

Project Manual

Live Oak County

Live Oak County Courthouse

Exterior Restoration



May 30, 2024

Live Oak County Commissioners Court

Hon. James Liska
Live Oak County Judge

Hon. Richard Lee
Hon. Randy Kopplin
Hon. Mitchell Williams
Hon. Lucio Morin

Commissioner Precinct 1
Commissioner Precinct 2
Commissioner Precinct 3
Commissioner Precinct 4

Owner:

Live Oak County
301 Houston Street
George West, Texas 78022

Owner's Project Representative:

Judge James Liska
County Judge
P.O. Box 487
Ph. (361) 449-2733 Fax (361) 449-3155

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**SECTION 000107
SEALS PAGE
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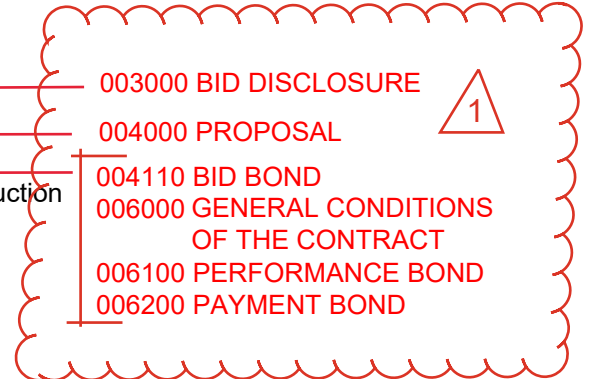
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**SECTION 002113
INSTRUCTIONS TO BIDDERS**

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1.02 RELATED DOCUMENTS

- A. Document 004100 - Bid Form.
- B. Document 007300 - Supplementary Conditions:

INVITATION

2.01 BID SUBMISSION

- A. Bids signed and under seal, executed, and dated will be received at the office of the County Auditor at 301 Houston St, 3rd Floor, George West, Texas 78022-0669 before 3 p.m. local standard time on 07-25-2024.
- B. Offers submitted after the above time will be returned to the bidder unopened.

- C. Submit required Supplements To Bid Forms within 24 hours after closing time for receiving bids.

2.02 INTENT

- A. The intent of this Bid request is to obtain an offer to perform work to complete project named Live Oak County Courthouse Exterior Restoration for a Stipulated Sum contract, in accordance with Contract Documents.

2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS

- A. Work of this proposed Contract comprises building restoration, including general construction Work.
- B. Project Location:
301 Houston St.
George West, Texas 78022.

2.04 CONTRACT TIME

- A. Identify Contract Time in the Bid Form. The completion date in the Agreement shall be the Contract Time added to the commencement date.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 CONTRACT DOCUMENTS IDENTIFICATION

- A. Contract Documents are identified as Owner's Project Number 2308 A1, as prepared by Architect, and with contents as identified in the Project Manual.

3.02 AVAILABILITY

- A. Bid documents may be obtained by contacting the Live Oak County Auditor's Office, (361) 449-2733, P.O. Box 699, George West, Texas 78022-0669 or by email, attention Regina Dove, rdove@co.live-oak.tx.us.

3.03 EXAMINATION

- A. Upon receipt of Bid Documents verify that documents are complete. Notify Architect should the documents be incomplete.
- B. Immediately notify Architect upon finding discrepancies or omissions in the Bid Documents.

3.04 INQUIRIES/ADDENDA

- A. Direct questions to Architect , email; nsolis@fisherheck.com.
- B. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.
- C. Verbal answers are not binding on any party.
- D. Clarifications requested by bidders must be in writing not less than 7 days before date set for receipt of bids. The reply will be in the form of an Addendum, a copy of which will be forwarded to known recipients.

3.05 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

- A. General Requirements for Substitution Requests:
 - 1. Project Manual establishes standards for products, assemblies, and systems.
 - 2. Submit requests only for elements for which substitution is specifically allowed in the Project Manual.
- B. Substitution Request Form:
 - 1. Submit substitution requests by completing the form in Section 004325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- C. Review and Acceptance of Request:
 - 1. Architect may approve the proposed substitution and will issue an Addendum to known bidders.

2. For approved substitutions, include representation of changes in the bid, if any, required in the work and changes to Contract Time and Contract Sum to accommodate such substitutions. A later claim by the bidder for an addition to the Contract Time or Contract Sum because of changes in work necessitated by use of substitutions will not be considered.

SITE ASSESSMENT

4.01 SITE EXAMINATION

- A. Examine the project site before submitting a bid.
- B. The currently occupied premises at the project site are open for examination by bidders only during the following hours:
 1. Monday through Friday: 8AM to 5PM.

