWPB Quality Mark Requirements*.
1. Pressure-treat above-ground items with water-borne preservatives complying with *AWPB LP-2*. After treatment, kiln-dry to a maximum moisture content of 15%. Treat indicated items and the following:
    - a. Wood cants, nailers, curbs, blocking, stripping and similar concealed members in contact with masonry or concrete.
    - b. Wood sills, sleepers, blocking, furring, stripping and similar concealed members in contact with masonry or concrete.
  2. Pressure-treat the following with water-borne preservatives for ground contact use complying with *AWPB LP-22*.
    - a. Wood members in contact with ground.
    - b. Wood members in contact with fresh water.
  3. Complete fabrication of treated items prior to treatment where possible. If cut after treatment, coat cut surfaces with heavy brush coat of some chemical used for treatment. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.
- B. Inspect each piece of treated lumber or plywood after drying and discard damaged or defective pieces.

## PART 3 - EXECUTION

### 3.01 GENERAL

- A. Discard units of materials with defects which might impair quality of work, and units which are too small to use in fabricating work with minimum joints or optimum joint arrangement.
- B. Set carpentry work accurately to require levels and lines, with members plumb, and true and accurately cut and fitted.
- C. Securely attach carpentry work to substrate by anchoring and fastening as shown and as required by required by recognized standards. Countersink nail heads and exposed carpentry work and fill holes. Use common wire nails, except as otherwise indicated. Use finishing nails for finish work. Select fasteners or size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood, pre-drill as required.

### 3.02 WOOD GROUNDS, NAILERS, BLOCKING AND SLEEPERS

- A. Provide wherever shown and where required for screeding or attachment of other work. Form to shapes as shown and cut as required for true line and level or work to be attached. Coordinate location with other work involved.
- B. Attach to substrate as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown. Build into masonry during installation of masonry work. Where possible, anchor to form-work before concrete placement.
- C. Provide permanent grounds of dressed, preservative treated, key-beveled lumber not less than 1-1/2" wide and of thickness required to bring face of ground to exact thickness of finish material involved. Remove temporary grounds when no longer required.

### 3.03 WOOD FURRING

- A. Install plumb and level with closure strips at edges and openings. Shim with wood as required for tolerance of finished work.

- B. Furring: Unless otherwise shown, provide 1"x 4" furring at 16" o.c. maximum spacing.
- C. Suspended Furring: Provide size and spacing shown, including hangers and attachment devices. Level to a tolerance of 1/8" in 10'.

### 3.04 WOOD, FRAMING, GENERAL

- A. Provide framing members of sizes and on spacing shown, and frame openings as shown, or if not shown, comply with recommendations of "Manual for House Framing" of National Forest Products Association. Do not splice structural members between supports.
- B. Anchor and nail as shown, and to comply with "Recommended Nailing Schedule" of "Manual for House Framing" and other recommendations of *NFPA*.
- C. Fire stop concealed spaces with wood blocking not less than 2" thick, if not blocked by other framing members. Provide blocking at third points of and at each building story level and at ends of joist spans.

### 3.05 JOIST FRAMING

#### GENERAL:

- A. Provide framing of sizes and spacing shown. Install with crown edge up and support ends of each member with not less than 1-1/2" of bearing members by toe nailing or metal, or 3" on masonry. Attach to wood bearing members by toe nailing or metal connectors; frame to wood supporting members with wood ledgers as shown, or if not shown, with metal connectors. Fire-cut members built into masonry (*if any*). Frame opening with headers and trimmers where span or headers exceeds 4". Do not notch in middle third of joist; limit notches to 1/6 depth of joist; 1/3 at ends. Do not bore holes larger than 1/3 depth of joist or located closer than 2" from top or bottom. Provide solid blocking (2" thick by depth of joist) at ends of joists unless nailed to header or brand member.
- B. Lap members framing from opposite sides of beams, girders or partitions not less than 4" or securely tie opposing members together. Provide solid blocking (2" thick by depth of joist) over supports.
- C. Under jamb studs at openings, provide solid blocking between joist.
- D. Under non-load bearing partitions, provide double joists separated by solid blocking equal to depth of studs above. Provide triple-joists separated as above, under partitions receiving ceramic tile and similar heavy finishes or fixtures, unless otherwise shown.
- E. Provide bridging between joists where nominal depth-to-thickness ratio exceeds 4' at intervals of 8'. Use bevel cut 1"x 4" or 2"x 3" wood bracing, double-crossed and nailed both ends to joists or use solid wood bridging 2" thick by depth of joist, end nailed to joist.

### 3.06 SUB-FLOORING

- A. Install boards with end joints staggered over supports, and with each piece extending over at least two (2) spaces between supports. Nail with 8d common nails, space two (2) per support for board widths of 6" and less, three (3) per support for widths of 8" or more.
- B. Cover sheathing with building paper, lapped and nailed with roofing nails.

### 3.07 INSTALLATION OF PLYWOOD

GENERAL: Comply with applicable recommendations contained in *Form No. E 304*, "APA Design/Construction Guide-Residential and Commercial", for types of plywood products and applications indicated.

- A. Fastening Methods: Fasten panels as indicated below:

1. Subflooring: Staple or nail to framing
2. Plywood Backing Panels: Nail to supports

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***END OF SECTION 06 10 00***

SECTION 07 01 50.19 – PREPARATION FOR RE-ROOFING

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Remove existing roofing gravel, base flashing, vent stack flashings, roofing membrane and miscellaneous items to the deck surface.
- B. Remove all flashings and lumber at existing curb type expansion joint.
- C. Inspect metal deck and coat all rusted areas with rust inhibitive paint prior to the installation of insulation.
- D. Inspect wood deck and replace with like material prior to the installation of base sheet
- E. Install red rosin sheathing paper and mechanically fasten fiberglass base sheet.

1.02 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry
- B. Section 07 22 00 - Roof and Deck Insulation
- C. Section 07 61 13 – Standing Seam Metal Roof
- D. Section 07 60 00 - Flashing and Sheet Metal

1.03 PRE-INSTALLATION CONFERENCE

- A. Attend conference specified in Section 01 31 00.
- B. Review installation procedures and coordination required with related work.

1.04 SUBMITTALS

- A. Submit product data and samples of materials to be used.

1.05 ENVIRONMENTAL REQUIREMENTS

- A. Do not remove roofing existing roofing membrane or decking when weather conditions threaten the integrity of the building contents or intended continued occupancy. Maintain continuous temporary protection prior to new roofing system.

1.06 PROTECTION

- A. Roofing Contractor is to be responsible for all mechanical, electrical and plumbing services required for the removal and re-installation of the new roof system.
- B. During execution or work covered by these specifications, the Contractor shall provide protection for equipment, materials, and personnel inside and outside the building against falling debris, sparks, and water.
- C. It shall be the Contractor=s responsibility to respond immediately to correction of roof leakage during construction. A 4 hour time limit shall be given from the time of notification of emergency conditions. In the event of water penetration during rain or storm, the Contractor shall provide for repair or protection of building contents and interior. If the Contractor does not respond or cannot be contacted, the Owner will effect repairs or emergency action and the Contractor shall be back charged for all expenses and damages, if any.

## 1.07 SCHEDULING

- A. Schedule work to coincide with commencement of installation of new insulation and roofing system.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

- A. Temporary Protection: Sheet polyethylene. Provide weights to retain sheeting in position.
- B. Rust Inhibitive Paint: Rust-Go by Garland or approved substitute.
- C. Fiberglass Base Sheet: ASTM D-4601, Type II.
- D. Fasteners: Annular, ring shank nails with integral 1" caps.
- E. Red Rosin Sheathing

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Roofing Contractor shall verify all existing site conditions.
- B. Verify that existing roof surface is clear and ready for work of this Section.

### 3.02 MATERIAL REMOVAL

- A. Remove all membrane, cant strips, insulation, cant strips, base flashings and items shown on the drawings. The complete removal of all fasteners to leave a smooth even surface for re-roofing.
- B. Under certain conditions it will be necessary and desirable to incorporate one or more of the following methods for removal of dirt, silt, gravel, debris, roof membrane and insulation from the roof surface in order to preserve the ecology, eliminate unsightly conditions and protect building:
  - 1. Roof vacuum system.
  - Crane and hopper with dump truck system.
  - Enclosed shuts with protective shrouds on building and ground surfaces.
- C. All debris dumped from the roof shall be transported from the roof via chutes into dumpsters or trucks, and this debris shall, be removed from the premises when vehicles are full. No debris shall be transported from the area being worked over an existing finished roof without and underlayment of 3/4" plywood.
  - 1. All roof equipment not in use or left filled will be parked on the column lines on 3/4" plywood.
  - 2. Contractor shall provide tie-ins at the end of each days work. Area of tie-in shall be spudded clean of all existing gravel.

### 3.03 TEMPORARY PROTECTION

- A. Provide temporary protective sheeting over uncovered deck surface.
- A. Turn sheeting up and over parapets and curbing. Retain sheeting in position with weights or temporary fasteners.
- B. Provide for surface drainage from sheeting to existing drainage facilities.
- C. Do not permit traffic over unprotected or repaired deck surface.



## 3.04 BASE SHEET INSTALLATION

- A. Loose lay red rosin sheathing paper over entire wood deck surface area and tack in place.
- B. Over red rosin at all wood deck areas, roll out the base sheet over the surface. Lap subsequent sheets 4" over the preceding one. Mechanically attach the base sheet laps at 7 1/2" centers, and down the longitudinal center of each sheet nail two rows of nails with rows spaced approximately 11" apart and nails staggered on approximately 18" centers. Increase fastening pattern by 50% at the 8' perimeter and by 70% in the 16' corners.

## 3.05 METAL DECK REPAIRS

- A. Coat all rusted deck areas with rust-inhibitive paint at a rate of 400 sq. ft. per gallon.

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**END OF SECTION 07 01 50.19**

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PART 1 – GENERAL

## 1.01 SUMMARY

- A. Section Includes: Furnishing of all labor, materials, services, and equipment necessary for the supply and installation of cementitious crystalline waterproofing to concrete substrates, above-grade, or below-grade, on either dry or wet side of substrates, as indicated on drawings and as specified herein.
- B. Related Sections:
  - 1. Section 031000 - Concrete Forming and Accessories.
  - 2. Section 079000 - Joint Protection.
  - 3. Section 099000 - Paints and Coatings.

## 1.02 REFERENCES

- A. Applicable Standards: The following standards are referenced herein.
  - 1. American Society for Testing and Materials (ASTM)
  - 2. Army Corps of Engineers (CRD)
  - 3. American National Standards Institute (ANSI)
  - 4. NSF International
  - 5. European Standards (EN)
  - 6. RILEM
  - 7. Drinking Water Inspectorate (DWI)

## 1.03 SYSTEM DESCRIPTION

- A. Cementitious Crystalline Waterproofing: Concrete waterproofing and protection system shall be of the crystalline type that is a blend of Portland cement, fine treated silica sand and active proprietary chemicals. When mixed with water and applied as a cementitious coating, the active chemicals diffuse into the concrete and cause a catalytic reaction which generates a non-soluble crystalline structure within the pores and capillary tracts of concrete. This crystalline system causes the concrete to become sealed against the penetration of liquids from any direction and protects the concrete from deterioration due to harsh environmental conditions. The system is used for above or below-grade walls and slabs, including liquid retaining structures and where enhanced chemical resistance is required.

## 1.04 SYSTEM PERFORMANCE REQUIREMENTS

- A. Testing Requirements: Crystalline waterproofing system shall have been tested in accordance with the following standards and conditions and at the dosage rate specified by the manufacturer, and the testing results shall meet or exceed the performance requirements as specified herein.
- B. Independent Laboratory: Testing shall have been performed by an accredited independent laboratory meeting the requirements of ASTM E 329 or other applicable international standard for certification of testing laboratories. Testing laboratory shall have obtained all control and treated concrete samples.
- C. Crystalline Penetration: Crystallizing capability of waterproofing material shall be evidenced by independent SEM (Scanning Electron Microscope) photographs. Crystal growth 12 inches (30 cm) from the surface of the coating shall be evident with 1000X magnification 1 year after application of the coating and exposure of the sample to normal weathering.
- D. Permeability: Independent testing shall be performed according to U.S. Army Corps of Engineers CRD C48 "Permeability of Concrete". Concrete samples shall have design strength of 2000 psi (14 MPa) and thickness of 2 inches (50 mm). Treated samples shall have two coats of crystalline waterproofing applied per

manufacturer's directions. Samples to be pressure tested to 175 psi (405 foot head of water) or 1.2 MPa (123.4 m head of water). Control samples shall leak and treated samples, after crystalline growth has occurred, shall exhibit no measurable leakage.

- E. Permeability - Negative Side Application: Independent testing shall be performed according to EN 12390-8 or other recognized direct pressure test. Concrete samples shall have a design strength of 25 MPa (3600 psi). Treated samples shall be exposed to water pressure on the side opposite to the crystalline coating. Coated samples shall exhibit a greater than 90% reduction in depth of water penetration as compared to the control samples.
- F. Chemical Resistance: Independent testing shall be performed according to ASTM C 267 "Chemical Resistance of Mortars" and ASTM C 39 "Compressive Strength of Cylindrical Concrete Specimens". Concrete samples (treated and untreated) shall have design strength of 4000 psi (27.6 MPa). Treated samples shall have two coats of crystalline waterproofing applied per manufacturer's directions. Untreated and treated specimens must be immersed for a minimum of 84 days in following chemical solutions: hydrochloric acid (3.5 pH), brake fluid, transformer oil, ethylene glycol, toluene, caustic soda. Treated specimens shall exhibit no detrimental effects after exposure and shall have an average of 17% increase in compressive strength versus untreated control specimens.
- G. Acid Resistance: Independent testing shall be performed to determine "Sulfuric Acid Resistance of Concrete Specimens". Treated concrete samples shall be tested against untreated control samples. All samples shall be immersed in 5% sulfuric acid and weighed weekly for 10 weeks. Untreated samples shall exhibit at least 8 times more mass loss than treated samples.
- H. Carbonation Resistance Testing: Independent testing shall be performed according to RILEM CPC-18 or other recognized accelerated carbonation test. Concrete samples shall have a 0.5 w/cm ratio or be approximately 30 MPa (4500 psi) in strength. Coated samples shall have crystalline coating applied one day after casting and all samples to be cured for 7 days prior to carbonation. After 91 days exposure to CO<sub>2</sub> the coated samples shall show a 35% or greater reduction in carbonation depth as compared to the control samples.
- I. Potable Water Approval: Waterproof material shall have a current, valid approval certificate from NSF (NSF 61), DWI, or other recognized certification agency.

#### 1.05 SUBMITTALS

- A. General: Submit listed submittals in accordance with conditions of the Contract and with Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's specifications, installation instructions, and general recommendations for waterproofing applications.
- C. Test Reports: Submit for acceptance, complete test reports from approved independent testing laboratories certifying that waterproofing system conforms to performance characteristics and testing requirements specified herein.
- D. Manufacturer's Certification: Provide document signed by manufacturer or manufacturer's representative certifying that the materials to be installed comply with the requirements of this specification.
- E. Manufacturer's Field Report: Provide copy of report from manufacturer's representative that the surfaces to which waterproofing material is to be applied are in a condition suitable to receive same.

#### 1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall be ISO 9001 registered and shall have no less than 10 years experience in manufacturing the cementitious crystalline waterproofing materials for the required work. Manufacturer

must be capable of providing field service representation during construction phase. Manufacturers who cannot provide ongoing field support or the performance test data specified herein will not be considered for the project.

- B. Applicator: Waterproofing applicator shall be experienced in the installation of cementitious crystalline waterproofing materials as demonstrated by previous successful installations and shall be approved by the manufacturer in writing.
- C. Pre-Installation Conference: Prior to installation of waterproofing, conduct meeting with waterproofing applicator, Architect/Engineer, owner's representative, and waterproofing manufacturer's representative to verify and review the following:
  - 1. Project requirements for waterproofing as set out in Contract Document.
  - 2. Manufacturer's product data including application instructions.
  - 3. Substrate conditions, and procedures for substrate preparation and waterproofing installation.
- D. Technical Consultation: The waterproofing manufacturer's representative shall provide technical consultation on waterproofing application and provide on-site support as needed.

#### 1.07 DELIVERY, STORAGE AND HANDLING

- A. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- B. Delivery: Deliver packaged waterproofing materials to project site in original undamaged containers, with manufacturer's labels and seals intact.
- C. Storage: Store waterproofing materials in dry, enclosed location, at a minimum temperature of 45°F (7°C).

#### 1.08 PROJECT CONDITIONS

- A. Compliance: Comply with manufacturer's product data regarding condition of substrate to receive waterproofing, weather conditions before and during installation, and protection of the installed waterproofing system.

#### 1.09 WARRANTY

- A. Manufacturer's Warranty: Manufacturer shall provide standard product warranty executed by authorized company official.
- B. Applicator's Warranty: Applicator shall warrant the waterproofing installation against defects caused by faulty workmanship or materials for a period of typically (specify term) years from Date of Substantial Completion. The warranty will cover the surfaces treated and will bind the applicator to repair, at his expense, any and all leaks through the treated surfaces which are not due to structural weaknesses or other causes beyond applicator's control such as fire, earthquake, tornado and hurricane. The warranty shall read as follows:
  - 1. Warranty: The applicator warrants that, upon completion of the work, surfaces treated with cementitious crystalline waterproofing will be and will remain free from water leakage resulting from defective workmanship or materials for a period of (specify term) years from Date of Substantial Completion. In the event that water leakage occurs within the warranty period from such causes, the applicator shall, at his sole expense, repair, replace or otherwise correct such defective workmanship or materials. Applicator shall not be liable for consequential damages and applicator's liability shall be limited to repair, replacement or correcting of defective workmanship or materials. Applicator shall have no responsibility with respect to water leakage or other defects caused by structural failure or movement of the structure, or any other causes beyond Applicator's control.

### PART 2 – PRODUCTS

#### 2.01 MATERIALS

#### CRYSTALLINE WATERPROOFING

- A. Acceptable Manufacturer:  
 Xypex Chemical Corporation  
 13731 Mayfield Place, Richmond, B.C., Canada V6V 2G9  
 800 961.4477 or 604 273.5265  
 E-mail: [info@xypex.com](mailto:info@xypex.com) Website: [www.xypex.com](http://www.xypex.com)

Note: Acceptable manufacturers include all licensed manufacturing operations of Xypex Chemical Corporation.

- B. Proprietary Products: Xypex crystalline waterproofing materials as follows:
1. Xypex Concentrate
  2. Xypex Modified
  3. Xypex Patch'n Plug
- Note: Supplemental specifications are available for Xypex Admix series (admixture) and Xypex Concentrate DS-1/DS-2 (dry shake).

- C. Substitutions: Submit in accordance with Section 01 25 00 – Substitution Procedures.

- D. Source Quality: Obtain all proprietary crystalline waterproofing products from a single manufacturer.

## 2.02 MIXES

- A. General: Mix waterproofing material by volume with clean, potable water. Mix waterproofing material in quantities that can be applied within 20 to 30 minutes from time of mixing. As mixture thickens, stir frequently, but do not add additional water. Do not mix bonding agents or admixtures with crystalline waterproofing materials.

- B. Brush Application Mix: Measure dry powder and place in mixing container. Measure water and mix into the dry powder with a paddle on a slow speed electric drill (250 RPM) or other type mixer which is acceptable to manufacturer. Mixing proportions shall be as follows:

| Coverage                                 | Proportions (by volume) |
|------------------------------------------|-------------------------|
| 1.5 lb./sq. yd. (0.8 kg/m <sup>2</sup> ) | 5 powder to 2 water     |
| 2.0 lb./sq. yd. (1.0 kg/m <sup>2</sup> ) | 3 powder to 1 water     |

- C. Spray Application Mix: Mixing shall be same as specified for brush application except that mixture shall be thinner. Use following proportions as a guide only. Adjust proportions to match type of spray equipment and pressures used. Mixing proportions shall be as follows:

| Coverage                                 | Proportions (by volume) |
|------------------------------------------|-------------------------|
| 1.5 lb./sq. yd. (0.8 kg/m <sup>2</sup> ) | 5 powder to 3 water     |

- D. Dry-Pac Mix: Using a trowel, mix 1 part clean water with 6 parts Xypex Concentrate powder for 10 to 15 seconds. It is acceptable that lumps may be present in mixture. Mix only as much as can be applied in 15 minutes.

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. Site Visit: Prior to waterproofing installation, arrange visit to project site with waterproofing manufacturer's representative. Representative shall complete a field review, confirming that the sample areas observed, are considered to be in acceptable condition to receive Xypex Coating.

- B. Verification of Substrates: Verify that concrete surfaces are sound and clean, and that form release agents and materials used to cure the concrete are fully removed.
- C. Examination for Defects: Examine surfaces to be waterproofed for defects such as honeycombing, rock pockets, faulty construction joints and cracks. Such defects to be repaired in accordance with manufacturer's product data and 3.02 below.

### 3.02 PREPARATION

- A. Surface Preparation: Smooth surfaces (e.g. where steel forms are used) or surfaces covered with form oil or other contaminants shall be cleaned, water-blasted, lightly sand-blasted, or acid etched as necessary to provide a clean absorbent surface. The surface must also have an open capillary system to provide "tooth and suction" for the Xypex treatment. A minimum of CSP-3 per the International Concrete Repair Institute Concrete Surface Profile Chips or other equivalent standard is required. Surfaces to be acid-etched shall be should be saturated with water before application of the acid. After acid etching flush concrete thoroughly with clean water. Horizontal surfaces shall have a rough wood float or broom finish. Where a smooth trowel finish is required on horizontal surface, crystalline waterproofing material shall be applied by dry shake method at time of concrete finishing in accordance with manufacturer's product data.
- B. Repair of Defects: Concrete defects shall be repaired in accordance with manufacturer's technical literature including relevant Method Statements ([www.xypex.com/technical/statements](http://www.xypex.com/technical/statements)). Procedures are generally as follows:
  - 1. Cracks and Faulty Construction Joints:
    - a. Chip out cracks, faulty construction joints and other defects to a depth of 1.5 inches (37 mm) and a width of one inch (25 mm). A "V" shaped slot is not acceptable. The slot may be saw cut instead of chipped but ensure that the slot is dovetailed or otherwise shaped such that there will be mechanical interlock of materials placed into the slot at a later stage.
    - b. Clean slot of debris and dust. Soak area with water and remove excess surface water. Apply a slurry coat of Xypex Concentrate at the rate of 1.5 lb./sq. yd. (0.8 kg/m<sup>2</sup>) to the slot.
    - c. While slurry coat is still tacky, fill cavity with Dry-Pac. Compress tightly into cavity using pneumatic packer or block and hammer.
    - d. This step may be omitted if the area filled with Dry-Pac will be subsequently covered with Xypex coating. Wet Dry-Pac surface lightly with water, then apply a slurry coat of Xypex Concentrate at a coverage rate of 1.5 - 2 lb./sq. yd. (0.8 - 1 kg/m<sup>2</sup>) over the repaired area to 6" (150 mm) on either side of slot.
  - 2. Rock Pockets, Honeycombing or other defective concrete: All areas of poor concrete consolidation (honeycomb or rock pockets) shall be repaired.  
Note: Where there is active water-flow see Method Statements or contact Xypex Technical Services Representative for assistance.
- C. Wetting Concrete: Xypex requires a saturated surface dry (SSD) substrate. Concrete surfaces must be thoroughly saturated with clean water prior to the application so as to aid the proper diffusion of the Xypex chemistry and to ensure the growth of the crystalline formation deep within the pores of the concrete. Remove excess water before the application such that there is no glistening water on the surface. If concrete dries out before application, it must be re-wetted.

### 3.03 APPLICATION

- A. Construction Joints: In addition to specified waterstops, apply one coat of Xypex Concentrate slurry at a rate of 2 lb./sq. yd. (1 kg/m<sup>2</sup>) to joint surfaces between concrete pours. Moisten surfaces prior to slurry application. Apply slurry and keep moist for 12 hours then allow slurry to set or dry. Where joint surfaces are not accessible prior to pouring new concrete, contact Xypex Technical Services Representative for assistance.

Note: Inclusion, type and position of waterstops are at the discretion of the designer. Expanding waterstops may be placed on Xypex after it has dried or before Xypex slurry application. Xypex slurry may only be applied over waterstop if approved by waterstop manufacturer.

- B. Sealing Strips: Where hydrostatic conditions exist, sealing strips shall also be applied at construction joints by filling grooves that are created along the joints. Dimensions of the grooves shall be 1 inch (25 mm) wide and 1.5 inches (37 mm) deep. If grooves are not pre-formed then chip grooves to those dimensions. Fill the grooves as follows:
1. Apply slurry coat of Xypex Concentrate slurry to slot in accordance with manufacturer's instructions or recommendations.
  2. While slurry coat is still tacky, fill slot with Xypex Concentrate Dry-Pac.
  3. Compact tightly using pneumatic packer or hammer and block.
  4. This step may be omitted if the area filled with Dry-Pac will be subsequently covered with Xypex coating. Wet Dry-Pac surface lightly with water, then apply a slurry coat of Xypex Concentrate at a coverage rate of 1.5 - 2 lb./sq. yd. (0.8 - 1 kg/m<sup>2</sup>) over sealing strip and extending to 6" (150 mm) on either side.  
Note: For further information, see Xypex Schematic Drawings for standard construction joint details.
- C. Form Tie Holes: Form tie holes shall be waterproofed in accordance with manufacturer's technical literature including relevant Method Statements ([www.xypex.com/technical/statements](http://www.xypex.com/technical/statements)). Procedures are generally as follows:
1. Prepare the tie hole to create a straight sided void with a profile of at least ICRI CSP-3. For through element ties holes such as those created by taper ties the prepared void is to be at least 5" (125 mm) deep. For cone ties the void is to be to the bottom of the cone.
  2. Clean and profile the area to a 12-inch (300 mm) diameter around the tie hole to an ICRI CSP-3 profile.
  3. For through-element tie holes create a solid plug of material at the bottom of the profiled hole using Xypex Patch'n Plug leaving at least 4" (100 mm) of empty tie hole from the top of the plug to the surface of the concrete element.
  4. Apply a coat of Xypex Concentrate slurry at a rate of 1.5 lb./sq. yd. (0.8 kg/m<sup>2</sup>) to the inside of the tie hole and to a 12" (300 mm) diameter area around the hole.
  5. Fill and compact the tie hole with Xypex Concentrate Dry-Pac.
  6. This step may be omitted if the area filled with Dry-Pac will be subsequently covered with Xypex coating. Wet Dry-Pac surface lightly with water, then apply a slurry coat of Xypex Concentrate at a coverage rate of 1.5 - 2 lb./sq. yd. (0.8 - 1 kg/m<sup>2</sup>) over the repaired area to a 12" (300 mm) diameter area around the filled void.
- D. Surface Application: After repairs, surface preparation, treatment of construction joints and sealing strip placement have been completed in accordance with manufacturer's product data and as specified herein, apply Xypex treatment to concrete surfaces with semi-stiff bristle brush, push broom (for large horizontal surfaces), or suitable spray equipment. The Xypex coating must be uniformly applied and should be just under 1/16" (1.25 mm) thick.
- Application rates and locations shall be as indicated in the drawings and in accordance with manufacturer's product data. When brushing, work slurry well into surface of the concrete, filling surface pores and hairline cracks. When spraying, hold nozzle close enough to ensure that slurry is forced into pores and hairline cracks.
1. First Coat (of one or two coat application): Apply Xypex Concentrate slurry coat to locations indicated on drawings in accordance with manufacturer's product data.
  2. Second Coat (of two coat application): Where indicated on drawings or as required by manufacturer's product data, apply Xypex Modified or Xypex Concentrate slurry coat after the first coat of Xypex Concentrate has reached an initial set but while it is still "green" (less than 48 hours). Curing by misting the coating with water should be done between coats. Ensure first coat is in SSD condition before application of the second coat.  
Note: Prior to the installation, it is recommended that a test section be completed under anticipated ambient and project conditions to demonstrate acceptable bond
- E. Sandwich (Topping) Application: When treated structural slabs are to receive a concrete or other topping, place the topping while waterproofing material is still "green" (less than 48 hours) but after it has reached an initial set. The



preferred time frame is 12 to 24 hours after the installation of Xypex coating. Curing by misting the coating with water should be done between application of coating and installation of concrete overlay. Ensure coating is in SSD condition prior to placement of concrete.

### 3.04 CURING

- A. General: Begin curing as soon as Xypex coating has hardened sufficiently so as not to be damaged by a fine spray. Cure Xypex treatment with a mist fog spray of clean water three times a day for 2 to 3 days. Wet burlap and some specialty curing blankets are also effective for curing during the prescribed period. In warm climates, more than three sprayings per day may be necessary to prevent excessive drying of coating.
- B. Air Circulation: Do not lay plastic sheeting directly on the waterproofing coating as air contact is required for proper curing. If poor air circulation exists in treated areas, it may be necessary to provide fans or blown air to aid in curing of waterproofing treatment.
- C. Holding Structures: For water holding structures such as swimming pools, reservoirs, water treatment tanks and wet wells, cure Xypex treatment for three days and then allow treatment to set for 12 days before filling. For structures holding hot or corrosive liquids, cure waterproofing treatment for three days and allow to set for 18 days before filling.
- D. Protection: During the curing period, protect treated surfaces from damage by wind, sun, rain, puddling of water and temperatures below 36°F (2°C). If plastic sheeting is used for protection, it must be raised off of the waterproofing coating to allow sufficient air circulation.

### 3.05 INTERFACE WITH OTHER MATERIALS

- A. Backfilling: Do not backfill for 36 hours after application. If backfill takes place within seven days after application, then backfill material shall be moist so as not to draw moisture from waterproof coating.
- B. Paint, Epoxy or Similar Coatings: Do not proceed with surface preparation or application of paint or other coatings until waterproofing treatment has cured and set for a minimum of 21 days. Light abrasive blasting or washing the Xypex surface with a 3 - 5% acid solution followed by a rigorous rinse with clean water is recommended before applying the coating. Be sure to flush all acid off the surface. Alternately, removal of the Xypex coating by high pressure washing or abrasive blasting following full curing is acceptable. Consult epoxy and paint manufacturer for additional coating instructions and restrictions.
- C. Grout, Cement Parge Coat, Plaster or Stucco: It is recommended that any other cementitious system be applied over the Xypex coating after the Xypex has completely set but while it is still "green" (12 to 48 hours). The 12-to-24-hour window is considered ideal. Contact your Xypex Technical Services Representative regarding surface preparation and other procedures for installations of other materials onto Xypex coatings older than 48 hours. Alternately, removal of the Xypex coating by high pressure washing or abrasive blasting following the full 21 day curing is acceptable. Use of a polymer additive to help improve bond in the over coating mortar mix should be considered.
- D. Responsibility to Ensure Compatibility: Xypex Chemical Corporation makes no representations or warranties regarding compatibility of Xypex treatment with coatings, plasters, stuccos, tiles or other surface-applied materials. It shall be the responsibility of the installer of the surface-applied material that is to be applied over the Xypex waterproofing treatment, to take whatever measures are necessary, including testing, to ensure acceptance by or adhesion to the waterproofing treatment.

Note: Prior to the installation, it is recommended that a test section be completed under anticipated ambient and project conditions to demonstrate acceptable bond.

### 3.06 FIELD QUALITY CONTROL



- A. Observation: Do not conceal installed waterproofing system before it has been observed by Architect/Engineer, waterproofing manufacturer's representative, and other designated entities.
  - B. Testing for Tanks and Foundation Works
    - 1. Testing: Fill tanks or, for foundation works, shut off dewatering system as soon as practical so that the structure shall be exposed to its normal service conditions. Examine for leaks. For structures that will be dry until a specific event (e.g., interior located containment basin) the concrete elements should be fully saturated several times over a period of several weeks to encourage crystal development to occur.
    - 2. Monitoring:
      - a. Actively leaking cracks and joints shall be left to self-heal for as long as practical. Depending on job site and ambient conditions crack healing can be expected to take several days to weeks.
      - b. Any crack or joints that do not heal in the allowable time frame shall be repaired by the general contractor.
      - c. Moving cracks shall be repaired using polyurethane injection or other appropriate method.
    - 3. Repair: Use Xypex repair procedures to seal any static crack or joint that does not self-heal. See Method Statements ([www.xypex.com/technical/statements](http://www.xypex.com/technical/statements)) or contact Xypex Technical Services Representative for appropriate repair procedures.
- Note: Lower temperatures will extend the times for crystalline development.

### 3.07 CLEANING AND PROTECTION

- A. Cleaning: Clean spillage and soiling from adjacent surfaces using appropriate cleaning agents and procedures.
- B. Protection: Take measures to protect completed Xypex coating until the coating is hard enough to not be damaged. In normal conditions protect from pedestrian traffic for 3 days and vehicular traffic for 7 days. If coatings will be exposed to ongoing vehicular traffic or other abrasive environments consult Xypex Technical Services.

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**END OF SECTION 07 16 16**

## SECTION 07 19 23 – WATER REPELLENTS

## PART 1 - GENERAL

## 1.01 SECTION INCLUDES

- A This section covers the preparation, materials, services, and equipment required in conjunction with the application of a clear water repellent on all above grade, vertical, exterior exposed surfaces of masonry, concrete, brick, or stucco.

## 1.02 RELATED SECTIONS

- A. Section 03 01 30.91 - Concrete Restoration & Cleaning.
- B. Section 03 30 00 - Cast In Place Concrete.
- C. Section 03 40 00 - Precast Concrete.
- D. Section 04 01 20.91 - Masonry Restoration & Cleaning.
- E. Section 04 20 00 – Unit Masonry.
- F. Section 04 40 00 – Stone Assemblies.
- G. Section 07 18 00 - Traffic Coatings.
- H. Section 09 63 00 - Masonry Flooring.
- I. Section 09 91 00 - Painting.
- J. Section 09 93 0 – Stains and Transparent Finishing.
- K. Section 09 96 00 - High Performance Coatings.
- L. Section 09 97 23 –Concrete and Masonry Coatings.

## 1.03 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 - Submittals.
- B. Product Specification Data: Submit manufacturer's technical literature, specifications, and application instructions for the specified clear water repellent material.
- C. Samples: Obtain liquid samples of the specified clear water repellent for sample application. Sample application is covered in section

## 1.04 QUALITY ASSURANCE

- A. Manufacturer: A firm with no less than ten (10) years experience in manufacturing the products specified in this section.
- B. Applicator Qualification: A firm with no less than three (3) years experience in the application of the products specified in this section. In addition, applicator must state the intended use of the proper application equipment and that it has been well maintained.
- C. Mock-Up:

1. Apply water repellent per manufacturer's application instructions as directed by the Architect to substrate material that matches actual job conditions. Determine the acceptability of appearance and optimum coverage rate required for application.
  2. After sample treatment has cured in accordance with manufacturers recommendations, water test to verify that substrate is coated with sufficient water repellent to effectively repel liquid water from the surface.
  3. Obtain Architect and/or Project Owner approval prior to full scale application of water repellents.
- D. Pre-Application Meeting: Convene a pre-application meeting prior to the start of application of the specified material. Attendance by a representative of each of the following organizations is requested, the application firm, the architectural firm, and the water repellent manufacturer. Notify each of the attendees at least three (3) days prior to the meeting time.

#### 1.05 PRODUCT DELIVERY

- A. Material Delivery: Deliver materials to the job site in original sealed containers, clearly marked with manufacturer's name, brand name, and type of material. Verify the product matches that of the original sample applied on the mock-up wall.
- B. Record Keeping: Contractor / applicator shall record product batch number or lot number for warranty purposes.
- C. Storage & Protection: Store materials inside, if possible, away from sparks and open flame. Store in a secure area to avoid tampering and contamination. Water based materials must be kept from freezing. Store and handle in accordance with manufactures written instructions.

#### 1.06 PROJECT CONDITIONS

- A. Surface Preparation: Surface must be free of cracks, dirt, oils, paint or other contaminants which may affect the appearance or performance of the water repellent material.
- B. Environmental Requirements:
1. Air and substrate temperature must be above 45° F (7° C) or below 95° F (35° C) unless otherwise specified by manufacturer.
  2. Do not proceed with application if the substrate is wet or contains frozen water.
  3. Do not apply material when rain is predicted within 48 hours; or earlier than five (5) days after the substrate became wet.
  4. Do not apply materials in high or gusty winds.
- C. Protection:
1. Special precautions should be taken to avoid vapor transmission (fumes) from entering the building being treated. Ventilation systems and fresh air intakes should be turned off and closed.
  2. Protect shrubs, metal, wood trim, glass, asphalt, and other building hardware during application from over-spray.
  3. Do not permit spray mist or liquid to drift onto surrounding properties.

#### 1.07 SCHEDULING

- A. Architect shall be notified not less than 48 hours before each application of water repellent is scheduled.

#### 1.09 PERFORMANCE REQUIREMENTS

- A. Provide water repellents with the following properties based on testing manufacturer's standard products, according to test methods indicated, applied to substrates simulating Project conditions using same materials and application methods to be used for Project.
1. Water-Vapor Transmission: Maximum 8 percent reduction in rate of vapor transmission in comparison of treated and untreated specimens, per ASTM E-96.
  2. Water Penetration and Leakage through masonry: Minimum 90 percent reduction in leakage rate in comparison of treated and untreated specimens, per ASTM E-514.

3. Durability Maximum 5 percent loss of water repellency after 2500 hours of weathering in comparison to specimens before weathering, per ASTM G-53.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURER

- A. Chemprobe Coating Systems, L.P.  
Masonry Division of Tnemec Company, Inc.  
2805 Industrial Lane  
Garland, TX 75041  
PH: 800/760-6776  
PH: 972.271.5551  
FX: 972.271.5553
- B. Or approved equal.

### 2.02 WATER REPELLENT

- A. GENERAL: All products shall be carried in solvent and contain siloxane and hydrophobic fumed silica (defused quartz carbide). No fillers, sterates, or paraffins. Products shall be a minimum of seven (7) percent solids.
  1. PRIME A PELL 200: Solvent based 7% solids siloxane coupled with diffused quartz carbide.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Verify the following:
  1. The required joint sealants have been installed.
  2. New masonry and mortar have cured a minimum of twenty-eight (28) days.
  3. Surface to be treated is clean, dry and contains no frozen water.
  4. Environmental conditions are appropriate for application.

### 3.02 PREPARATION

- A. Protection:
  1. Special precautions should be taken to avoid vapor transmission (fumes) from entering the building being treated. Ventilation systems and fresh air intakes should be turned off and closed.
  2. Protect shrubs, metal, wood trim, glass, asphalt, and other building hardware during application from over-spray.
  3. Do not permit spray mist or liquid to drift onto surrounding properties or parking lots.
- B. Other:
  1. Verify lawn sprinklers are turned off, where applicable, so as to avoid water contact prior to cure times required by the manufacturer.

### 3.03 APPLICATION

- A. Apply specified water repellent at a rate in accordance with manufacturer's written application instructions.
- B. Material must be applied using solvent resistant, low-pressure application equipment designed for water repellent application.
- C. Apply material as shipped by the manufacturer. Do not dilute or thin.
- D. Apply a saturating application of the product working from the bottom up. On porous substrates such as concrete masonry units, allow a slight rundown (less than three inches). On high density materials such as pre-cast concrete

panels or GFRC, do not allow any run-down. On all substrates allow the product to penetrate the substrate for approximately 5 - 7 minutes, then apply again in the same manner. This second pass will require less material.

#### 3.04 FIELD QUALITY CONTROL

- A. The architect shall be contacted 48 hours prior to application so as to provide supervision as required. The architect or the architect's representative shall inspect the progress as the work proceeds. Do not apply any water repellent that is not specified by the architect.
- B. After water repellent has cured for six (6) days at low humidity and temperature between 70°-90° F or eight (8) days at high humidity and low temperature between 50°-69° F, all surfaces shall be tested with a light water spray. Recoat any area that indicates water absorption after the water test has completely dried.

#### 3.05 CLEANING

- A. Remove protective coverings from adjacent surfaces and other protected areas.
- B. Immediately clean water repellent coating from adjoining surfaces and surfaces soiled by water-repellent application as work progresses.
- C. At completion, remove from the job site, all excess material, debris, and waste resulting from this work. Dispose of water repellent containers according to state and local environmental regulations.

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**END OF SECTION 07 19 23**

## SECTION 07 25 00 - WEATHER BARRIERS

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section Includes:
  - 1. Commercial weather barrier assemblies.
  - 2. Flexible flashing.
  - 3. Weather barrier flashing.
  - 4. Fluid-applied flashing.
  - 5. Weather barrier accessories.
  - 6. Drainage material.
- B. Related Requirements:
  - 1. Section 072100 "Thermal (Blanket) Insulation" for installation of exterior insulation.

## 1.3 DEFINITIONS

- A. Weather Barrier: A combination of materials and accessories that do the following:
  - 1. Prevent the accumulation of water as a water-resistive barrier.
  - 2. Minimize the air leakage into or out of the building envelope as a continuous air barrier.
  - 3. Provide sufficient water vapor transmission to enable drying as a vapor-permeable membrane.
- B. Water-Resistive Barrier: A combination of materials and accessories that prevent the accumulation of water within the wall assembly per International Building Code Section 1403.2.
- C. Continuous Air Barrier: The combination of interconnected materials, assemblies, and sealed joints and components of the building envelope that minimize air leakage into or out of the building envelope per ASHRAE 90.1 section 5.4.3.1.
- D. Vapor Diffusion: A slow movement of individual water vapor molecules from regions of higher to lower water vapor concentration (higher to lower vapor pressure).
- E. Vapor Permeable Membrane: The property of having a water-vapor permeance rating of 10 perms (575 ng/Pa x s x sq. m) or greater, when tested in accordance with the desiccant method using Procedure A of ASTM E96 per definition in International Building Code. Vapor permeable material permits the passage of moisture vapor through vapor diffusion.

## 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. For weather barrier, include data on air and water-vapor permeance based on testing in accordance with referenced standards.
- B. Sustainable Design Submittals:
  - 1. Test Reports: Envelope testing and verification of the following:
    - a. Water-Spray Test.
    - b. Air Infiltration Test.
    - c. Water Penetration Test.
  - 2. Product Data: Including the following information:
    - a. Provide Environmental Product Declarations (EPDs)
    - b. Provide SDS (formerly MSDS), third-party certifications, or product technical data confirming that systems meet or exceed emissions guidelines for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs), as follows:

- 1) Commercial weather barrier complies with California Department of Public Health (CDPH) Standard.
- 2) Adhesives and sealants wet-applied on-site are to meet/exceed VOC content requirements for wet-applied products and comply with SCAQMD Rule 1168.
- 3) Flashing systems comply with SCAQMD Rule 1168 on VOC limits.

C. Shop Drawings: Show details of weather barrier at terminations, openings, and penetrations. Show details of flexible flashing applications.

D. Preconstruction Laboratory Mockup Testing Submittals:

1. Owner will engage in a third-party testing program: Develop[ed] specifically for Project.
2. Test Reports: Prepared by a qualified preconstruction testing agency for each mockup test.
3. Record Drawings: As-built drawings of preconstruction laboratory mockups showing changes made during preconstruction laboratory mockup testing.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For weather barrier, from ICC-ES.
- B. Manufacturer's Instructions: For installation of each product specified.
- C. Qualification Data: For Installer field testing agency.
- D. Sample Warranty: For manufacturer's warranty.
- E. Reports: Field test and inspection reports.
- F. Installer's weather barrier manufacturer-training certificate.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is certified by weather barrier system manufacturer to install manufacturer's product.
- B. Laboratory Mockup Testing Agency Qualifications: Qualified in accordance with ASTM E699 for testing indicated and accredited by IAS or ILAC Mutual Recognition Arrangement in compliance with ISO/IEC 17025.
- C. Manufacturer's Field Service: Register Project with weather barrier manufacturer prior to installation of weather barrier and comply with weather barrier manufacturer's Project registration and observation process.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not store near heat source or open flame.

#### 1.8 WARRANTY

- A. Manufacturer's Product Warranty: To repair or replace weather barrier product that fails in materials within specified warranty period.
  1. Warranty Period: 10 years from date of purchase.
- B. Manufacturer's Product and Labor Warranty: Manufacturer agrees to repair or replace weather barrier that fails in materials within specified warranty period, including removal and replacement of affected construction up to manufacturer's limits.
  1. Warranty Period: 10 years from date of purchase.

## PART 2 - PRODUCTS

## 2.1 MANUFACTURERS

- A. Source Limitations: Obtain weather barrier assembly components, including weather barrier flashing and foam insulation from same manufacturer as weather barrier.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed weather barrier and accessories shall withstand specified wind pressures, liquid water penetration, and water vapor pressures without failure due to defective manufacture of products.
- B. High-Performance Installations:
  - 1. For installation with one of the following building envelope performance or structural characteristics:
    - a. Exceeding 65 mph (100 km/h) equivalent structural load.
    - b. Exceeding 15 mph (24 km/h) equivalent wind-driven rainwater infiltration.
    - c. Buildings with 60 ft. (18 m) or more total height above grade plane, as defined in the International Building Code.
    - d. Construction with gypsum or cement-based exterior sheathing.
    - e. Non-wood based primary structure such as steel, light gage steel, masonry, or concrete.

## 2.3 WEATHER BARRIER

- A. Commercial Building Wrap: ASTM E2357 passed, ABAA (Air Barrier Association of America) evaluated air barrier assembly, and assembly water resistance per ASTM E331; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested in accordance with ASTM E84; UV stabilized for nine-month exposure; and acceptable to authorities having jurisdiction.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide DuPont de Nemours, Inc.; **Tyvek CommercialWrap D** or comparable product by one of the following:
    - a. Or approved equal.
  - 2. System Description, Single-Layer Weather Barrier: Single-layer weather barrier, including flashing and sealing of penetrations and seams.
  - 3. System Description, Single-Layer Drainable: Single-layer weather barrier with integral drainage, including flashing and sealing of penetrations and seams.
  - 4. System Description, Double-Layer Drainable: Double-layer weather barrier, including flashing and sealing of penetrations and seams, arranged as follows:
    - a. Primary Layer: Commercial building wrap with integral drainage installed closest to building interior.
  - 5. Drainability: 98 percent or greater when tested in accordance with ASTM E2273.
  - 6. Air Permeance, Product: Not more than 0.004 cfm/sq. ft. at 1.57 lbf/sq. ft. (0.02 L/s x sq. m at 75 Pa) when tested in accordance with ASTM E2178.
  - 7. Air Permeance, Assembly: Not more than 0.04 cfm/sq. ft. at 1.57 lbf/sq. ft. (0.2 L/s x sq. m at 75 PA) when tested in accordance with ASTM E 2357 and evaluated by ABAA.
  - 8. Water Penetration Resistance, Product: Hydrostatic head resistance greater than 7.7 ft. (2.35 m) in accordance with AATTC 127.
  - 9. Water Penetration Resistance, Assembly: Assembly wall specimen described in ASTM E2357 to water resistance in accordance with ASTM E331 to 6.24 lbf/sq. ft. (300 Pa).
  - 10. Water-Vapor Permeance: Not less than 23 perms (1300 ng/Pa x s x sq. m) per ASTM E96/E96M, Desiccant Method (Procedure A) or not less than 28 perms (1600 ng/Pa x s x sq. m) per ASTM E96/E96M, Water Method (Procedure B).
  - 11. Water-Vapor Permeance: Not less than 30 perms (1700 ng/Pa x s x sq. m) per ASTM E96/E96M, Desiccant Method (Procedure A) or not less than 46 perms (2600 ng/Pa x s x sq. m) per ASTM E96/E96M, Water Method (Procedure B).
  - 12. Allowable UV Exposure Time: Not less than nine months when tested in accordance with ASTM G155 (Accelerated Weathering).
  - 13. Flame Propagation Test: Materials and construction shall be as tested in accordance with NFPA 285.
  - 14. Heat and Visible Smoke Release Rates: Maximum rates in accordance with NFPA 285.
    - a. Peak Heat Release: 13,217 Btu/sq. ft. (150 kW/sq. m).
    - b. Total Heat Release: 1762 Btu/sq. ft. (20 MJ/sq. m)
    - c. Effective Heat of Combustion: 7744 Btu/lb (18 MJ/kg)
  - 15. Weather barrier system to have a VOC content of 30 g/L or less.



## 2.4 WEATHER BARRIER ACCESSORIES

- A. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by weather barrier manufacturer for sealing joints and penetrations in commercial building wrap.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide DuPont de Nemours, Inc.; Tyvek Tape or comparable product.
- B. Closed-Cell Polyurethane Foam Insulation: Low-pressure, low-expansion, single-component polyurethane foam, with maximum flame-spread and smoke-developed indexes of 15 and 25, respectively, per ASTM E84.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide DuPont de Nemours, Inc.; GS Pro or comparable product.
- C. Fasteners with Self-Gasketing Washers: Commercial building wrap manufacturer's recommended pneumatically or hand-applied fasteners with **1-inch- (25-mm-)** diameter, high-density polyethylene cap washers with UV inhibitors.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide DuPont de Nemours, Inc.; Tyvek Wrap Caps or comparable product.
- D. Primer for Flashings: Synthetic rubber-based product; spray applied. Strengthen adhesive bond at low temperature applications between weather products such as self-adhered flashing products, commercial building wraps, and common building sheathing materials.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide DuPont de Nemours, Inc.; DuPont Adhesive Primer or comparable product.
  - 2. Peel Adhesion Test: Passes in accordance with ASTM D3330, Test Method F, for the following.
    - a. Peel Angles: 0, 25, 72, and 180 degrees.
    - b. Substrates: Concrete masonry units (CMUs), exterior gypsum sheathing, oriented strand board (OSB), aluminum, and vinyl.
  - 3. Chemical Compatibility: Pass; AAMA 713.
  - 4. Flame Spread Index: 5; ASTM E84.
  - 5. Smoke Development Index: 0; ASTM E84.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements.
- B. Verify that substrate and surface conditions are in accordance with commercial weather barrier manufacturer recommendations prior to installation.
  - 1. Verify that rough sill framing for doors and windows is sloped downwards towards the exterior and is level across width of the opening.
- C. Verify that surfaces to receive weather barrier flashing are clean, dry, and free of frost.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Direct water onto an acceptable weather barrier drainage plane with an unobstructed path to exterior of wall.
  - 1. Provide a drainage path for water intrusion through window and door attachment system that collects at window and door sills and directs water to the exterior or weather barrier.

### 3.3 COMMERCIAL BUILDING WRAP INSTALLATION

- A. General: Comply with weather barrier manufacturer's written installation guidelines and warranty requirements.
- B. Cover exposed exterior surface of sheathing with weather barrier securely fastened to framing immediately after sheathing is installed.
  - 1. Maintain continuity of air and water barrier assemblies.

2. Start weather barrier installation at a building corner, leaving **12 inches (300 mm)** of weather barrier extended beyond corner to overlap.
  3. Install weather barrier horizontally starting at lower portion of wall surface.
  4. Provide minimum **6 inches (150 mm)** overlap at horizontal- and vertical-wrap seams in a shingle manner to maintain continuous downward drainage plane and air and water barrier.
- C. Seams: Seal seams with building wrap tape per manufacturer's recommended installation instructions.
1. Shiplap horizontal seams in weather barrier to facilitate proper drainage.
- D. Fasteners: Use weather barrier manufacturer's recommended fasteners to secure weather barrier and install fasteners according to weather barrier manufacturer's installation guidelines.
1. Do not use temporary fasteners to permanently attach weather barrier.
  2. Do not place fasteners with gasketing washers where weather barrier flashing will be installed.
  3. Install fasteners with gasketing washers through flashing where recommended by manufacturer.
- E. Openings: Completely cover openings with weather barrier, then cut weather barrier membrane to openings in accordance with weather barrier manufacturer's installation guidelines.
1. Provide head and jamb flaps and seam overlaps to maintain continuous drainage.
  2. Repair damage to weather barrier using method recommended by weather barrier manufacturer.
  3. Install flashing in accordance with weather barrier manufacturer's installation guidelines.

### 3.4 DRAINAGE MATERIAL INSTALLATION

- A. Install drainage material with grooves or channels running vertically in compliance with manufacturer's written instructions.

### 3.5 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to train installers and observe subject test-wall areas and installations.
- B. Testing Agency: Owner will engage a qualified third-party testing agency to perform tests and inspections.
- C. Test Area: Perform tests on one bay at least **30 ft. (9.15 m)**, by one story.
- D. Field Quality Control Testing: Perform the following test on representative areas of structural-sealant-glazed curtain walls:
1. Air Infiltration Whole Building: ASTM E779 at not more than **0.40 cfm/sf (2.00 L/s per sq. m)**.
  2. Water Penetration: ASTM E1105 at a minimum uniform static-air-pressure differential of 0.67 times the static-air-pressure differential specified for laboratory testing in "Performance Requirements" Article, but not less than **6.24 lbf/sq. ft. (300 Pa)**. No water penetration shall occur as defined in ASTM E1105.
    - a. Perform a minimum of two tests in areas as directed by Architect.
    - b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to 10, 30, and 70 percent completion.
- E. Prepare test and inspection reports.

### 3.6 CLEANING

- A. Immediately remove release paper and scrap from work area and dispose of material in accordance with requirements of Section 017300 "Execution" and Section 017419 "Construction Waste Management and Disposal."

### 3.7 PROTECTION

- A. Protect installed weather barrier from the following:
1. Damage from cladding, structure, or a component of the structure (for example, window, door, or wall system).
  2. Contamination from building site chemicals, premature deterioration of building materials, or nonstandard use or application of products.
  3. Foreign objects or agents, including the use of materials incompatible with weather barrier products.

4. UV exposure in excess of products' stated limits.

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***END OF SECTION 07 25 00***

## SECTION 07 41 13.13 – STANDING SEAM METAL ROOF PANELS

## PART 1 - GENERAL

## 1.01 DESCRIPTION:

- A. Work described in this section includes preformed metal roofing system complete with insulation, temporary moisture protection, clips, perimeter and penetration flashing, and closures.

## 1.02 RELATED SECTIONS

- A. Section 06 10 00 - Rough Carpentry
- B. Section 07 22 00 - Roof and Deck Insulation
- C. Section 07 52 00 - Modified Bitumen Roof Membrane
- D. Section 07 01 50.19 - Preparation for Re-Roofing
- E. Section 07 60 00 - Flashing and Sheet Metal

## 1.03 SUBMITTALS:

- A. Submit under provisions of Section 01 33 00.
- B. Shop drawings: Show roofing system with flashings and accessories in plan and elevation; sections and details. Include metal thicknesses and finishes, panel lengths, joining details, anchorage details, flashings and special fabrication provisions for termination and penetrations; purlin and girt locations, thermal expansion provisions and special supports. Indicate relationships with adjacent and interfacing work. Shop drawings must be completed by the metal panel manufacturer's engineering department. Any and/or all changes recommended by the successful bidder must be approved by the manufacturer in writing prior to submittal.
- C. Product Data: Include manufacturer's detailed material and system description, sealant and closure installation instructions, engineering performance data and finish specifications.
- D. Design test reports:
  - 1. Indicate fastener types and spacings; and provide fastener pullout values.
  - 2. Submit copy of manufacturer's minimum design load calculations according to ASCE 7-16.
  - 3. Submit copy of certification from manufacturer stating that specified system has been tested in accordance with ASTM-1592 requirements by an independent Engineering Firm. All test results must be submitted including Air (ASTM E 283 & E1680) and Water (ASTM E 331 & E 1646) Infiltration Tests. These test results must meet or exceed those listed in Section 1.8 (Design and Performance Criteria) and be stamped by an independent Engineering Firm.

## 1.04 INSTALLER QUALIFICATIONS:

- A. Engage an experienced metal roofing contractor (erector) to install standing seam system who has a minimum of five (5) years' experience specializing in the installation of structural standing seam metal roof systems.
- B. Contractor must be certified by manufacturer specified as supplier of structural standing seam system and obtain written certification from manufacturer that installer is approved for installation of specified system. If requested, contractor must supply owner with a copy of this certification.
- C. Successful contractor is required to maintain a full-time supervisor/foreman who is on the jobsite at all times during installation of new roof system. Foreman must have a minimum of five (5) years' experience with the installation of system similar to that specified.
- D. Successful contractor must obtain all components of roof system from a single manufacturer including any roll good

materials if required. Any secondary products that are required which cannot be supplied by the specified manufacturer must be recommended and approved in writing by primary manufacturer prior to bidding.

- E. If required, fabricator/installer shall submit work experience and evidence of adequate financial responsibility. The owner's representative reserves the right to inspect fabrication facilities in determining qualifications.

#### 1.05 MANUFACTURERS QUALIFICATIONS / ALTERNATE MANUFACTURERS:

- A. The materials outlined in the Material and Method Specifications are the type of materials that should be used on this project. Bidder will not be allowed to supply panels formed at the jobsite on portable roll formers; metal panels must be pre-manufactured and engineered for this project. Bidder will not be allowed to change materials after the bid opening date. If the bidder wishes to propose an alternate manufacturer and/or material than that specified, the following manufacturer criteria must be submitted with the bid.
  1. Submit certified test reports from a testing laboratory that bear the stamp of a registered P.E. to show compliance with specified performance criteria. Test reports must meet the specified negative uplift pressures as listed per this specification for the gauge, panel width and clip spacing specified as confirmed by manufacturers ASTM-E 1592 test results.
  2. Tests shall have been made for identical systems within the ranges of specified performance criteria.
  3. Empirical calculations for roof performance shall only be acceptable for positive loads.
  4. Indicate fastener types and spacing and provide fastener pullout values.
  5. Submit copy of manufacturer's Factory Mutual certification for specified system.
  6. Submit copy of UL 90 classification in accordance with UL 580 test procedure.
  7. Submit copy of certification from manufacturer stating that specified system has been tested in accordance with ASTM-1592 requirements by an independent Engineering Firm. All test results must be submitted including Air (ASTM E 283 & E1680) and Water (ASTM E 331 & E 1646) Infiltration Tests and meet or exceed those listed in Section 1.8 (Design and Performance Criteria)
  8. A list of a minimum of five (5) jobs where the proposed alternate material was used under similar conditions. The reference list shall include date of project, size of project, address and contact telephone number.
  9. A financial statement demonstrating a current ratio of 2:1 (current assets to current liabilities).
  10. A written statement from the manufacturer stating that they will provide the building owner with a daily site inspections by an experienced, full time employee of the company.
  11. A written statement from a corporate officer of the manufacturing company stating that he or she has reviewed the specifications and confirms that the proposed system meets or exceeds all performance requirements listed as well as meets the panel size, gauge, weight, clip design, sealant design, uplift pressures and height of the vertical seam.
  12. A copy of manufacturer's year warranty.
- B. The following samples must be submitted by alternate manufacturers:
  1. Submit sample of panel section, at least 6" x 6" showing seam profile and also a sample of color selected.
  2. Submit sample of panel clip.
  3. Submit sample of bearing plate.
  4. Submit sample of purlin (Z) and/or bearing plate if required.
  5. Submit sample of base sheet, roll goods and/or mastics if required.

#### 1.06 DELIVERY, STORAGE, AND HANDLING:

- A. Manufacturer's responsibility:
  1. Protect components during fabrication and packing from mechanical abuse, stains, discoloration, and corrosion.
  2. Provide protective interleaving between contact areas of exposed surfaces to prevent abrasion during shipment, storage, and handling.
- B. Installer's responsibility:
  1. Store materials off ground providing for drainage; under cover providing for air circulation; and protected from wind movement, foreign material contamination, mechanical damage, cement, lime or other corrosive substances.
  2. Handle materials to prevent damage to surfaces, edges and ends of roofing sheets and sheet metal items.

- Damaged material shall be rejected and removed from the site.
- 3. Protect panels from wind-related damages.
- 4. Inspect materials upon delivery. Reject and remove physically damaged or marred material from project site.

## 1.07 JOB CONDITIONS:

- A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage requirements for preformed metal roofing system.
- B. Protection:
  - 1. Provide protection or avoid traffic on completed roof surfaces.
  - 2. Do not overload roof with stored materials.
  - 3. Support no roof-mounted equipment directly on roofing system.
- C. Ascertain that work of other trades which penetrates the roof or is to be made watertight by the roof is in place and approved prior to installation of roofing.

## 1.08 QUALITY CRITERIA:

- A. Applicable standards:
  - 1. American Iron and Steel Institute (AISI):
    - a. 1986 Specification for the Design of Cold-Formed Steel Structural Members.
  - 2. American Society for Testing and Materials (ASTM):
    - a. A792-96 Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
    - b. B209-96 Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
    - c. A653-96 Specification for Steel Sheet Zinc-coated (galvanized) or Zinc-Iron Alloy-coated (Galvannealed) by the Hot-Dip process.
    - d. D1056-91 Specification for Flexible Cellular Materials - Sponge or Expanded Rubber.
    - e. D3575-84 Test Methods for Flexible Cellular Materials made from Olefin Polymers.
    - f. E283-93 Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
    - g. E1680-95 Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems.
    - h. E1592-95 Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.
    - i. E331-86 Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
    - j. E1646-95 Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.
  - 3. Sheet Metal and Air Conditioning Contractors National Association (SMACNA):
 1993 Architectural Sheet Metal Manual, 5th edition.
  - 4. Underwriters' Laboratories (UL):
    - a. Standard UL - 580 Tests for Wind-Uplift Resistance of Roof Assemblies.
    - b. Standard UL - 263 Tests for Fire Resistance
    - c. Standard UL - 790 Class A Fire Rating.
  - 5. Factory Mutual Research (FM):
    - a. Standard FM 4471 Tests for Wind-Uplift Resistance of Roof Assemblies.
- B. Applicable erection tolerances: Maximum variation from true planes or lines: 1/4" in 20'-0"; 3/8" in 40'-0" or more.

## 1.09 DESIGN AND PERFORMANCE CRITERIA:

- A. Thermal Movement:
  - 1. Completed metal roofing and flashing system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability.
  - 2. Interface between panel and clip shall provide for unlimited thermal movement in each direction along the longitudinal direction.



Pressure Of 20.0 Psf for 15 minutes

- H. Water penetration (dynamic pressure): No water penetration, other than condensation, when exposed to dynamic rain and 70 mph wind velocities for not less than five minutes duration, when tested in accord with principles of AAMA 501.1.
- I. Capacities for gauge, span or loading other than those tested may be determined by interpolation of test results within the range of test data. Extrapolation for conditions outside test range are not acceptable.

#### 1.10 WARRANTIES:

- A. Owner shall receive ONE (1) WARRANTY from manufacturer of roof panels covering ALL of the following criteria. Multiple warranties are NOT acceptable.
  1. Manufacturer's 15 year "NDL" no Dollar Limit watertight warranty for Metal Roof and Modified Roof System.
  2. 20 year coverage on finish including checking, crazing, peeling, chalking, fading and/or adhesion.
  3. 20 year material coverage.
  4. Warranty shall commence on date of substantial completion.
  5. Installer shall provide manufacturer with 2 year warranty covering roofing system installation and water tightness.

### PART 2 - PRODUCTS

#### 2.01 MATERIALS

- A. The Owner reserves the right to select and utilize products that will perform the best with the related construction materials and will afford the maximum protection for the facility.

#### 2.02 METAL ROOFING SYSTEM

- A. Any proposed systems must meet or exceed the following listed characteristics and be submitted for approval 7 days prior to bid opening. Additionally, all performance requirements listed in "Design Criteria" (Section 1.8) and Warranty Criteria (Section 1.9) must be met and submitted as well as all items listed in the Manufacturer's Qualifications (Section 1.4).
  1. Panel material: 24-gauge Galvalume steel, type AZ-55, grade 50 B, smooth as per ASTM A792-96.
  2. Flashing and flat stock material: Fabricate in profiles indicated on drawings of same material, thickness, and finish as roof system, unless indicated otherwise.
- B. Finish on surfaces:
  1. Exposed surfaces for uncoated Galvalume shall be as shipped from the mill.
  2. Unexposed surfaces for coated Galvalume shall be baked-on polyester coating with .20 - .30 dry film thickness (TDF).
- C. Characteristics:
  1. Configuration: Standing seams incorporating mechanically interlocked, concealed anchor clips allowing unlimited thermal movement, and of configuration which will prevent entrance or passage of water.
    - a. Panel/Cap configuration must have a total of four (4) layers of steel surrounding anchor clip for prevention of water infiltration and increased system strength designed to limit potential for panel blow-off.
    - b. Profile of panel shall have mesa's every ½" o.c. continuous throughout panel which are a minimum of 1.5" wide. These will absorb thermal stresses, reduce oil canning in panel and increase load carrying capacity.
    - c. Exposed fasteners, screws and/or roof mastic is unacceptable and will be rejected. System configuration only allows for exposed fasteners at panel overlap (if required) and trim details (as per manufacturer's guidelines)
    - d. Panels must be furnished in continuous lengths from ridge to eave with no overlaps unless approved by manufacturer to length of run.
  2. Seam must be 2-3/8" minimum height for added upward pressures and aesthetic appeal. Seam shall have



continuous anchor reveals to allow anchor clips to resist positive and negative loading and allow unlimited expansion and contraction of panels due to thermal changes. Integral (not mechanically sealed) seams are not acceptable.

3. Concealed Anchor Clips: Clips must be 16 gauge, 40,000 p.s.i. (G-90 galvanized steel) ONE (1) piece clip with projecting legs for additional panel alignment and provision for unlimited thermal movement in each direction along the longitudinal dimension.
  - a. Two-piece (2) clips are NOT acceptable.
  - b. Clip design must isolate sealant in panel cap from clip to insure that no sealant damage occurs from the clip during expansion and contraction.
  - c. Clip must maintain a clearance of a minimum of 3/8" between panel and substrate for proper ventilation to help prevent condensation on underside of panel and eliminate the contact of panel fastener head to panel.
4. Bearing Plates: Bearing plates must be 16 gauge, pre-punched, 3" X 5" in size as provided by the Manufacturer of the panel.
5. Seam cap: Snap-on cap shall be a minimum of 1" wide "T" shaped of continuous length up to 45 feet according to job condition and field seamed by means of manufacturer's standard seaming machine.
  - a. Cap shall be designed to receive continuous double bead of hot applied, foamed in place gasketing sealant which will not come in contact with the anchor clip to allow unlimited thermal movement of panel without damage to cap sealant.
  - b. Sealant shall be non-fatigue, nitrogen injected water barrier.
6. Standing Seam Panel Width: 16".
7. Stiffening ribs: Located in flat of panel to minimize oil canning and telegraphing of structural members.
8. Panel length: Full length without joints, including bends.
9. Replaceability: Panels shall be of a symmetrical design with snap on cap configuration such that individual panels may be removable for replacement without removing adjacent panels.
10. Panel ends shall be panned at ridge, head-wall, and hip conditions where applicable.

E. Accessories:

1. Gable anchor clips: Standing Seam and Batten Seam styles Galvalume alloy; minimum 16 gauge.
2. Fasteners:
  - a. Concealed fasteners: Corrosion resistant steel screws designed to meet structural loading requirements. The normal minimum screw size shall be #14.
  - b. Exposed fasteners: Corrosion resistant steel screws (cadmium or zinc coatings are not acceptable) stainless steel with neoprene sealing washer, or 3/16" diameter waterproof rivets.
3. Closures: Factory pre-cut closed cell foam meeting ASTM D3575-93 a cross-linked closed cell polyolefin foam, enclosed in metal channel matching panels when used at hip and ridge.
4. Panel joint (endlap) sealant: Non-curing modified isobutylene tri-polymer tape of thickness to fully adhere to both surfaces being joined with indicated service life of 20 years.
5. Provide all miscellaneous accessories for complete installation.

2.03 ACCESSORY PRODUCTS:

A. Sealant:

1. Acceptable product:
  - a. Concealed Application : PT1-707 or Bostik Chem-Calk butyl sealant.
  - b. Exposed Application : General Electric Co., SILGLAZE II 2800.
2. Colors: As selected by architect from sealant manufacturer's standard selection.

2.04 FABRICATION:

- A. Shop fabricate metal roofing and flashing components to the maximum extent possible, forming metal work with clear, sharp, straight, and uniform bends and rises. Hem exposed edges of flashings.
- B. Form flashing components from full single width sheet in minimum 10'-0" sections. Provide mitered corners, joined using closed end pop rivets and joint sealant.
- C. Fabricate roofing and related sheet metal work in accord with approved shop drawings and applicable standards.

## PART 3 - EXECUTION

## 3.01 PREPARATION:

- A. Inspection: Examine the alignment and placement of the building structure and substrate. Correct any objectionable warp, waves or buckles in the substrate before proceeding with installation of the preformed metal roofing. The installed roof panels will follow the contour of the structure and may appear irregular if not corrected.
- B. Establish straight side and crosswise benchmarks.
- C. Use proper size and length fastener for strength requirements. Approximately 5/16" is allowable for maximum fastener head size beneath the panel.
- D. Rectangular Roofs shall be checked for square and straightness. Gable ends may not be straight; set a true line for the gable clips and flashing with string line.
- E. Measure the roof lengthwise to confirm panel lengths, overhangs, coverage of flashings at eaves and ridges and verify clearances for thermal movement.
- F. Pre-roofing conference: Prior to beginning metal roofing work, a pre-roofing conference shall be held to review work to be accomplished.
  - 1. Contractor, metal roofing subcontractor, metal roofing system manufacturer's representative and all other subcontractors who have equipment penetrating roof or whose work involves access to roof shall be present.

## 3.02 ROOFING AND FLASHING INSTALLATION:

- A. All details will be shown on manufacturer's shop drawings to successful bidder; install roofing and flashings in accordance with approved shop drawings and manufacturer's product data, within specified erection tolerances.
- B. Directly over the Fire Tite Ice & Water Shield, install the 16-gauge one piece panel clips (3 hole punched) into the deck based on the following spacing pattern.
  - 1. Clip spacing must be 2 ft. for Zone 1 (field)  
Clip spacing must be 2 for Zone 2 (eave, ridge etc.)  
Clip spacing must be 1.5 for Zone 3 (corners)
  - \* Clip spacing for Zones 2 & 3 must extend 8.0 ft. onto roof area.
  - \* This clip spacing must be followed to ensure integrity of the completed installation. These have been determined based on the uplift calculations for the specified roof and the test results of ASTM-E-1592.
- C. Installation of Roof Panels: Roof panels can be installed by starting from either end and working towards the opposite end. Due to the symmetrical design of the specified panel system, it is also acceptable to start from the middle of the roof and work toward each end.
  - 1. A stainless-steel pop rivet shall be secured through the anchor reveal of the panel leg and extend into the arms of the panel clip located at the ridge of the system. This is done at each arm of the clip along the ridge. The panel is then anchored at both sides of the clip.
    - a. Be sure to capture all drilling debris during this operation with a rag or cloth placed on the panels at the drilling operation.
  - 2. The seam caps are shipped with two rolls of factory applied hot melt sealant located inside the caps. To install the caps, hook one side of the cap over the panel edge and rotate over the opposite panel leg. For ease of installation, start at one end of the panel and work toward the opposite end.
  - 3. A hand crimping tool is used to crimp the cap around the top of two adjacent panels
  - 4. Caps shall then be permanently seamed with manufacturers mechanical seamer.
- D. Isolate dissimilar metals and masonry or concrete from metals with bituminous coating. Use gasketed fasteners where required to prevent corrosive action between fastener, substrate, and panels.

- E. Limit exposed fasteners to extent indicated on shop drawings.
- F. Anchorage shall allow for temperature expansion/contraction movement without stress or elongation of panels, clips, or anchors. Attach clips to structural substrate using fasteners of size and spacing as determined by manufacturer's design analysis to resist specified uplift and thermal movement forces.
- G. Seal laps and joints in accordance with roofing system manufacturer's product data.
- H. Coordinate flashing and sheet metal work to provide weathertight conditions at roof terminations. Fabricate and install in accordance with standards of SMACNA Manual.
- I. Provide for temperature expansion/contraction movement of panels at roof penetrations and roof mounted equipment in accordance with system manufacturer's product data and design calculations.
- J. Installed system shall be true to line and plane and free of dents, and physical defects with a minimum of oil canning.
- K. Form joints in linear sheet metal to allow for 1/4" minimum expansion at 20'-0" o.c. maximum and 8'-0" from corners.
- L. At joints in linear sheet metal items, set sheet metal items in two 1/4" beads of butyl sealant. Extend sealant over all metal surfaces. Mate components for positive seal. Allow no sealant to migrate onto exposed surfaces.
- M. Remove damaged work and replace with new, undamaged components.
- N. Touch up exposed fasteners using paint furnished by roofing panel manufacturer and matching exposed panel surface finish.
- O. Clean exposed surfaces of roofing and accessories after completion of installation. Leave in clean condition at date of substantial completion. Touch up minor abrasions and scratches in finish.

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**END OF SECTION 07 41 13.13**

## SECTION 07 42 13.13 –METAL WALL PANELS

## PART 1 - GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

## 1.02 SUMMARY

- A. This Section includes
  1. Factory-formed: concealed-fastener, metal wall panels.
  2. Finish must conform to the "Metal Construction Association Certified Premium Painted™" designation

## 1.03 RELATED SECTIONS

- A. Division 5 Section "Cold Formed Metal Framing"
- B. Division 6 Section "Rough Carpentry"
- C. Division 7 Section "Sheet Metal Flashing and Trim"
- D. Division 7 Section "Metal Soffit Panels"
- E. Division 7 Section "Gutters"
- F. Division 7 Section "Downspouts"
- G. Division 7 Section "Manufactured Copings"
- H. Division 5 Section "Column Covers"

## 1.04 PERFORMANCE REQUIREMENTS

- A. General: Provide metal wall panel assemblies that comply with performance requirements specified as determined by testing manufacturers' standard assemblies similar to those indicated for this Project, by a qualified testing and inspecting agency.
- B. System shall meet performance criteria as installed. Either test data or signed and sealed engineering calculations shall document the performance of the panel system to meet design loads required.
- C. Wind Loading: Design and size components to withstand dead and live loads caused by wind pressures and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
  1. Wall panels shall meet a minimum of 140 mph rating.
  2. Impact resistance shall be in compliance with IBC 2021, ASCE 7-16, Risk Category III.
- D. Maximum Deflection under Design Loads:
  1. 1/180 of span

## 1.05 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Product Data: Manufacturer's current product specifications and installation instructions.

- C. Shop Drawings: Include small-scale elevations, as required. Show details of trim and flashing conditions, fastening and anchorage methods, weatherproofing techniques, terminations, and penetrations.
- D. Samples:
  - 1. Selection Samples: Submit actual metal chips with full range of colors available for Architect's selection.
  - 2. Verification Samples: Submit two samples of each type of metal panel required, not less than 12 inches (305mm), and illustrating finished panel profile.
- D. Product Test Reports: Submit copies of test reports or load tables verifying performance capability of panel system:
  - 1. Metal Wall Panels: Include reports for Field Tested, ASTM E 84 Flame Spread Rating, Paint Performance Tests.
  - 2. Fastener test and pull-out calculations
  - 3. Load tables
  - 4. Maintenance Data
- E. Manufacturer's Certificates:
  - 1. Certify products meet or exceed specified requirements.
  - 2. Must be stamped by an independent Engineering firm.

#### 1.06 QUALITY ASSURANCE

- A. Installer: Company specializing in the type of work required for this project, with not less than 2 years of documented experience.
- B. Pre-Installation meeting: Convene meeting not less than one week prior to beginning installation between general contractor, installing contractor, owner's representative, and manufacturer.

#### 1.07 DELIVERY, STORAGE & HANDLING

- A. Do not deliver materials of this section to project site until suitable facilities for storage and protection are available.
- B. Protect materials from damage during transit and at project site. Store under cover but sloped to provide positive drainage. Do not expose materials with strippable protective film to direct sunlight or extreme heat.
- C. Do not allow storage of other materials or allow staging of other work on installed metal panel system.
- D. Upon receipt of delivery of metal panel system, and prior to signing the delivery ticket, the installer is to examine each shipment for damage and for completion of the consignment.

#### 1.08 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal roofing that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish Warranty Period: 30 years from date of Substantial Completion.
- B. Special Installer's Warranty: Specified form in which Wall Installer agrees to repair or replace components of custom-fabricated sheet metal wall that fail in materials or workmanship within 5 years from date of Substantial Completion.

### PART 2 – PRODUCTS

#### 2.01 MANUFACTURERS

- A. Manufacturer's Qualifications: All panels are to be factory formed and packaged per job requirements.
  - 1. Manufacturer shall have a minimum of ten (10) years' experience in the factory fabrication of metal wall panels.
  - 2. Manufacturer must be certified to ISO 9001:2008 with design.
- B. Specification is based upon the products of ATAS International, Inc. No other manufacturer of metal wall systems

shall be accepted as an alternate product without prior written approval. These substitution requests must meet specifications and must be submitted a minimum of ten (10) days prior to date of bid.

- C. Coordinate with insulation requirements as noted by Architect.
- D. Secondary framing members as required for load criteria and wind requirements.

## 2.02 CONCEALED-FASTENER, LAP-SEAM METAL WALL PANELS

- A. Concealed-fastener, Lap seam Metal Wall Panels: Provide factory-formed metal wall panels designed to be field assembled by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation
- B. Box-Rib-Profile, Concealed-Fastener Metal Wall Panels: Formed with raised, 1-1/2" box-shaped ribs that are symmetrical with recessed ribs, evenly spaced across panel width, and with rib/recess sides angled at 90 degrees.
  - 1. Basis-of Design Product: ATAS International, Inc.; Metafor™ - MFP120
  - 2. Available Manufacturers:
    - a. ATAS International, Inc.
  - 3. Material: Aluminum - .050 thick
    - a. Texture: Smooth
    - b. Finish: KYNAR 5000® PDVF or HYLAR 5000® Finish
    - c. Color: Custom color to be chosen later
  - 4. Panel Coverage: 12"
  - 5. Panel Height: 5/8"
  - 6. Panel Application Orientation: Horizontal.

## 2.03 FABRICATION

- A. Panels:
  - 1. Panels to be Factory fabricated in a controlled environment.
  - 2. Panels to be tension leveled during roll forming process.
  - 3. Panels to be produced in longest lengths possible, except when modular units are utilized.
- B. Form all components true to shape, accurate in size, square and free from distortion or defects. Cut panels to precise lengths indicated on approved shop drawings or as required by field conditions.
- C. Accessories: Factory fabricates trim and flashing components in standard 12-foot lengths.
  - 1. Form panel lines, breaks, and angles to be sharp and true, with surfaces free from warp and buckle.
  - 2. Fabricate wall panels as required to maintain fabrication tolerances and to withstand design loads.
- D. Fabricate metal wall panels in a manner that eliminates condensation on interior side of panel and with joints between panels designed to form weathertight seals.
- E. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- F. Panels, fabrication, and installation shall meet the requirements of the Metal Construction Association Preformed Metal Wall Guidelines

## PART 3 - EXECUTION

### 3.01 PREPARATION

- A. Field Measurements
  - 1. Field measurements should be taken by the installer for verification of dimensional correctness in relationship to original plans, prior to providing manufacturer with a bill of material.
- B. Delivery, Storage and Handling

1. Do not deliver materials of this section to project site until suitable facilities for storage and protection are available.
  2. Protect materials from damage during transit and at project site. Store under cover, but sloped to provide positive drainage. Do not expose materials with strippable protective film to direct sunlight or extreme heat.
  3. Do not allow storage of other materials or allow staging of other work on installed metal panel system.
  4. Upon receipt of delivery of metal panel system, and prior to signing the delivery ticket, the installer is to examine each shipment or damage and for completion of the consignment.
- C. Sequencing and Scheduling
1. Installer shall coordinate with general contractor as to scheduled delivery time after receipt of field verified bill of material by manufacturer as it relates to actual project scheduling.

### 3.02 METAL WALL PANEL INSTALLATION, GENERAL

- A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts and subgirts, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.
1. Field cutting of metal wall panels by torch is not permitted.
  2. Rigidly fasten metal wall panels and allow for thermal expansion and contraction as required by the panel manufacturer. Pre-drill panels as required.
  3. Install screw fasteners.
  4. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
  5. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated or, if not indicated, as necessary for waterproofing and material compatibility.
  6. Provide weatherproof seals for pipe and conduit penetrating exterior walls.
- B. Fasteners: Use fasteners of size and length as required for compatibility with substrate.
1. Aluminum Wall Panels: Use stainless-steel fasteners or metallic coated fasteners for surfaces exposed to the exterior and aluminum or galvanized steel fasteners for surfaces exposed to the interior.
  2. Concealed fasteners shall have a high-performance coating
  3. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal wall panel manufacturer.
  4. Coat back side of aluminum wall panels with bituminous coating where wall panels will contact wood, ferrous metal, or cementitious construction.
- C. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal wall panel assemblies.
- D. Provide water and air infiltration retarder / barriers as noted within project documents. See Drawings.

### 3.03 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete sheet metal roofing assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
  2. Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual" and NRCA Waterproofing Manual. Provide concealed fasteners where possible and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
  3. Panels, fabrication, and installation shall meet the requirements of the Metal Construction Association Preformed Metal Wall Guidelines.
- B. Coordinate with installation of:
1. Cold Formed Metal Framing, as noted in Section 5

2. Rough Carpentry, as noted in Section 6
3. Sheet Metal Flashing and Trim, as noted in Section 7
4. Metal Soffit Panels, as noted in Section 7
5. Metal Gutters, as noted in Section 7
6. Metal Downspouts, as noted in Section 7
7. Metal Copings, as noted in Section 7
8. Metal Column Covers, as noted in Section 5

#### 3.04 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal wall panels are installed. Maintain in a clean condition during construction.
- B. Protection:
  1. Provide as required completed work of this section will be without damager or deterioration at date of substantial completion.
- C. Touch up minor abrasions with matching paint provided by panel manufacturer. Remove and replace panels that cannot be satisfactorily touched up. See Metal Construction Association Technical Bulletin #95-1051.
- D. Sweep and remove chips, shavings, and dust from roof on a daily basis during installation period. Leave installed work clean, free from grease, finger marks and stains. Remove all protective masking from material immediately after installation of product.
- E. Upon completion of installation, remove scraps and debris from project site.
- F. After metal wall panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.

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**END OF SECTION 07 42 13.13**



## SECTION 07 60 00 – FLASHING AND SHEET METAL

## PART 1- GENERAL

## 1.01 DESCRIPTION

- A. Related Work:
  - 1. Section 07 92 00: Joint Sealants
- B. American Society of Testing and Materials (ASTM):
  - 1. 176-77, Stainless and Heat Resistant Chromium Steel Plate, Sheet and Strip.
  - 2. A 526-71 (R1965), Steel Sheet, Zinc-Coated (Galvanized by the Hot-Dip Process).
  - 3. B 32-76
  - 4. D 412-75 Rubber Properties in Tension
  - 5. D 624-73 Rubber Property - Tear Resistant
  - 6. D 746-73, Brittleness Temperature of Plastics and Elastomers by Impact.
  - 7. D 2240-75, Rubber Property - Durometer Hardness
- C. Federal Specifications (FS):
  - 1. SS-C-00253A, Cement, Bituminous, Plastic.
  - 2. TT-P-645, Primer, Paint Zinc Chromate, Alkyd Type

## 1.02 SUBMITTALS

- A. Submit shop drawings for each shop or field fabricated item showing joints, types and locations of fasteners, and special shapes.
- B. Submit manufacturer's installation and welding instructions for manufactured items.
- C. Submit in accordance with Section 01 33 00 – Submittal Procedures.

## 1.03 GUARANTEE

- A. Unless other guarantee requirements are specified, furnish written guarantee for materials and workmanship for two (2) year period signed by installer and Contractor.

## PART 2- PRODUCTS

## 2.01 SHEET METAL

- A. Galvanized Sheet Steel: ASTM A 526, commercial quality, paint grip type.
  - 1. Where flashing type and gauge is not indicated, use 24 gauge minimum (.0239") galvanized sheet steel.
- B. Stainless Steel: ASTM A 176, Type 302/304 soft temper.
- C. Lead:
  - 1. Antimony 4 to 6% remainder lead.
  - 2. Weight: 3 pounds / square feet

## 2.02 PRE-FINISHED GALVANIZED SHEET METAL

- A. 24 gauge hot-dipped galvanized steel (G90), commercial quality, primed and finished on finish side with fluoropolymer coating.
  - 1. Dry film thickness of coating 1 mil (+0.1 mil).
  - 2. Protect finished side with factory installed strippable film.
  - 3. Apply wash coat of .3 to 4 mil dry film thickness to the reverse side.
  - 4. Color to be selected from manufacturer's standards.
  - 5. Provide a written 20-year non-prorated warranty covering fade, chalking, and coating integrity. Warranty

shall include cost of labor and materials.

- B. Manufacturers / Products:
  - 1. Foremost Manufacturing Co., Livonia, MI, "Kynar 500 Sheet Stock"
  - 2. Petersen Aluminum Corporation, Elk Grove, IL, "PAC-CLAD Steel"
  - 3. Vincent Metals, Building Products Group, Minneapolis, MN, "ColorKlad".

## 2.03 PRE-FINISHED METAL COLUMN COVERS

- A. Exterior column covers in 1/8" aluminum 3003-H14 with a standard one color, two coats Kynar Painted finish.
- B. Interior column covers in .063" aluminum 3003-H14 with standard one color, two coats Kynar painted finish.
- C. Approved Manufacturer / Product:
  - 1. Baker Metal Products Inc./N gauge system 4000 or approved equal.

## 2.04 ACCESSORIES

- A. Solder: 50% tin and 50% lead, ASTM B32
- B. Flux: Rosin, cut muriatic acid, or commercial preparation for materials to be soldered.
- C. Neutralizer: 5% to 10% washing soda solution.
- D. Fasteners:
  - 1. Barbed roof nails, clips, or self-tapping sheet metal screws.
  - 2. Metal compatible with sheet metal or flashing material shall be stainless steel or hot dipped galvanized steel.
- E. Adhesive: As recommended by elastomeric manufacturer for bonding to substrate and for waterproof sealing of flashing seams.

## 2.05 SEALANTS

- A. Type: Acrylic Polymer Sealant
- B. Acceptable Manufacturers / Products:
  - 1. Pecora Corp., Harleysville, PA, "60+ Unicrylic"
  - 2. Tremco, Cleveland, OH, "Mono"
- C. Location: In contact with roofing or waterproof materials.

## PART 3- EXECUTION

### 3.01 INSPECTION

- A. Inspect surfaces for conditions detrimental to work.
- B. Do not proceed with work until unsatisfactory conditions are corrected.

### 3.02 FABRICATION

- A. Form sheet metal on bending brake.
- B. Do shaping, trimming, and hand seaming on bench as far as practicable.
- C. Make angle bends and folds for interlocking metal with full regard for expansion and contraction to avoid buckling or fullness in metal after installation.

- D. Fabricate supplemental parts necessary to complete each item of work.
- E. Form materials with straight lines, sharp angles, and smooth curves.

### 3.03 INSTALLATION

- A. General
  - 1. Comply with SMACNA "Architectural Sheet Metal Manual" recommendations for installation of work.
  - 2. Provide for thermal expansion of exposed sheet metal work exceeding 15 feet running length maximum.
  - 3. For flashing and trim, space expansion joints maximum of 10 ft. located 2 feet from corners and intersections.
  - 4. Conceal fasteners and expansion provisions wherever possible.
  - 5. Fold back edges of concealed side of exposed edge to form hem.
  - 6. Insert metal flashings into reglets, anchor with fasteners and wedges, and seal joints.
  - 7. Set sheet metal items level, true to line, and plumb.
  - 8. Secure to wood with screws or nails and washers.
  - 9. Set metal already partly formed in place and fasten by means of cleats.
  - 10. Where flashing type and gage is not indicated, use 24 ga. minimum galvanized sheet steel.
- B. Pre-finished galvanized sheet metal
  - 1. Exercise care during fabrication and erection to avoid damage to finish coat.
  - 2. Use color matched touch-up paint and rivets where exposed to view or otherwise required.
  - 3. Mechanically remove coating if soldering is necessary.
  - 4. Fabricate and install with strippable film in place. After installation is complete, immediately remove strippable film to avoid damage to paint coating underneath due to ultraviolet light.
- C. Curb Flashing
  - 1. Flash roof curbs with 26 ga. pre-finished metal.
  - 2. Seam and solder joints.
  - 3. Extend flashing down over curb 4" minimum over base flashing.
- D. Roof Counterflashing
  - 1. Overlap base flashing 4" minimum.
  - 2. Install bottom edge tight against base flashing.
  - 3. Lap seam vertical joints 3" minimum and apply sealant.
  - 4. Miter, lap seam, and close corner joints with solder or sealant.
- E. Gutters, Downspouts, and Leaderheads
  - 1. Fabricate with minimum amount of joints. Provide closure pieces at ends.
  - 2. Fabricate downspout in one piece, without seams.
  - 3. Fabricate gutters and downspouts out of 24 ga. pre-finished sheet metal. Gutter and downspout shall be "box-type". Downspout shall be 5" x 7" minimum.
- F. Column Covers
  - 1. Install pre-finished metal column covers as recommended by manufacturer.
  - 2. Provide reveal at top and bottom of column.

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**END OF SECTION 07 60 00**

## SECTION 07 71 23 – GUTTERS AND DOWNSPOUTS

## PART 1 – GENERAL

## 1.1 SECTION INCLUDES

- A. Gutters and Downspouts.
- B. Related Accessories.

## 1.2 RELATED SECTIONS

- A. Section 07 61 13 – Standing Seam Metal Roof.
- B. Section 07 21 00 – Insulation.
- C. Section 07 60 00 – Sheet Metal Flashing and Trim.
- D. Section 07 92 00 – Joint Sealers

## 1.3 REFERENCES

- A. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- B. SMACNA - Architectural Sheet Metal Manual.

## 1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Conform to applicable code for size and method of rainwater discharge.
- B. American Architectural Manufacturers Association (AAMA) Specification 1405.1 "Specification for Aluminum Raincarrying Systems".
- C. FHA Minimum Property Standard 4900.1 for One- and Two-Family Dwellings.
- D. FHA Minimum Property Standard 4910.1 for Multi-Family Dwellings.
- E. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.
  - 1. Product shall meet a minimum of 140 mph rating.
  - 2. Impact Resistance shall be in compliance with IBC 2021, ASCE 7-16, Risk Category III.

## 1.5 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 – Submittal Procedures.
- B. Product Data: Manufacturer's catalog data, detail sheets, and specifications.
- C. Shop Drawings: Prepared specifically for this project; showing dimensions of metal gutters and accessories, fastening details and connections and interface with other products.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- G. Manufacturer's warranties.

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1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications:
- B. Installer Qualifications: Certified and approved installer of the sheet metal roofing manufacturer Englert, Inc.
- C. Perform Work in accordance with SMACNA Manual or CDA Handbook.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store products to prevent twisting, bending, and abrasion, and to provide ventilation. Slope stored materials to drain.
- C. During storage prevent contact with materials capable of causing discoloration, staining, or other damage.

## 1.8 PROJECT CONDITIONS

- A. Coordinate installation with installation of adjacent roofing, siding, and related materials.

## 1.9 WARRANTY

- A. Provide the Manufacturer's Limited 20-Year, pro-rated and non-transferable Warranty covering labor materials.

## 1.10 COORDINATION

- A. Coordinate Work with other operations and installation of floor finish materials to avoid damage to installed underlayment and membrane materials.

## PART 2 PRODUCTS

## 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Englert, Inc., which is located at: 1200 Amboy Ave. ; Perth Amboy, NJ 08861; Toll Free Tel: 800-364-5378; Tel: 732-826-8614; Fax: 732-826-8865; Email: [request info](mailto:request info); Web: [www.englertinc.com](http://www.englertinc.com)
- B. Requests for substitutions will be considered in accordance with provisions of Section 01630.

## 2.2 COMPONENTS

- A. Gutters: Aluminum sheet, ASTM B 209, Alloy 3105-H24. Minimum tensile strength 26,000 psi, minimum yield strength 25,000 psi or equivalent. Continuous and seamless sheet aluminum, roll formed.
  - 1. Thickness:
    - a. 0.027 inch (0.69 mm).
    - b. 0.032 inch (0.81 mm).
- B. Downspouts: Aluminum sheet, ASTM B 209, Alloy 3105-H24. Minimum tensile strength 26,000 psi, minimum yield strength 25,000 psi or equivalent.
  - 1. Thickness:
    - a. 0.019 inch (0.48 mm).
  - 2. Size:
    - a. 6 inches by 6 inches
- C. Endcaps: Aluminum sheet, ASTM B 209, Alloy 3105-H24, thickness 0.027 inch (0.69 mm).
- D. Inside and Outside Mitres: Aluminum sheet, ASTM B 209, Alloy 3105-H24, thickness 0.027 inch (0.69 mm).
- E. Gutter Hangers and Anchors: Aluminum sheet, ASTM B 209, Alloy 3105-H24, thickness 0.063 inch (1.60 mm). Provide types required to suit project requirements.

- F. Downspout Anchors: Aluminum. Provide types required to suit project requirements.
- G. Elbows: Aluminum sheet, ASTM B 209, Alloy 3105-H24. Minimum tensile strength 26,000 psi, minimum yield strength 25,000 psi or equivalent.
  - 1. Thickness:
    - a. 0.019 inch (0.48 mm).
  - 2. Size: To match downspouts.
- H. Gutter Guard:
  - 1. Size:
    - a. Aluminum mesh, 5 inch (127 mm) by 3 foot (914 mm).
    - b. Aluminum mesh, white, 5 inch (127 mm) by 3 foot (914 mm).
    - c. Aluminum mesh, 6 inch (152 mm) by 3 foot (914 mm).
- I. Gutter Screen:
  - 1. Size:
    - a. Aluminum screen, brown, 5 inch (127 mm) by 3 foot (914 mm).
    - b. Aluminum screen, white, 5 inch (127 mm) by 3 foot (914 mm).
- J. Aluminum Finish: CastleClad, two-coat system applied in a continuous baked-on process in a single operation, comprising of an acid-based primer and baked-on high performance linear polyester topcoat on exposed surfaces. Concealed surfaces finished with a polyester gold backer or wash coat.
  - 1. Color: To be Selected by Architect.
- K. Sealant: Provide as specified in Section 07 92 00 – Joint Sealers.
- L. Fasteners: Same material and finish as gutters and downspouts.

### 2.3 FABRICATION

- A. Continuously form seamless gutters to the profiles and sizes specified.
- B. Form downspouts of profiles and sizes specified.
- C. Hem exposed edges of metal.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify governing dimensions at building.
- C. Verify surfaces are ready to receive gutters and downspouts.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Clean and repair if necessary, any adjoining work on which this work is in any way dependent for its proper installation.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

- B. Install gutters using appropriate hangers to allow normal expansion and contraction.
- C. Install gutter hangers using two 1-1/4-inch (32 mm) screw shank nails and fastened into solid lumber.
- D. All gutters shall be in continuous length for each elevation (run). No end laps are allowed.
- E. Exercise care in placing aluminum in contact with other dissimilar metals or materials that are not compatible with aluminum.
- F. Providing adequate insulation/separation wherever necessary, such as by painting or otherwise protecting when they are in contact with aluminum or when drainage from them passes over aluminum surfaces.
- G. Install sealants where indicated to clean dry surfaces only without skips or voids.

#### 3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

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**END OF SECTION 07 71 23**

## SECTION 07 92 00 – JOINT SEALANTS

## PART 1 - GENERAL

## 1.01 WORK INCLUDED

- A. The work of this section includes all exterior sealant work and all interior caulking work which is not specified as the work of a particular section.

## 1.02 RELATED WORK

- A. Flashing sealant is a part of Section 07 60 00, "Flashing and Sheet Metal".

## 1.03 REFERENCE STANDARDS

- A. Requirements for reference standards are defined in Sections 01 42 00.

## 1.04 PRODUCT DATA AND APPROVAL

- A. Before ordering any material, submit for Architect's approval complete manufacturer's specifications of all materials specified in this section, including surface preparation and installation requirements.

## 1.05 QUALITY ASSURANCE

- A. Applicator shall be experienced and trained in the techniques of caulking and sealant applications and shall be thoroughly familiar with recommendations of the manufacturer for the specified caulking and sealants.
  - 1. Selection of the proper sealant and caulking compound for particular joints shall be in accordance with current recommendations published by the manufacturer.

## 1.06 DELIVERY AND STORAGE

- A. Deliver materials to job in original, unopened containers with manufacturer's brand name clearly marked on all containers. Handle and store materials in original packages in accordance with manufacturer's recommendations.

## 1.07 GUARANTEE

- A. Upon completion and acceptance of the project, furnish the Owner through the Architect a written guarantee. Guarantee all items and work included in this section for a period of two (2) years from date of acceptance against defective workmanship and materials.
- B. Defects resulting from faulty materials and/or workmanship during the guarantee period shall be repaired or replaced by the Contractor at his expense.

## PART 2 - PRODUCTS

## 2.01 CAULKING COMPOUND (FOR INTERIOR USE ONLY)

- A. Type: Oil-base, one part component non-hardening, gun grade, paintable.
- B. Acceptable Manufacturers / Products:
  - 1. Dow Corning, Midland, Mich., "790 Silicone Building Sealant, one-component silicone".
  - 2. General Electric Co., Waterford, NY, "Silpruf, one-component silicone".
  - 3. Pecora, "Synthacalk GC-9, one-component polysulfide base".

## 2.02 PREPARATORY MATERIALS

- A. Primer: Non-staining type recommended by sealant manufacturer to suit application.



- B. Joint Cleaner: Non-corrosive type recommended by sealant manufacturer; compatible with joint forming materials.
- C. Backer Rod for Exterior Sealant: Compressible rod stock of polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable non-absorptive material as recommended for compatibility with sealant by sealant manufacturer.
  - 1. Thickness before compression: twice thickness of joint.
  - 2. Manufacturers / Products:
    - a. Sandell Manufacturing Co., Inc., Cambridge, MA, "Poly-Tite Standard".
    - b. Williams Products, Inc., Troy, MI, "Everlastic".
- D. Backer Rod for Expansion Joints: Extruded foamed polyurethane strip saturated with polybutylene material.
  - 1. Manufacturers / Products:
    - a. Sandell "Poly-Tite Standard"
    - b. Williams "Everlastic"
- E. Bond Breaker: Pressure sensitive type recommended by sealant manufacturer to suit application.

### PART 3 - EXECUTION

#### 3.01 PREPARATION / INSTALLATION

- A. Perform all sealant work in accordance with caulking and sealant manufacturer's published instructions.
- B. Clean and prepare joints in accordance with caulking and sealant manufacturer's recommendations. Remove any loose materials and other foreign matter which might impair adhesion of sealant.
- C. Ensure that joint forming materials are compatible with sealant and caulking compound.
- D. Examine joint dimensions and size materials to achieve required width/depth ratios. Use approved joint backer rod to achieve required joint depths to allow sealants to perform properly.
  - 1. Use bond breaker where required.
- E. Apply sealant within recommended temperature ranges. Consult manufacturer when sealant cannot be applied within recommended temperature ranges.
- F. Form joints slightly concave and straight edges. Sealant must be free of air pockets, embedded matter, ridges and sags.

#### 3.02 CLEANING

- A. As work progresses, remove excess materials adjacent to joints. Leave finished work in neat, clean condition with no evidence of spillovers onto adjacent surfaces.

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**END OF SECTION 07 92 00**

## SECTION 08 11 13 – HOLLOW METAL DOORS AND FRAMES

## PART 1 - GENERAL

## 1.01 DESCRIPTION OF WORK

- A. The extent of standard doors and frames is shown and schedule on drawings.

## 1.02 QUALITY ASSURANCE

- A. Provide door and frames complying with Steel Door Institute specified. "Recommended Specifications: Standard Steel Doors and Frames" (SDI-100) and as herein.
- B. Manufacturer: Provide standard steel doors and frames by a single firm specializing in production of this type of work. Provide steel doors and frames by one of the following:
  - 1. Amweld Building Products Div.
  - 2. Ceco Corp.
  - 3. Republic Builders Prod. Corp.
- C. Fire-Rated Assemblies: Provide fire-rated doors and frames investigated and tested as fire door assemblies, complete with type of hardware to be used. Identify each fire door and frame with recognized UL testing laboratory labels, indicating applicable fire rating of steel doors and frames, construct and install assemblies to comply with NFPA Standard No 80, and as herein specified.
- D. Temperature Rise Rating: At stairwell enclosure provide door which have Temperature Rise Rating of 450 degrees F. (232 degrees C.) maximum in 30 minutes of fire exposure.

## 1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications for fabrication and installation, including data substantiating those products comply with requirements.
- B. Shop Drawings: Submit for fabrications and installation of steel doors and frames. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of finish hardware and reinforcement, and details of joints and connections. Show anchorage and accessory items.
- C. Provide schedule of doors and frames using some reference numbers for details and opening as those on contract drawings.

## 1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver hollow metal work packed in a carton or crated to provide protection during transit and job storage. Provide additional sealed plastic wrapping for factory finished doors.
- B. Inspect hollow metal work upon delivery for damage. Minor damage may be repaired provided finish items are equal in all respects to new work and acceptable to Architect; otherwise, remove and replace damaged items as directed.
- C. Store doors and frames at building site under cover. Place units wood sills at least 4" high, or otherwise store on floors in a manner that will prevent rust and damage. Avoid use of vented plastic or canvas shelters which could create humidity chamber. If cardboard wrapper on door becomes wet, remove carton immediately. Provide 1/4" spaces between stacked doors to permit air circulation.

## PART 2 - PRODUCTS

## 2.01 MATERIALS

- A. Hot-Rolled Steel Sheets and Strip Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.

- B. Cold Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 366, and ASTM A 568.
- C. Galvanized Steel Sheets: (Exterior doors and frames) Zinc coated carbon steel sheets of commercial quality, complying ASTM A 536, with ASTM A 526, with ASTM A 525, G60 zinc coating, mill phosphating.
- D. Supports and Anchors: Fabricate not less than 18 gage galvanized sheet steel.
- E. Inserts, bolts, and Fasteners: Manufacturer's standard units except hot-dip galvanized items to be built into exterior wall complying with ASTM A 153, Class C or D as applicable.
- F. Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints.

## 2.02 FABRICATION, GENERAL

- A. Fabricate steel door and frame units to be rigged, neat in appearance and free from defects, warp, or buckle. Wherever practicable, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory-assembled before shipment, to assure proper assembly at project site.
- B. Fabricate exposed faces of doors and panels, including stiles and rails of non-flush units, from only cold-rolled steel.
- C. Fabricate frames, concealed stiffeners, reinforcement, edge channels, louvers, and moldings from either cold-rolled or hot-rolled steel (at fabricator's option).
- D. Fabricate exterior doors, panels, and frames from galvanized sheet steel. Close top and bottom edges of exterior doors as integral part of door construction or by addition of inverted steel channels.
- E. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat Phillips heads for exposed screws and bolts.

## 2.03 FINISH HARDWARE PREPARATION

- A. Prepare doors and frames to receive mortised and concealed finish hardware in accordance with final Finish Hardware Schedule and templates provided by hardware supplier. Comply with applicable requirement of ANSI A 115 series specifications for door and frame preparation for hardware.
- B. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied finish hardware may be done at project site.
- C. Locate finish hardware as shown on final shop drawings or, if not shown in accordance with "Recommended Locations for Builder's Hardware", published by Door and Hardware Institute.

## 2.04 SHOP PAINTING

- A. Clean, treat, and paint exposed surfaces of steel door and frame units, including galvanized surfaces.
- B. Clean steel surfaces of mill scale, rust, oil, grease, dirt, and other foreign materials before application of paint.
- C. Apply shop coat of prime paint of even consistency to provide a uniformly finished surface ready to receive finish paint.

## 2.05 STANDARD STEEL DOORS

- A. Heavy Duty 1 3/4" Thick (Type III) (Style 3):
- B. Stile and Panel Construction: Minimum 20-gauge stiles are butted against a full 16-gauge panel. Panels interlock with stiles or are joined to the stiles by internal welding. Stiles and panels closed at top and bottom of door with recessed end channels. Door face sheet are formed from one sheet of metal with no seams on door fascias or vertical edges. Doors to receive closures shall have 12-gauge reinforcement, 6-gauge hinge reinforcements and 14-gauge lock reinforcements.

- C. Provide metal doors indicated on drawings and/or schedules.

## 2.06 STANDARD STEEL FRAMES

- A. Provide 16-gauge metal frames for doors, transoms, sidelights, borrowed lights, and other openings of types and styles as shown on drawings and/or schedules. Conceal fastenings unless otherwise indicated.
  - 1. Fabricate frames for masonry construction with mitered and welded corners.
  - 2. Fabricate frames for dry wall construction with mitered corners knocked down for field assembly.
- B. Form exterior frames of hot dip galvanized steel.
- C. Door Silencers: Except on weather-stripped frames, drill stops to receive 2 silencers on strike jambs of single-swing frames and 2 silencers on heads of double-swing frames.

## PART 3 - EXECUTION

### 3.01 INSPECTION

- A. Installer must examine substrate and conditions under which steel doors and frames are to be installed and must notify Contractor in writing of any conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

### 3.02 INSTALLATION

- A. Install standard steel doors, frames, and accessories in accordance with final shop drawings and manufacturer's data, and as herein specified.

### 3.03 PLACING FRAMES

- A. Comply with provision of SDI-105 "Recommended Erection Instructions for Steel Frames" unless otherwise indicated. Except for frames located in-place concrete or masonry and at drywall installations, place frames prior to construction of enclosing walls and ceilings. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.
- B. In plaster or masonry walls constructed with antifreeze additives, protect inside (concealed) faces of door frames using fibered asphalt emulsion coating. Apply approximately 1/8" thick over shop primer and allow to thoroughly dry before handling.
- C. In masonry construction, locate 3 wall anchors per jamb at hinge and strike levels. Building-in of anchors and grouting of frames is required.
- D. At in-place concrete or masonry construction, set frames and secure to adjacent construction with machine screws and masonry anchorage devices.
- E. Install fire-rated frames in accordance with NFPA std. No. 80.
- F. In metal stud partitions, install at least 3 wall anchors per jamb at hinge and strike levels. In open steel stud partitions, place studs in wall anchor notches and wire tie. In closed steel stud partitions, attach wall anchors to studs with tapping screws.

### 3.04 DOOR INSTALLATION

- A. Fit hollow metal doors accurately in frames, within clearances specified in ADI-100.
- B. Place fire-rated doors with clearances as specified in NFPA Standard No. 80.

## 3.05 ADJUST AND CLEAN

- A. Prime Coat Touch-Up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.
- B. Protection Removal: Immediately prior to final inspection, remove protective plastic wrappings from pre-finished doors.
- C. Final Adjustments: Check and readjust operating finish hardware items, leaving steel doors and frames undamaged and in complete and proper operating condition.

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**END OF SECTION 08 11 13**

## SECTION 09 91 00 – PAINTING

## PART 1 - GENERAL

## 1.01 DESCRIPTION OF WORK

- A. The extent of painting work is shown on drawings and schedules, and as herein specified.
- B. The work includes painting and finishing of interior and exterior exposed items and surfaces throughout project, except as otherwise indicated.
  - 1. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of work.
- C. The work includes field painting of exposed bare and covered pipes and ducts (including color coding), and of hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under mechanical and electrical work, except as otherwise indicated.
- D. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime intermediate or finish coats.
- E. Paint exposed surfaces whether or not colors are designated in "schedules", except where natural finish of material is specifically noted as a surface not to be painted. Where items or surfaces are not specifically mentioned, paint same as adjacent similar materials or areas. If color or finish is not designated, Architect will select these from standard colors available for materials systems specified.
- F. Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer finishing is specified for such items as (*but not limited to*) metal toilet enclosures, refinished partition systems, acoustic materials, architectural woodwork and casework, finished mechanical and electrical equipment including light fixtures, switchgear and distribution cabinets, elevator entrance frames, doors and equipment.
- G. Concealed Surfaces: Unless otherwise indicated, such as back priming of all exterior wood trim, painting is not required on surfaces such as walls or ceiling in concealed areas and generally inaccessible areas, foundation spaces, furred areas, utility tunnels, pipe spaces, duct shafts and elevator shafts.
- H. Finished Metal Surfaces: Metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials will not require finish painting, unless otherwise indicated.
- I. Operating Parts and Labels: Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor and fan shafts will not require finish painting, unless otherwise indicated. Do not paint over any code-required labels, such as Underwriters Laboratories and Factory Mutual, or any equipment identification, performance rating, name or nomenclature panels.

## 1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information including paint label analysis and application instructions for each material proposed for use.
- B. Samples: Submit samples for Architect's review of color and texture only. Provide a listing of material and application for each coat of each finish sample.
  - 1. On 12"x 12" hardboard, provide two samples of each color and material, with texture to simulate actual conditions. Resubmit samples as requested by Architect until acceptable sheen, color, and texture is achieved.

## 1.03 DELIVERY AND STORAGE

Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label, and

following information.

- A. Name or title of material. *Fed. Spec.* number, if application instructions. Color name and number.

#### 1.04 JOB CONDITIONS

- A. Apply water-base paints only when temperature of surfaces to be painted and surrounding air temperatures are between *50 degrees F (10 degrees C.)* And *90 Degrees F (32 degrees C.)* Unless otherwise permitted by paint manufacturer's printed instructions.
- B. Apply solvent-thinned paints only when temperature of surfaces to be painted and surrounding air temperatures are between *45 degrees F (7 degrees C.)* And *95 degrees F (35 degrees C.)*, unless otherwise permitted by paint manufacturer's printed instruction.

DO NOT APPLY PAINT in snow, rain, fog or mist; or when relative humidity exceeds 85% or damp or wet surfaces: Unless otherwise permitted by paint manufacturer's printed instructions. Painting may be continued during inclement weather if areas and surfaces to be painted are closed and heated within temperature limits specified by paint manufacturer during application and drying periods.

- C. Paint Coordination: Provide finish coats which are compatible with prime paints used. Review other sections of these specification in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information on characteristics of finish materials proposed for use, to ensure compatible prime coats are used. Provide barrier coats over incompatible primers or remove and re-prime as required. Notify Architect in writing of any anticipated problems using specified coating systems with substrates primed by others.

### PART 2 - PRODUCTS

#### 2.01 MATERIAL QUALITY

- A. Provide best quality grade of various types of coating as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.
  - 1. Proprietary names used to designate colors or materials are not intended to imply that products of named manufacturers are required to exclusion of equivalent products of other manufacturers.
  - 2. Federal Specifications establish minimum acceptable quality for paint materials. Provide written certification from paint manufacturer that materials provided meet or exceed these minimums.
  - 3. Manufacturer's products which comply with coating qualitative requirements of applicable Federal Specifications, yet differ in quantitative requirements, may be considered for use when acceptable to Architect. Furnish material data and manufacturer's certificate of performance to Architect for any proposed substitutions.
- B. Provide undercoat paint produced by same manufacturer as finish coats. Use only thinners approved by paint manufacturer, and use only within recommended limits.
- C. Pint Coordination: Provide finish coats which are compatible with prime
- D. A "Schedule of Paint Systems" is at the end of this section.

### PART 3 - EXECUTION

- 3.01 INSPECTION: Applicator must examine areas and conditions under which painting work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Applicator's acceptance of surfaces and conditions within any particular area. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to

formation of a durable paint film.

### 3.02 SURFACE PREPARATION

- A. General: Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as herein specified for each particular substrate condition. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary for complete painting of painting of each space or area, reinstall removed items. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Program cleaning and process will not fall onto wet, newly-painted surfaces.
- B. Cementitious Materials: Prepare Cementitious surfaces of concrete, concrete block, cement plaster and cement-asbestos board to be painted by removing efflorescence, chalk, dust, dirt, grease, oils and by roughening as required to remove glaze. Determine alkalinity and moisture content of surfaces to be painted by performing appropriate tests. If surfaces are found to be sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application of paint. Do not paint over surfaces where moisture content exceeds that permitted in manufacturer's printed directions.

Clean concrete floor surfaces scheduled to be painted with commercial solution of muriatic acid, or other etching cleaner. Flush floor with clean water to neutralize acid, and allow drying before painting.

- C. Wood: Clean wood surfaces to be painted of dirt, oil, or other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sandpaper smooth those finished surfaces exposed to view, and dust off. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer, before application of priming coat. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood-filler. Sandpaper smooth when dried.

Prime, stain or seal wood required to be job-painted immediately upon delivery to job. Prime edges, ends, faces-undersides, and backsides of such wood, including cabinets, counters, cases, paneling.

When transparent finish is required, use spar varnish for back-priming.

Back-prime paneling on interior partitions only where masonry plaster, or other wet wall construction occurs on backside.

Seal tops, bottoms, and cut-outs of un-primed wood doors with a heavy coat of varnish or equivalent sealer immediately upon delivery to job.

- D. Galvanized Surfaces: Clean free of oil and surface contamination with non-petroleum based solvent.

### 3.03 MATERIALS PREPARATION

- A. Mix and prepare painting materials in accordance with manufacturer's directions.

Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.

Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material. Remove film if necessary strain material before using.

### 3.04 APPLICATION

- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.

Apply additional coats when undercoats, stains or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Give special attention to insure that surfaces, including edges, corners, crevices,



- welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
- Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently-fixed equipment or furniture with prime coat only before final installation of equipment.
- Paint interior surfaces of ducts, where visible through registers or grilles, with flat, non-specular black paint.
- Paint back sides of access panels, and removable or hinged covers to match exposed surfaces.
- Finish exterior doors on tops, bottoms and side edges same as exterior faces, unless otherwise indicated.
- Sand lightly between each succeeding enamel or varnish coat.
- Omit first coat (*primer*) on metal surfaces which have been shop-primed and touch-up painted, unless otherwise indicated.
- B. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pre-treated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
- Allow sufficient time between successive coatings to permit proper drying. Do not re-coat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- C. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish a total dry film thickness as indicated or, if not indicated, as recommended by coating manufacturer.
- D. Prime Coats: Apply prime coat of material which is required to be painted or finished, and which has not been prime coated by others.
- Re-coat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat to assure a finish coat with no burn-through or other defects due to insufficient sealing.
- E. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, color spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.
- F. Transparent (Clear) Finishes: Use multiple coats to produce glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity; runs brush marks, orange peel, nail holes, or other surface imperfections.
- G. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

### 3.05 FIELD QUALITY CONTROL

The right is reserved by Owner to invoke material testing procedure at any time, and any number of times during period of field painting.

### 3.06 CLEAN-UP AND PROTECTION

- A. Clean-Up: During progress of work remove from site discarded paint materials, rubbish, cans and rags at end of each work day.
- Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping using care not to scratch or otherwise damage finished surfaces.
- B. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing or

work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.

Provide "Wet Paint" signs as required to protect newly-painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.

At the completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

### 3.07 EXTERIOR PAINT SCHEDULE

- A. General: Provide the following paint systems for the various substrates, as indicated. Concrete Masonry Units
- B. Lusterless (Flat) Acrylic Finish: 2 coats over filler coat with total dry film thickness not less than 2.5 mils, excluding filler coat.  
  
 Filler Coat: 100% Acrylic Block Filler (Volume Solids Minimum 53%) *(Required if new or porous existing block)*  
  
*Sherwin Williams:* Heavy Duty Block Filler, B42W00046.  
  
 First and Second Finish Coats: Acrylic Elastomeric  
  
*Sherwin Williams:* A05W00151 Sherlastic® Elastomeric Coating @ 8.0 – 12.0 mils D.F.T.
- C. Ferrous Metal (Miscellaneous Metal):  
  
 1. Full Gloss Alkyd Enamel: 2 Finish coats over primer.  
 2. Prime Coat:  
  
*Sherwin Williams:* B66W00310 Pro-Cryl® Universal Primer.  
  
 First and Second Finish Coats: Semi-Gloss High performance Acrylic Finish.  
  
*Sherwin Williams:* B66W00351 SherCryl® HPA Acrylic Semi-Gloss Finish.
- D. Ferrous Metal (Handrails):  
  
 1. Full Gloss Alkyd Enamel: 2 Finish coats over primer.  
 2. Prime Coat:  
  
*Sherwin Williams:* B66W00310 Pro-Cryl® Universal Primer.  
  
 First and Second Finish Coats: Semi-Gloss High performance Urethane Modified Finish.  
  
*Sherwin Williams:* B54W00151 Industrial Urethane Alkyd Enamel.
- E. General Painted Wood:  
  
 Prime Coat: Exterior Primer Coating (Back prime all wood)  
  
*Sherwin Williams:* B42W00041 Exterior Latex Wood Primer.  
  
 First and Second Finish Coat: Exterior Latex Satin.  
  
*Sherwin Williams:* A82W00151-A-100® Exterior Latex Satin.
- F. Zinc-Coated Metal: Water based Rust Inhibitive Primer.  
  
 Prime Coat:

*Sherwin Williams:* B66W00310 Pro-Cryl® Universal Primer.

First and Second Finish Coats: High Performance Acrylic Finish.

*Sherwin Williams:* B66W00351 SherCryl® HPA Acrylic Semi-Gloss Finish.

### 3.08 INTERIOR PAINT SCHEDULE

A. General: Provide the following paint systems for the various substrates, as indicated.

B. Concrete Masonry Units & Gypsum Board: *(omit filler coat on gypsum board)*

C. Interior Water Based Precatalyzed Epoxy in Egg-Shell Finish: Coats with total dry film thickness not less than 3.0 mils.

D. Lusterless (Flat) Emulsion Finish: *2 Finish coats* over filled surface.

Filler Coat: Acrylic Block Filler. Apply filler coat at a rate to ensure complete coverage with pores filled.

*Sherwin Williams:* B25W00025 PrepRite® Block Filler.

Prime Coat: Interior Latex Emulsion.

*Sherwin Williams:* B28W08200 ProMar® 200 Interior Latex Primer.

Second and Third Coats: Water Based Precatalyzed Epoxy.

*Sherwin Williams:* K45W00151 Pro Industrial Pre-Catalyzed Water Based Eggshell Epoxy.

E. Lusterless (Flat) Emulsion Finish: *2 Finish coats* over filled surface.

Filler Coat: Acrylic Block Filler. Apply filler coat at a rate to ensure complete coverage with pores filled.

*Sherwin Williams:* B25W00025 PrepRite® Block Filler.

First and Second Finish Coats: Interior Latex Emulsion.

*Sherwin Williams:* B28W08200 ProMar® 200 Interior Latex Primer.

F. Semi-Gloss Latex Enamel Finish: *2 Coats* over filled surface with total dry film thickness not less than 3.0 mils. excluding filler coat.

Filler Coat: Acrylic Block Filler. Apply filler coat at a rate to ensure complete coverage with pores filled.

*Sherwin Williams:* B25W00025 PrepRite® Block Filler.

First Coat: Latex Enamel.

*Sherwin Williams:* B28W08200 Pro-Mar 200 Latex Semi-Gloss.

Second Coat:

*Sherwin Williams:* B28W08200 Pro-Mar 200 Latex Semi-Gloss.

G. Zinc-Coated Metal & Primed Ferrous Metal: Semi-Gloss Pre-Catalyzed Epoxy *2 Finish coats* over primer.

Prime Coat: Omit prime coat on primed ferrous metal

*Sherwin Williams:* B66W00310 Pro-Cryl® Universal Primer.

First and Second Finish Coats: Semi-Gloss Pre-Catalyzed Epoxy.

*Sherwin Williams:* K46W00151 Pro Industrial Pre-Catalyzed Epoxy, Semi-Gloss.

H. Painted Woodwork and Hardboard: Semi-Gloss Enamel Finish: 3 Coats.

First Coat: Interior Enamel Undercoat.

*Sherwin Williams:* B28W08111 Premium Interior Wall & Wood Primer.

Second and Third Coats: Interior Semi-Gloss Enamel.

*Sherwin Williams:* K46W00151 Pro-Classic Waterborne Semi-Gloss.

I. Stained Woodwork: Stained-Varnish Rubbed Finish: 3 Finish Coats over stain plus filler on open grain wood.

Stain Coat: Interior Oil Stain.

*Sherwin Williams:* A49V00200 Wood Classics® Interior Oil Stain.

First Coat: Bleached Shellac.

*Sherwin Williams:* A66F00390 Wood Classics® FastDry Varnish Hand Rubbed Satin Clear.

Filler Coat on Open Wood: Paste Wood Filler. Wipe before first varnish coat.

*Sherwin Williams:* Sherwood Filler.

Second and Third Coats: Oil Rubbing Varnish.

*Sherwin Williams:* Wood Classic Varnish.

3.09 EXTERIOR WATER PROOFING SYSTEM

A. Features: Apply directly to fresh concrete (less than 28 days old), Can be applied over high pH (up to 13) substrates, No Primer required.

B. General Characteristics: Loxon XP is a high build coating that provides excellent flexibility, durability and weather resistance. This product will protect against wind-driven rain when used on tilt-up, precast, or poured-in-place concrete, CMU, and stucco. It is highly alkali and efflorescence resistant. This may be applied to a surface with a pH of 6 to 13.

C. Physical Properties:

|                                         |            |
|-----------------------------------------|------------|
| Wind-Driven Rain Test.....              | Passes     |
| ASTM D6904-03                           |            |
| 2 cts Loxon XP at 6.4 – 8.3 mils dft/ct |            |
| Water Vapor Permeance.....              | 13.4 perms |
| Based on ASTM D1653                     |            |
| 1 ct Loxon XP at 9.4 mils dft,          |            |
| 14 day cure @ 77°F & 50% RH             |            |
| Elongation.....                         | 350%       |
| ASTM D2370                              |            |
| 1 ct Loxon XP at 9.4 mils dft,          |            |
| 14 day cure @ 77°F & 50% RH             |            |
| Tensile Strength.....                   | 350 psi    |
| ASTM D2370                              |            |
| 1 ct Loxon XP at 9.4 mils dft,          |            |



Finish: Sherwin Williams A-100 House Paint, or use  
Sherwin Williams Loxon XP, A24W451.

### 3.12 APPLICATION

- A. Mixing of Paint: Stir thoroughly prior to use.
- B. Do not apply when air and surface temperatures are below 50 degrees F (10 degrees C).
- C. Work well into crevices and holes to ensure adequate penetration and sealing.
- D. Brush: Stir thoroughly and apply as received in the container with a nylon/polyester brush.
- E. Roller: Stir thoroughly and apply as received in the container with a ½" to 1 ½" nap synthetic roller cover.
- F. Spray, Airless: Pressure, minimum 2,300 PSI;  
Tip, minimum .012"
- G. Thinning/Cleanup: Do not reduce. Clean spills and spatters immediately with soap and warm water. Clean hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with mineral spirits to prevent rusting of the equipment.

3.13 USE COMPLETELY OR DISPOSE OF PROPERLY. This product contains organic solvents which may cause adverse effects to the environment if handled improperly. Disposal of wastes containing either organic solvents or free-liquids in landfills is prohibited. Dry, empty containers may be recycled in a can recycling program. Local disposal requirements vary; consult your sanitation department or state-designated environmental agency for more information on disposal options.

### 3.14 ENVIRONMENTAL AND SAFETY INFORMATION

Warning! Harmful if inhaled

Contains glycol ether and crystalline silica.

May affect the brain or nervous system causing dizziness, headache, or nausea. Causes eye, skin, nose, and throat irritation.

3.15 IMPORTANT: Designed to be mixed with other components. Mixture will have hazards of both components. Before opening packages, read all warning labels.

3.16 NOTICE: Repeated and prolonged exposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are signs that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. To avoid breathing vapors or spray mist, open window and doors or use other means to ensure fresh air entry during application and drying. Cancer Hazard: Contains crystalline silica which can cause cancer when in respirable form (spray mist or sanding dust).

Keep away from heat and flame. Use only with adequate ventilation. Do not breathe vapors or spray mist. Do not get in eyes or on skin.

Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA for use with paints, eye protection, gloves, and protective clothing during application and until all vapors and spray mist are exhausted. In confined places or where continuous spray operations are typical, or if proper respirator approved by NIOSH/MSHA. In all cases follow respirator manufacturer's directions. Do not permit anyone without protection in the painting area. Close container after each use.

3.17 FIRST AID: If affected by inhalation of vapors or spray mist, remove to fresh air. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and call a physician; for skin, wash thoroughly with soap and water. In case of ingestion, DO NOT INDUCE VOMITING. Get medical help immediately.

3.18 IN CASE OF: FIRE - Use foam, CO2, dry chemical, or water fog.  
SPILL - Absorb with inert material and dispose of in accordance with applicable regulations.

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*END OF SECTION 09 91 00*

## SECTION 26 00 01 – ELECTRICAL GENERAL PROVISIONS

## PART 1 - GENERAL

- A. The General Conditions and all pertinent sections are a part of this specification and the Contractor shall consult them in detail for instructions pertaining to his work. He shall consult all other sections relative thereto.
- B. The term "Architect" in this specification may be his agent such as the Consulting Engineer.
- C. The *EXTENT* of the work is shown on the drawings and specified herein.

## 1.01 SCOPE OF WORK

- A. The work contemplated under this specification comprises the furnishing of all labor and materials required and necessary for the complete installation of electrical wiring for lighting, power, and control circuits from the various panel boards to each ultimate outlet hereinafter specified and / or shown on the accompanying drawings. The work also includes the demolition necessary to accomplish the new construction. Work shall be done in accordance with the National Electrical Code, *NFPA* Codes related to the specific occupancy, and State and local codes & ordinances. This work includes raceways and pull wires for systems to be furnished and installed by others.
- B. This work includes the installation of connection wiring, both feeders and controls for all motors, controls, safety devices and miscellaneous electrical equipment of this project.
- C. The specifications are intended to describe a complete, workable, electric distribution system and bidders shall report any discrepancies or omissions preventing such workability *ten (10) days* prior to the time their bids are submitted.
- D. The work covered by this specification shall be as shown on the drawings and called for herein.
  - 1. Furnish and install all conduit, wire ways, and conductors for service, feeder, branch circuit, and control wiring.
  - 2. Furnish and install panel boards, disconnect switches, motor starters, etc.
  - 3. Furnish and install lighting units complete with controls, and lamps.
  - 4. Provide service entrance complete with service conductors, raceway, and pole in accordance with utility company requirements for overhead service. Pay all utility service fees and charges for obtaining power to the site and or service revisions as required.
  - 5. Provide electrical service and control wiring for mechanical devices requiring same.
  - 6. Furnish and install raceway system, complete with pull wire for telephone, computer and CATV systems as noted.
  - 7. Pay all fees and charges for all inspections and permits and utility company service.
  - 8. Remove all existing electrical equipment wiring and devices not reused on this project. Owner has right to retain any or all equipment, wiring, or devices removed. Any equipment, wiring or devices not retained by Owner shall be disposed of at Contractor's expense.
- E. Equipment installed shall be installed in strict accordance with the instructions of the manufacturer.
- F. The Contractor is referred to the Architectural and structural plans for information in regard to Architectural details. His work shall be done in strict accordance with the local and state ordinance governing this class or work. He shall install his work to meet existing conditions as found at the building site and to accommodate the work of other trades. He shall be held responsible for the timely placing of conduits and switch and outlet boxes in walls and partitions while same are under construction.

## 1.02 REJECTED WORK AND MATERIALS

- A. Any materials and / or equipment different from those called for in specifications, drawings, or approved by Architect must, on notification from the Architect or his designatee be immediately removed from the project and replaced by those authorized.



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1.03 SUBMITTALS

- A. Before proceeding with work and/or within *thirty (30) days* after award of the General Contract for this work, the Contractor shall furnish to the Architect *six (6)* complete sets of shop and working drawings of such apparatus, equipment, controls, etc., to be provided in this project. These drawings shall give dimensions, weights, mounting data, performance curves, and other pertinent information. The submittals shall include lighting fixtures, panel boards, distribution panels, motor control, disconnects, starters, lighting controls, specialty boxes, special wire ways, fire alarm systems, and all specialty equipment.
- B. The Contractor may be required to submit shop drawings on any other material he supplies in construction of this project. These drawings shall be submitted at the time requested by the Architect.
- C. The Architect's approval of shop drawings shall not relieve the Contractor from responsibility of incorrectly figured dimensions or any other errors that may be contained in these drawings. The omission from the shop drawings, or specifications, even though approved by the Architect, shall not relieve the Contractor from furnishing and erecting same.
- D. Upon completion of the work, the Contractor shall furnish *six (6)* bound sets of equipment brochures, parts list, operating instructions, and maintenance manuals of materials furnished on this project.

## 1.04 MINOR DEVIATIONS

- A. The accompanying drawings show approximate location of feeders, branch circuits, light and power circuits, etc. Complete and accurate details in regard to location of outlets, apparatus, etc., from location indicated shall be made before roughing-in without additional cost to owner.

## 1.05 STANDARD OF MATERIALS AND WORKMANSHIP

- A. All materials shall be new and listed by *UL* as conforming to its standards. Work shall be executed in a workmanlike manner and present a neat finished appearance when complete.

## 1.06 LAWS, PERMITS, AND INSPECTIONS

- A. This Contractor shall, at his own cost, obtain necessary permits, pay all legal fees and charges, required by safety laws, ordinances, and regulations relating to the building and the public health and safety. The work shall be inspected before being concealed. Certificates of inspection shall be provided to the Architect and Engineer.

## 1.07 CUTTING AND PATCHING

- A. Cut only where necessary with approval of the Architect or his designattee any structural beams or joists. Coordinate all raceways and conduit runs with mechanical equipment so as to minimize penetrations through wall partitions in ceiling space. Seal around all penetrations equal to the rating of the wall or ceiling penetrated.

## 1.08 SAFETY PRECAUTIONS

- A. Furnish and place proper guards for prevention of accidents. Provide and maintain any other necessary construction required to secure safety of life or property.

## 1.09 SUPERVISION

- A. Constantly supervise the work done from beginning to completion and final acceptance. Keep the same foreman and workman throughout the project duration.
- B. During the progress of the work, it shall be subject to inspection by the representatives of the Engineers, and at these

time, the Contractor shall furnish the required information.

#### 1.10 SITE INSPECTION

- A. Visit site and study difficulties attendant to the successful execution of the work before bidding.

#### 1.11 INSERTS AND OPENINGS

- A. Furnish and install all inserts and hangers required to support conduit, cables, pull boxes, wireways, disconnect switches, etc.

#### 1.12 CONDUCTORS AND WIRING METHODS

- A. All wiring shall be installed in conduit as shown on the drawings. Nonmetallic sheath cable may be used in sizes #12 and #10 for branch circuit wiring only. No common neutral branch circuits are permitted on this project.
- B. Conduit and electrical metallic tubing shall be hot dipped galvanized. *EMT* connectors shall be compression type and, where required, only connectors approved as raintight may be used.
- C. Where conduit runs across or is installed parallel to hot water lines, conduit shall be installed at a minimum distance of 6" from same.
- D. All conductors #8 and smaller shall be copper with *THWN / THHN* 600 volt insulation. All conductors #6 and larger shall be copper with *THW* 600 volt insulation.
- E. Conductors in system shall be color coded throughout system. Said color coding shall be carried unchanged throughout the system. Color code shall be different between 480 volt system and 208 volt system.
- F. Conductors shall be identified at all access points by color coding. On larger conductors 6" long taped bands shall be used. In no case will tags be acceptable.
- G. All junction boxes shall be 4" square sheet metal with minimum of 18 *cu. in.* capacity, supported independently of conduit or wire entering it. Boxes in masonry walls shall be rated as such.
- H. Connectors shall be wire nuts sized in accordance with the size and number of conductors being connected.
- I. All conductors shall be copper. No aluminum conductor will be installed on project.
- J. All low voltage wiring installed in air handling spaces shall be plenum rated.

#### 1.13 DISCONNECT, SWITCHES, FUSIBLE, AND NON-FUSIBLE

- A. Switches shall be Heavy Duty unless otherwise noted, and where installed outdoors shall be weatherproof. Where required, said switches shall be horsepower rated.

#### 1.14 TESTS

- A. After installation is complete and at such time as the Architect may direct, Contractor shall conduct an operating test for approval. Equipment shall be demonstrated to operate in accordance with requirements of this specification. Tests shall be performed in the presence of the Architect. Furnish all instruments and personnel required for the test.

#### 1.15 GUARANTEE

- A. The Contractor shall be required to keep the work installed by him in repair and perfect working order for one year from date of completion and final acceptance; said guarantee shall be based on defective materials and sub-standard workmanship. Contractor shall furnish, at his own cost, all materials and labor necessary to comply with this guarantee.

## 1.16 UTILITY COMPANY FEES &amp; CHARGES

- A. Contractor shall coordinate service with the local electrical utility company and telephone company. Contractor shall pay all fees & charges associated with services or outages required in the execution of this work.

## 1.17 PAINTING ELECTRICAL EQUIPMENT

- A. The Contractor shall allow for the painting of panelboards, switchgear of any exposed electrical equipment. All painting shall be done by the painting sub-contractor at the direction of the Architect. This does not include the equipment in electrical equipment rooms, air handling rooms or mechanical rooms or spaces.

## 1.18 AS-BUILT DRAWINGS

GENERAL: The Contractor shall provide the Architect with *two* (2) sets of blue line prints, of the original bidding documents, as required and at Contractor's expense, as follows:

- A. If the Contractor shall elect to vary from the Contract Documents, and secures prior approval of the Architect, for any phase of the work other than those listed below, he shall record in a neat readable manner, all such variances on the blueprint in *RED*.
- B. For Electrical work, "As-Built" drawings shall be maintained by the Contractor as the work progresses and as follows:
1. All deviations from sizes, locations and from all other features of all installations shown in Contract Documents shall be recorded.
  2. In addition it shall be possible using these drawings to correctly and easily locate, identify, and establish sizes of all conduit, panels and like, as well as all other features of work which will be concealed underground and /or in the finished building.
  3. Locations of underground work shall be established by dimensions to columns, lines, or walls, locating all turns, etc.
  4. For work concealed in the building, sufficient information shall be given so it can be located with reasonable accuracy and ease. In some cases this may be by dimension. In others it may be sufficient to illustrate the work on the drawings in relation to the spaces in the building near which it was actually installed. Architect's decision in his manner will be final.
- C. The following requirements apply to all "As-built" drawings:
1. They shall be maintained at the Contractor's expense.
  2. All such drawings shall be done carefully and neatly and in a form approved by the Architect.
  3. Additional drawings shall be provided as necessary for clarification.
  4. They shall be kept up-to-date during the entire course of the Work and shall be available upon request for examination by the Architect and, when necessary, to establish clearances for other parts of the Work.
  5. The "As-Built" drawings shall be returned to the Architect upon completion of the Work and are subject to the approval of the Architect.

PART 2 PRODUCTS: *(not applicable)*

PART 3 EXECUTION: *(not applicable)*

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**END OF SECTION 26 00 01**

## SECTION 26 05 01 – BASIC ELECTRICAL MATERIALS AND METHODS

## PART 1 – GENERAL

## 1.01 SUMMARY

- A. This section includes the following:
  - 1. Electrical equipment coordination and installation.
  - 2. Sleeves for raceways and cables.
  - 3. Sleeve seals.
  - 4. Common electrical installation requirements.

## 1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.

## 1.03 QUALITY ASSURANCE

- A. Test Equipment Suitability and Calibration: Comply with NETA ATS, "Suitability of Test Equipment" and "Test Instrument Calibration".

## 1.04 COORDINATION

- A. Coordinate arrangement, mounting, and support of electrical equipment:
  - 1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
  - 2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
  - 3. To allow right of way for piping and conduit installed at required slope.
  - 4. So connecting raceways, cables and wireways will be clear of obstructions and of the working and access space of other equipment.
- B. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.
- C. Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed. Coordinate electrical testing of electrical, mechanical, and architectural items, so equipment and systems that are functionally interdependent are tested to demonstrate successful interoperability.

## PART 2 – PRODUCTS

## 2.01 SLEEVES FOR RACEWAYS AND CABLES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Coordinate sleeve selection and application with selection and application of firestopping specified in Division 7 Section "Through-Penetration Firestop Systems".

## PART 3 – EXECUTION

## 3.01 COMMON REQUIREMENT FOR ELECTRICAL INSTALLATION

- A. Comply with NECA 1.
- B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.
- C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.
- D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment

and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

- E. Right of Way: Give to raceways and piping systems installed at a required slope.

### 3.02 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.
- B. Coordinate sleeve selection and application with selection and application of firestopping specified in Division 7 Section "Through-Penetration Firestop Systems".
- C. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- D. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.
- E. Extend sleeves installed in floors two (2) inches above finished floor level.
- F. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway or cable unless sleeve seal is to be installed.
- G. Seal space outside of sleeves with grout for penetrations of concrete and masonry and with approved joint compound for gypsum board assemblies.
- H. Interior Penetrations of Non-Fire Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Refer to Division 7 Section "Joint Sealants" for materials and installation.
- I. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway cable penetration sleeves with firestop materials. Comply with Division 7 Section "Through-Penetration Firestop Systems".
- J. Aboveground, Exterior-Wall Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.

### 3.03 FIRESTOPPING

- A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 7 Section "Through-Penetration Firestop Systems". Provide documentation on UL assembly rating of each firestop system.

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**END OF SECTION 26 05 01**

## SECTION 26 05 19 – CONDUCTORS AND CABLES

## PART 1 – GENERAL

## 1.01 SUMMARY

- A. This section includes building wires and cables and associated connectors, splices, and terminations for wiring systems rated 600 V and less.

## 1.02 SUBMITTALS

- A. Field quality-control test reports.

## 1.03 QUALITY ASSURANCE

- A. Electrical Components, Devices and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

## PART 2 – PRODUCTS

## 2.01 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

## 2.02 CONDUCTORS AND CABLES

- A. Refer to Part 3 “Conductor and Insulation Applications” Article for insulation type, cable construction, and ratings.
- B. Conductor Material: Copper complying with NEMA WC 5 or 7; stranded conductor.
- C. Conductor Insulation Types: Type THW, THHN-THWN, and XHHW and complying with NEMA WC 5 or 7.
- D. Multiconductor Cable: Type SO.

## 2.03 CONNECTORS AND SPLICES

- A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

## PART 3 – EXECUTION

## 3.01 CONDUCTOR AND INSULATION APPLICATIONS

- A. Exposed Feeders: Type THHN-THWN, single conductors in raceway.
- B. Feeders Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway.
- C. Feeders Concealed in Concrete, below Slabs-on-Grade, and in Crawlspace: Type THHN-THWN, single conductors in raceway.
- D. Exposed Branch Circuits, including in Crawlspace: Type THHN-THWN, single conductors in raceway.
- E. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceways.

- F. Branch Circuits Concealed in Concrete and below Slabs-on-Grade: Type THHN-THWN, single conductors in raceway.
- G. Cord Drops and Portable Appliance Connections: Type SO, hard service cord.
- H. Fire Alarm Circuits: Type THHN-THWN, in raceway Power-limited, fire-protective, signaling circuit cable.
- I. Class 1 Control Circuits: Type THHN-THWN, in raceway.
- J. Class 2 Control Circuits: Type THHN-THWN, in raceway, Power-limited cable, concealed in building finishes.

### 3.02 INSTALLATION

- A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
- B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure valves.
- C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- E. Support cables according to Division 16 Section "Basic Electrical Materials and Methods".
- F. Seal around cables penetrating fire-rated elements according to Division 7 Section "Through-Penetration Firestop Systems".
- G. Identify and color-code conductors and cables according to Division 16 Section "Electrical Identification".
- H. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- I. Wiring at Outlets: Install conductor at each outlet, with at least 12 inches of slack.

### 3.03 FIELD QUALITY CONTROL

- A. Testing: Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Section 7.3.1 Certify compliance with test parameters.
- B. Test Reports: Prepare a written report to record the following:
  - 1. Test procedures used.
  - 2. Test results that comply with requirements.
  - 3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

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**END OF SECTION 26 05 19**

## SECTION 26 05 26 – GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

## PART 1 – GENERAL

## 1.01 SUMMARY

- A. This section includes grounding of electrical systems and equipment. Requirements specified in this Section may be supplemented by requirements of other Sections.

## 1.02 SUBMITTALS

- A. Product Data: For ground rods.
- B. Field quality-control test reports.

## 1.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled under UL 467 as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

## PART 2 – PRODUCTS

## 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements.

## 2.02 GROUNDING CONDUCTORS

- A. For insulated conductors, comply with Division 26 Section "Conductors and Cables".
- B. Equipment Grounding Conductors: Insulated with green-colored insulation.
- C. Isolated Ground Conductors: Insulated with green-colored insulation with yellow stripe. On feeders with isolated ground, use colored tape, alternating bands of green and yellow tape to provide a minimum of three bands of green and two bands of yellow.
- D. Grounding Electrode Conductors: Stranded cable.
- E. Grounding Bus: Bare, annealed copper bars of rectangular cross section, with insulated spacer.
- F. Connectors: Comply with IEEE 837 and UL 467; listed for use for specific types, sizes, and combinations of conductors and connected items. Bolted type, compression type, or exothermic-welded type, in kit form, selected per manufacturer's written instructions.

## PART 3 – EXECUTION

## 3.01 INSTALLATION

- A. Use only copper conductors for both insulated and bare grounding conductors.
- B. In all raceways, use insulated equipment grounding conductors.
- C. Exothermic-Welded Connections: Use for connections to structural steel.
- D. Equipment Grounding Conductors: Comply with NFPA 70, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 are indicated.
  - 1. Install insulated equipment grounding conductors in feeders, branch circuits, lighting circuits, and receptacle



- 
- circuits.
2. Nonmetallic Raceways: Install an equipment grounding conductor in nonmetallic raceways unless they are designated for telephone or data cables.
  3. Air-Duct Equipment Circuits: Install an insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air cleaners and heaters. Bond conductor to each unit and to air duct.
  4. Signal and Communication Systems: For telephone, alarm, voice and data, and other communication systems, provide No. 2 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.
    - a. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-2-by-12-inch grounding bus.
    - b. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.
- E. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- F. Bonding Straps and Jumpers: Install so vibration by equipment mounted on vibration isolation hangers or supports is not transmitted to rigidly mounted equipment. Bond straps directly to the basic structure taking care not to penetrate any adjacent parts. Install straps only in locations accessible for maintenance.
- G. Connections: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer to order of galvanic series.
  2. Make connections with clean, bare metal at points of contact.
  3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
  4. Make aluminum-to-galvanized steel connections with tin-plated copper jumpers and mechanical clamps.
  5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
  6. Exothermic-Welded Connections: Comply with manufacturer's written instructions. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.
  7. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure-type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.
  8. Noncontact Metal Raceway Terminations: If metallic raceways terminate at metal housings without mechanical and electrical connection to housing, terminate each conduit with grounding bushing. Connect grounding bushings with a bare grounding conductor to grounding bus or terminal in housing. Bond electrically noncontinuous conduits at entrances and exits with grounding bushings and bare grounding conductors, unless otherwise indicated.
  9. Tighten screws and bolts for grounding and bonding connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.
  10. Compression-Type Connections: use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on grounding conductor.
  11. Moisture Protection: If insulated, grounding conductors are connected to ground rods or grounding buses, insulate entire area of connection and seal against moisture penetration of insulation and cable.

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**END OF SECTION 26 05 26**

## SECTION 26 05 29 – HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

## PART 1 – GENERAL

## 1.01 SUMMARY

- A. Section Includes:
  - 1. Hangers and supports for electrical equipment and systems.
  - 2. Construction requirements for concrete bases.

## 1.02 PERFORMANCE REQUIREMENTS

- A. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.
- B. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
- C. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of five times the applied force.

## PART 2 – PRODUCTS

## 2.01 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.
  - 1. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
  - 2. Channel Dimensions: Selected for applicable load criteria.
- B. Raceway and Cable Supports: As described in NECA 1 and NECA 101.
- C. Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
- E. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
- F. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
  - 1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
  - 2. Mechanical-Expansion Anchors: Insert-wedge-type, [zinc-coated] [stainless] steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
  - 3. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to MSS Type 18; complying with MFMA-4 or MSS SP-58.
  - 4. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
  - 5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
  - 6. Toggle Bolts: All-steel springhead type.

7. Hanger Rods: Threaded steel.

## 2.02 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.
- B. Materials: Comply with requirements in Section 055000 "Metal Fabrications" for steel shapes and plates.

## PART 3 – EXECUTION

### 3.01 APPLICATION

- A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.
- B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT and RMC as scheduled in NECA 1, where its Table 1 lists maximum spacings less than stated in NFPA 70. Minimum rod size shall be 1/4 inch in diameter.
- C. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted or other support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
  1. Secure raceways and cables to these supports with single-bolt conduit clamps using spring friction action for retention in support channel.
- D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.

### 3.02 SUPPORT INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.
- B. Raceway Support Methods: In addition to methods described in NECA 1, EMT and RMC may be supported by openings through structure members, as permitted in NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
  1. To Wood: Fasten with lag screws or through bolts.
  2. To New Concrete: Bolt to concrete inserts.
  3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
  4. To Existing Concrete: Expansion anchor fasteners.
  5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches thick.
  6. To Steel: Welded threaded studs complying with AWS D1.1/D1.1M, with lock washers and nuts or Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
  7. To Light Steel: Sheet metal screws.

8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.

- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

### 3.03 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Comply with installation requirements in Section 055000 "Metal Fabrications" for site-fabricated metal supports.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- C. Field Welding: Comply with AWS D1.1/D1.1M.

### 3.04 CONCRETE BASES

- A. Construct concrete bases of dimensions indicated but not less than 4 inches larger in both directions than supported unit, and so anchors will be a minimum of 10 bolt diameters from edge of the base.
- B. Use 3000-psi, 28-day compressive-strength concrete. Concrete materials, reinforcement, and placement requirements are specified in Section 033000 "Cast-in-Place Concrete."
- C. Anchor equipment to concrete base.
  1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
  2. Install anchor bolts to elevations required for proper attachment to supported equipment.
  3. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

### 3.05 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
  1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.
- B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

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**END OF SECTION 26 05 29**

## SECTION 26 05 83 – WIRING METHODS

## PART 1 - GENERAL

- A. General provisions are referred to in Section 26 00 01.
- B. Quality: All equipment shall be U. L. approved and bear U. L. label where such listing and/or labeling exist. All wiring devices to be specification grade for commercial use.

## PART 2 - MATERIALS

- A. Raceways:
  - 1. Raceways shall be rigid galvanized steel conduit, intermediate metal conduit, electrical metallic tubing, schedule 40 PVC, and liquid tite flexible metal conduit.
  - 2. Underground conduits shall be schedule 40 PVC unless otherwise noted. Schedule 40 PVC shall bear U. L. label for use intended.
  - 3. Minimum conduit shall be 3/4" unless otherwise noted on plans. Flexible metal conduit used for lighting fixture connections may be 6' lengths of 1/2" trade size.
  - 4. EMT couplings and connectors shall be of the compression type. Couplings and connectors shall be as manufactured by Raco, T&B, or Gedney.
  - 5. Flexible conduit connectors shall be approved for the purpose.
  - 6. Liquid tite flexible metal conduit shall have external bonding jumper.
  - 7. All rigid conduit and IMC fittings shall be threaded conduit outlet bodies with appropriate cover and gasket.
  - 8. Weatherproof hubs shall be equal to Myers, Appleton, or T&B.
- B. Wire and Cable:
  - 1. All conductors shall be copper, shall conform to applicable ASTM specifications as to conductivity, and shall be free from kinks and defects when installed.
  - 2. All wire shall be copper. Service and feeder conductors shall have type THW 600V insulation for conductors #6 and larger unless otherwise noted. Branch circuit and feeder conductors #8 and smaller shall have type THWN/THHW 600V insulation. Minimum conductor size shall be #12 unless otherwise noted. Nonmetallic sheath cable in sizes #12 and #10 may be used for branch circuit wiring only.
  - 3. All insulated wire and cable shall meet the applicable requirements of the latest IPCEA specifications.
  - 4. Where lighting fixture manufacturer recommends the use of high temperature wire in the fixture junction box, NEC type SF-2 shall be used.
  - 5. Service and feeder conductors shall have type THW 600V insulation for conductors #6 and larger unless otherwise noted. Branch circuit and feeder conductors #8 and smaller shall have type THWN/THHW 600V insulation. Minimum conductor size shall be #12 unless otherwise noted.
  - 6. Thermostat cable shall be plenum rated.
- C. Outlet, Junction Boxes, and Condulets:
  - 1. Outlet and junction boxes shall be sheet metal of minimum size of 4" square by 1 1/2 " deep. Boxes shall be as manufactured by Steel City, Appleton, or Raco.
  - 2. Manufactured pull boxes and junction boxes shall be as manufactured by the Hoffman Company, the Wegman Company, or Appleton.
  - 3. Condulets shall be Crouse-Hinds, Gedney, Appleton, or equal, "FS" or "FD" series shall be used for switch outlets. All condulets shall be equipped with rubber gaskets and sheet metal covers, where required. In corrosive areas, malleable iron fittings shall be used.
- D. Grounding:
  - 1. Ground rods shall be 3/4" x 10' long, copperclad.
  - 2. Grounding bushings shall be of the insulated type.

## PART 3 - EXECUTION

## 3.01 CONDUCTORS AND WIRING METHODS

- A. All wiring shall be installed in conduit as shown on the drawings.

- B. All raceways shall be concealed unless otherwise indicated.
- C. All exposed (indoor and outdoor) conduit, feeder conduit, and conduit larger than 1", shall be heavy-wall hot dip galvanized steel conduit except where specifically indicated otherwise. Indoor exposed conduit and indoor feeder conduits may be hot hip galvanized intermediate metal conduit.
- D. Minimum conduit size shall be 3/4" unless otherwise noted on plans. Flexible metal conduit used for lighting fixture connections may be 6' lengths of 1/2" trade size.
- E. Rigid galvanized conduit shall be used for all exposed outdoor locations and all stub-up.
- F. The Contractor shall be held responsible for the timely placing of conduits in slabs before same are poured and switch and outlet boxes in walls and partitions while same are under construction.
- G. This Contractor shall furnish and install all inserts and hangers required to support conduit, cables, pull boxes, wireways, disconnect switches, etc.
- H. EMT may be used for interior work that is concealed.
- I. EMT may not be embedded in concrete.
- J. PVC conduit may not be used within the building unless specifically called for on the plans.
- K. All conduit runs shall be run straight with the structure and supported by clips or straps intended for its use. No tie wire supports will be allowed.
- L. Pull boxes and junction boxes shall be used as required for proper installation of conductors or splicing.
- M. Expansion joints shall be included at approximately 150-foot intervals in all straight exposed conduit runs.
- N. Conduits shall be kept at least 6" from parallel runs of hot water piping, flues, or other hot objects.
- O. Where conduits rise through concrete, the curved portion shall not be visible above the finished floor. Approved conduit sealing fittings and compound shall be used where underground conduits enter building.
- P. Approved conduit sealing fittings and compound shall be used where all conduits enter building.
- Q. Spacing of conduit supports for horizontal and vertical runs shall be in accordance with National Electrical Code and field conditions. Conduit may not be supported from ceiling support wires.
- R. Galvanized steel strut type construction shall be used when practical for supporting conduits and equipment. Tie wire is not acceptable. Heat treated spring steel clips may be used for supporting 1" EMT or smaller, in the ceiling space to the grid system.
- S. Stainless steel shims, 1/16" thickness, or approved equal, shall be used between aluminum and steel surfaces to prevent galvanic action.
- T. During construction, all outlet boxes and conduit stub-ups shall be suitably protected against the entrance of foreign material.
- U. Watertight hubs shall be installed on all rigid conduit terminations in damp locations. Double locknuts and bushings are required on other rigid conduit terminations. Where rigid conduit is an extension of a PVC conduit run, grounding bushing shall be used.
- V. Underground ducts shall be separated, and duct lines shall slope downward away from buildings with a pitch of not less than 3" per 100 feet. All underground ducts are to be incased in red concrete where called for on the drawings a minimum of 3" encasement around exterior of duct is required.

- W. Underground raceways below building slabs do not require red concrete encasement. Raceways shall be installed below slab with a minimum of 3" cover.
- X. Duct separators shall be of plastic and the joints of the conduit shall be staggered so as to provide a duct line having maximum strength. All spare conduit shall be identified and location of both ends recorded.
- Y. All ducts shall have a mandrel and brush drawn through them to make sure they are open and clean.
- Z. All empty ducts shall have #14 galvanized iron pull-wire installed.

### 3.02 WIRE AND CABLE

- A. No wires shall be pulled in until the conduit system is complete. Only approved type pulling lubricant shall be used.
- B. Feeder conductors shall be continuous from point of origin to point of termination without splices unless otherwise noted on drawings.
- C. No splices or taps will be permitted in control or indication circuits except at terminals on control devices, and on terminal boards in junction boxes or equipment, unless noted on drawings.
- D. Control and indication circuit terminations at equipment, devices and terminal boards shall be made with spade type crimp connectors. Shake-proof lock washers, jamb nuts, or other suitable means for preventing loosening of connections shall be used on all connections subject to vibration.
- E. For #10 AWG and smaller conductors in lighting circuits, splices and taps shall be made with insulated "thread-on" type connectors.
- F. For #8 AWG and larger conductors, splices and taps shall be made by solderless, bolted type or compression type cable connectors. All such connections shall be taped having an insulation value at least equal to that of the conductor insulation.
- G. All tape shall be suitable for use intended.
- H. Conductors for branch circuits shall be color coded throughout system. Said color coding shall be carried unchanged throughout system.
- I. Conductors shall be identified at all access points by color coding. On larger conductors painted or taped bands shall be used. In no case will tags be acceptable.
- J. Control, indication, and power wiring shall be identified at all terminal points with wire markers. Painted numbers of colors or other non-permanent marking will not be acceptable. Numbering of wires in the actual installation shall correspond to the wire numbers shown on schematic wiring diagrams.
- K. Wire in panelboards shall be neatly formed and tied with self-locking nylon ties in a workmanlike manner.
- L. Cables not in conduit and subjected to tension shall be properly supported by the use of cable grips.
- M. Connectors shall be wirenuts sized in accordance with the size and number of conductors being connected.

### 3.03 OUTLET AND JUNCTION BOXES

- A. All boxes shall be sized in accordance with National Electrical Code requirements.
- B. All boxes shall be supported independently of conduits entering them.
- C. 4" square sheet metal boxes with plaster rings and/or covers as required shall be used for wiring devices and

telephone outlets for a neat and workmanlike installation.

- D. Weatherproof and dustproof type boxes and fittings, having threaded hubs and threaded or bolted type covers shall be used outdoors. Indoors, sheet metal boxes shall be used except for surface mounting where cast type boxes shall be used.
- E. Contractor shall furnish and install pull boxes as required in the raceway system for proper installation of the conductors, but in no case shall pull boxes be spaced more than 150 feet apart in any conduit run.

#### 3.04 GROUNDING

- A. All electrical equipment and other facilities and devices shall be grounded as required by the National Electrical Code, as shown on the drawings and as further specified herein.
- B. Grounding shall be installed as shown on plans and inspected by the Engineer prior to concealment. Building steel, water piping, etc., shall be bonded together as per NEC and connection shall be inspected by the Engineer prior to concealment.
- C. Bonding jumpers shall be used around concentric or eccentric knockouts on service equipment.
- D. Equipment grounding conductors shall be sized per NEC Table 250-95. An equipment grounding conductor shall be run with each feeder and branch circuit.
- E. When branch circuits are grouped in common raceway, an equipment grounding conductor shall be run with each branch circuit or multi-wire branch circuits. (Common neutral)

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**END OF SECTION 26 05 83**



## SECTION 26 27 00 – DISTRIBUTION EQUIPMENT

## PART 1 - GENERAL

- 1.01 General provisions are referred to in Section 26 00 01.
- 1.02 Quality: All equipment shall be U. L. listed and bear U. L. label where such lists and/or labeling exist.
- 1.03 Equipment Identification: All circuit breakers, safety switches, lighting panels, starters, etc., shall be identified by an engraved bakelite nameplate attached to the enclosure by brass screws. Engraved letters shall be a minimum of ½" high.

## PART 2 – PRODUCTS

## 2.01 PRODUCTS

- A. Distribution Equipment as manufactured by General Electric, Square D, or approved equal.
- B. Lighting and Distribution Panels:
1. Panel boards shall be as indicated on the plans. They shall be distributed phase, dead front type, equipped with thermo-magnetic molded case circuit breakers. Panel boards shall have copper bus and a full sized neutral.
  2. Indoor enclosures shall be NEMA 1. A circuit directory frame and card with a clear covering shall be provided on the inside of the door with a typed circuit directory.
  3. Side wire gutters shall be adequate for wire size used but 4" minimum for lighting panel boards and 5½" for distribution panel boards. Minimum enclosure width shall be 20".
  4. Fronts shall be complete with door and chrome plated combination cylinder lock and catch, with all locks keyed alike. Fronts shall be full finish steel with prime coat and finish coat of baked enamel in manufacturer's standard color, with indicating type adjustable concealed trim clamps and directory with transparent covers. Doors shall have flush hinges and operators.
  5. Service entrance panel shall be marked suitable for service entrance equipment and have minimum of 25,000 A. I. C. rating of all over current devices.
  6. All panels shall be equipped with equipment ground bus.
  7. All 120/240V breakers shall be rated 10,000 A. I. C. unless otherwise noted.
  8. All panels shall be equipped with copper buses.
  9. All molded-case main and branch circuit breaker types for each circuit, with toggle handles that indicate when tripped. Where multiple-pole breakers are indicated, provide with common trip so overload on one pole will trip all poles simultaneously. Breaker shall not trip to OFF position.
  10. Lighting panels shall be U. L. listed and bear the U. L. label. Panels shall be Square D, type NQOB, General Electric type AQ or equal.
  11. Distribution panel boards shall be U. L. listed and bear U. L. label. Panels shall be Square D, HCN, G. E. CCB or equal.
  12. Keys for all equipment furnished must be properly identified by tag for submittal to Architect and Owner.
- C. Safety Switches:
1. Safety switches shall be heavy duty type (unless otherwise noted), with quick-make, quick-break operation, visible blades, and line terminal shields.
  2. All switches shall be U. L. listed, horsepower rated, meeting Federal Specifications WS-865c, and NEMA Spec KS-1-1969.
  3. All switches shall have front cover mounted nameplates with catalog number Hp ratings and an equipment identification nameplate per Equipment Identification Section of this Specification.
  4. Switch assembly plus operating handle shall be an integral part of the enclosure base.
  5. Switch shall be pad-lockable in the OFF position and shall have tool defeatable door interlocks that prevent door from operating when handle is in the ON position.
  6. All safety switches shall be fusible unless noted.
  7. Three phase four wire units shall have solid neutral.
  8. Enclosures shall be NEMA 1 indoors, NEMA 3R outdoors, unless otherwise noted.
  9. Safety switches shall be manufactured by General Electric, Square D, or approved equal.

- D. Circuit Breakers:
1. Molded case circuit breakers shall meet NEMA standards, Federal Spec No. W-C-37a, where applicable and bear U. L. label. 120/240V breakers shall have minimum 10,000 A. I. C., unless otherwise noted on drawings.
  2. Breakers shall be quick-make and quick-break type.
  3. Two and three pole breakers shall have internal common trip not just tie handle.
  4. Enclosures shall be NEMA constructed for service and area of intended use.
  5. Breakers shall be thermo-magnetic type unless noted.
- E. Fuses:
1. Fuses shall be Buss dual element "Fusetron" or approved equal, unless noted. Rating shall be as noted on drawings or as recommended by equipment manufacturer of the equipment the fuse is protecting.
  2. Lighting unit fuses shall be as recommended by the fixture manufacturer.
- F. Starters:
1. Manual starting switches shall be surface or flush type as indicated. They shall be as manufactured by Square D, Allen-Bradley, Westinghouse, G. E., or approved equal. Plates for flush units shall be stainless steel. Units shall have an ON indicating light and overload protection.
  2. Three phase starters shall be combination type with thermo-magnetic circuit breakers as shown on drawings. They shall be equipped with control power transformer and have an HOA switch and run light in the door. Contractor shall have a minimum of four auxiliary field convertible contacts. Motor starters shall have single phase/phase-reversal protection.
- G. Factory Installed Variable Frequency Drive(s) / Disconnects:
1. Combination Variable Frequency Drive / Disconnects shall be properly sized, mounted, wired to the fan motor, and commissioned by the AHU manufacturer. Combination VFD / Disconnects shall include the VFD, a circuit breaker disconnect, and a Hand-Off-Auto (H-OA) switch. [An oversized control transformer, and on/off binary output, and all interfacing wiring between the VFD and the DDC controller shall be provided with factory mounted controls.] Factory mounting will facilitate temporary heating, cooling, ventilation, and/or timely completion of the project.
  2. Disconnects: VFD / Disconnects shall be supplied with 600 VAC, 3 pole, magnetic instantaneous short circuit trip circuit breaker. A through-the-door interlocking handle shall be spring loaded and designed to rest only in the full "ON" or "OFF" state. A concealed defeater mechanism will allow entry into the enclosure when the handle is in the "ON" position. A heavy-duty snap action flange operated fusible disconnect switch is also acceptable. A terminal guard shall be supplied on the line side terminals. NEMA Class R fuse clips and fuses shall be provided.
  3. Enclosures: VFD / Disconnects shall have NEMA Type 1 steel open ventilated enclosures.
  4. Variable Frequency Drives: The VFD / Disconnects shall be supplied with a high-performance pulse width modulated (PWM) AC drive that generates a sine-code, variable voltage / frequency, three phase output for optimum speed control. Insulated gate bipolar output transistors (IGBT's) shall insure a low audible magnetic motor noise (@ 60 Hz) of less than 2 Db (@1 meter) above across the line operation. Power electronics shall provide at least 97% efficiency. The VFD shall have one 15-bit microprocessor control logic circuit board for all horsepower ratings. All programming shall be maintained in non-volatile RAM memory so the program will be maintained when power is removed. A digital operator keypad and display shall provide local control and readout for: run/stop/jog, speed, reset, volts, amps, kilowatts, and diagnostics. Output current overload should be rated at 125% of motor FLA for one minute. The VFD shall have the following minimal protective features: current limited stall prevention, auto restart after momentary power loss, speed search for starting into rotating motor, anti-windmill w/DC injection before start, phase to phase short circuit protection, and ground fault protection. Ambient service temperature rating of 10 to 40 degrees C, and humidity rating to 95% non-condensing. The VFD shall meet or exceed UL, CSA, IEEE 444 (ANSI-C343), and IEC: 146A.
  5. Factory Mounting: VFD / Disconnects shall be mounted externally on the drive side of the air handling unit fan section. Ensure four feet of the mechanical room clearance in front of the starter for serviceability.
  6. Factory Wiring: VFD / Disconnects shall be wired to fan motor in "liquid tight" conduit and junction boxes. Units with factory mounted controls shall also include power wiring from the starter control transformer to the control system transformers. All binary start-stop signal, and an analog speed signal shall be wired complete from the direct digital controller to the VFD. Wiring methods shall comply with the National Electric Code and NFPA 90.

7. Factory Commissioning: Trained factory personnel shall ensure proper operation of the VFD by a thorough factory test. The VFD shall be properly set for the voltage and full load amps of the actual motor supplied.

**PART 3 - EXECUTION**

- A. Distribution Equipment shall be installed in complete accordance with the manufacturer's instructions.
- B. Panel boards shall have a typed circuit directory.
  1. Before connection of any apparatus, all insulated wires, cables, and buses will be tested for continuity, proper phasing and freedom from phase or ground faults.
  2. Upon completion of the installation, a complete operating and load test will be conducted for approval. Contractor shall furnish all instruments and personnel required for tests. Tests shall be made in the presence of the Architect. Failures shall be corrected in a manner satisfactory to the Architect.
- C. Upon completion of the electrical installation, Contractor shall restore and patch concrete building, siding, and any other work damaged, defaced, or modified in accomplishing the electrical installation. Patching and painting shall be accomplished so as to match finished materials, paint, or other finish to the satisfaction of the Architect.
- D. The Contractor shall allow for the painting of panel boards, switchgear, or any exposed electrical equipment. All painting shall be done at the direction of the Architect.
- E. All fuse holders shall be permanently marked with the correct fuse rating.

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**END OF SECTION 26 27 00**

## SECTION 26 27 26 – WIRING DEVICES

## PART 1 – GENERAL

## 1.01 SUMMARY

- A. This section includes the following:
  - 1. Single and duplex receptacles, ground-fault circuit interrupters, and integral surge suppression units.
  - 2. Single- and double-pole snap switches and dimmer switches.
  - 3. Device wall plates.
  - 4. Floor service outlets and multioutlet assemblies.

## 1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.
- C. Field quality control test reports.

## 1.03 QUALITY ASSURANCE

- A. Electrical Components, Devices and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

## PART 2 – PRODUCTS

## 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Wiring Devices:
    - a. Hubbell Incorporated; Wiring Device-Kellems
    - b. Leviton Mfg. Company, Inc.
    - c. Pass & Seymour/Legrand; Wiring Devices Div.
  - 2. Multioutlet Assemblies:
    - a. Hubbell Incorporated; Wiring Device-Kellems
    - b. Wiremold Company (The)

## 2.02 RECEPTACLES

- A. Straight-Blade-Type Receptacles: Comply with NEMA WD 1, NEMA WD 6, DSCC W-C-596G, and UL 498.
- B. Straight-Blade and Locking Receptacles: Heavy-Duty grade
- C. GFCI Receptacles: Straight blade, feed-through type, Heavy-Duty grade, with integral NEMA WD 6, Configuration 5-20R duplex receptacle; complying the UL 498 and UL 943. Design units for installation in a 2-3/4-inch- deep outlet box without an adapter.

## 2.03 PENDANT CORD/CONNECTOR DEVICES

- A. Description: Matching, locking-type plug and receptacle body connector, NEMA WD 6, Configurations L5-20P and L5-20R, Heavy-Duty grade.
  - 1. Body: Nylon with screw-open cable-gripping jaws and provision for attaching external cable grip.
  - 2. External Cable Grip:

## 2.04 SWITCHES

- A. Single- and Double-Pole Switches: Comply with DSCC W-C-896F and UL 20.
- B. Snap Switches: Heavy-Duty grade, quiet type.
- C. Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on/off switches and audible frequency and EMI/RFI filters.
  - 1. Control: Continuously adjustable slider; with single-pole or three-way switching to suit connections.
  - 2. Incandescent Lamp Dimmers: Modular, 120V, 60 Hz with continuously adjustable slider; single-pole with EMI/RFI filter to eliminate interference; and 5-inch wire connecting leads.
  - 3. Fluorescent Lamp Dimmer Switches: Modular; compatible with dimmer ballasts; trim potentiometer to adjust low-end dimming; dimmer-ballast combination capable of consistent dimming with low end not greater than 1 percent of full brightness.

## 2.05 WALL PLATES

- A. Single and combination types to match corresponding wiring devices.
  - 1. Plate-Securing Screws: Metal with head color to match plate finish.
  - 2. Material for Finished Spaces: Smooth, high-impact thermoplastic.
  - 3. Material for Wet Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in "wet locations".

## 2.06 FINISHES

- A. Color:
  - 1. Wiring Devices Connected to Power System: For raceway, enclosure, or cabinet components, provide manufacturer's standard paint applied to factory-assembled surface raceways, enclosures, and cabinets before shipping.

## PART 3 – EXECUTION

## 3.01 INSTALLATION

- A. Install devices and assemblies level, plumb, and square with building lines.
- B. Install wall dimmers to achieve indicated rating after derating for ganging.
- C. Install unshared neutral conductors on line and load side of dimmers.
- D. Arrangement of Devices: Unless otherwise indicated, mount flush with long dimension vertical, and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.
- E. Remove wall plates and protect devices and assemblies during painting.
- F. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

## 3.02 IDENTIFICATION

- A. Comply with Division 16 Section "Electrical Identification".
  - 1. Receptacles: Identify panelboard and circuit number from which served. Use hot, stamped or engraved machine printing on face of plate, and durable wire markers or tags inside outlet boxes.

## 3.03 CONNECTIONS

- A. Ground equipment according to Division 16 Section "Grounding and Bonding".
- B. Connect wiring according to Division 16 Section "Conductors and Cables".

## 3.04 FIELD QUALITY CONTROL

- A. Perform the following field tests and inspections and prepare test reports:
  - 1. After installing wiring devices and after electrical circuitry has been energized, test for proper polarity, ground continuity, and compliance with requirements.
  - 2. Test GFCI operation with both local and remote fault simulations according to manufacturer's written instructions.
- B. Remove malfunctioning units, replace with new units, and retest as specified above.

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**END OF SECTION 26 27 26**

## SECTION 26 28 16 – ENCLOSED SWITCHES AND CIRCUIT BREAKERS

## PART 1 – GENERAL

## 1.01 SUMMARY

- A. This Section includes fire the following individually mounted, enclosed switches and circuit breakers:
  - 1. Fusible switches
  - 2. Enclosures

## 1.02 SUBMITTALS

- A. Product Data: For each type of enclosed switch, circuit breaker, accessory, and component indicated.
- B. Shop Drawings: Diagram power, signal, and control wiring.
- C. Field quality-control test reports.
- D. Operation and maintenance data.

## 1.02 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

## PART 2 – PRODUCTS

## 2.01 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

## 2.02 FUSIBLE AND NON-FUSIBLE SWITCHES

- A. Manufacturers:
  - 1. Eaton Corporation; Cutler-Hammer Products
  - 2. General Electric Co.; Electrical Distribution & Control Division
  - 3. Siemens Energy & Automation, Inc.
  - 4. Square D/Group Schneider
- B. Fusible Switch, 600 A and Smaller: NEMA KS 1, Type HD, with clips or bolt pads to accommodate specified fuses, lockable handle with capability to accept two padlocks, and interlocked with cover in closed position.
- C. Accessories:
  - 1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
  - 2. Neutral Kit: Internally mounted; insulated, capable of being grounded, and bonded; and labeled for copper and aluminum neutral conductors.

## 2.03 ENCLOSURES

- A. NEMA Ab 1 and NEMA KS 1 to meet environmental conditions of installed location.
  - 1. Outdoor Locations: NEMA 250, Type 3R
  - 2. Indoor Locations: NEMA 250, Type 12

## PART 3 – EXECUTION

## 3.01 INSTALLATION

- A. Comply with applicable portions of NECA 1, NEMA PB 1.1, and NEMA PB 2.1 for installation of enclosed switches.
- B. Mount individual wall-mounting switches with tops at uniform height, unless otherwise indicated.

## 3.02 FIELD QUALITY CONTROL

- A. Prepare the following field tests and inspections and prepare test reports:
  - 1. Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Section 7.5 for switches. Certify compliance with test parameters.
  - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

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**END OF SECTION 26 28 16**