4.02 PREBID CONFERENCE

- A. A bidders conference has been scheduled for 10 a.m. on the 10th day of July, 2024 at the location of the Courthouse.
- B. All general contract bidders and suppliers are invited.
- C. Representatives of Architect and Live Oak County will be in attendance.
- D. Summarized minutes of this meeting will be circulated to attendees. These minutes will not form part of Contract Documents.
- E. Information relevant to the Bid Documents will be recorded in an Addendum, issued to Bid Document recipients.

QUALIFICATIONS

5.01 EVIDENCE OF QUALIFICATIONS

- A. To demonstrate qualification for performing the Work of this Contract, bidders may be requested to submit written evidence of financial position, license to perform work in the State and historic preservation and restoration experience.

BID SUBMISSION

6.01 SUBMISSION PROCEDURE

- A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.
- B. Submit one copy of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with bidder's name, project name and Owner's name on the outside.
- C. Improperly completed information, irregularities in security deposit, may be cause not to open the Bid Form envelope and declare the bid invalid or informal.
- D. An abstract summary of submitted bids will be made available to all bidders following bid opening.

6.02 BID INELIGIBILITY

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.
- B. Bid Forms, Appendices, and enclosures that are improperly prepared may, at the discretion of Owner, be declared unacceptable.
- C. Failure to provide security deposit, bonding or insurance requirements may, at the discretion of Owner, be waived.

BID ENCLOSURES/REQUIREMENTS

7.01 SECURITY DEPOSIT

- A. Bids shall be accompanied by a security deposit as follows:

1. Bid Bond of a sum no less than 5 percent of the Bid Amount.
 2. Certified check in the amount of no less than 5 percent of the Bid Amount.
- B. The security deposit will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the accepted bidder.
- C. Include the cost of bid security in the Bid Amount.
- D. If no contract is awarded, all security deposits will be returned.

7.02 CONSENT OF SURETY

- A. Submit with the Bid: _____.

7.03 PERFORMANCE ASSURANCE

- A. Accepted Bidder: Provide a Performance bond as described in 007300 - Supplementary Conditions.
- B. Include the cost of performance assurance bonds in the Bid Amount.

7.04 INSURANCE

- A. Provide an executed "Undertaking of Insurance" on the form provided stating their intention to provide insurance to the bidder in accordance with the insurance requirements of Contract Documents.

7.05 BID FORM REQUIREMENTS

- A. Complete all requested information in the Bid Form and Appendices.

7.06 FEES FOR CHANGES IN THE WORK

- A. Include in the Bid Form, the fees proposed for subcontract work for changes (both additions and deductions) in the Work. Contractor shall apply fees as noted, to the subcontractor's gross (net plus fee) costs on additional work.

7.07 BID FORM SIGNATURE

- A. The Bid Form shall be signed by the bidder, as follows:
1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
 2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.
 3. Corporation: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, a copy of the by-law resolution of their board of directors authorizing them to do so, must also be submitted with the Bid Form in the bid envelope.
 4. Joint Venture: Each party of the joint venture shall execute the Bid Form under their respective seals in a manner appropriate to such party as described above, similar to the requirements of a Partnership.

OFFER ACCEPTANCE/REJECTION


8.01 DURATION OF OFFER

- A. Bids shall remain open to acceptance and shall be irrevocable for a period of sixty (60) days after the bid closing date.

8.02 ACCEPTANCE OF OFFER

- A. Owner reserves the right to accept or reject any or all offers.
- B. After acceptance by Owner, Architect on behalf of Owner, will issue to the successful bidder, a written Bid Acceptance.

END OF SECTION 002113

SECTION 00 3000 
CONTRACTOR'S BID DISCLOSURE

**CONTRACTOR'S
 BIDDER DISCLOSURE STATEMENT**

All questions must be answered or your bid will be deemed non-responsive and subject to rejection. The data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The bidder may submit any additional information he desires.

1. This Bidder Disclosure Statement is submitted to the County of Karnes by:

___ a Corporation ___ a Partnership ___ a Texas Joint Venture or ___ an individual

Address: _____ Contractor's No.: _____
 City: _____ State: _____ Zip Code: _____

2. Years in business under present business name: _____.

3. Years of experience in construction work of the type called for in this contract as:
 A General Contractor _____, A Subcontractor _____.

4. What projects has your organization completed? List most recent FIRST.

Contract Amount	Type of Work	Date Completed	Owner's Name & Address Contact Person & Telephone No.
-----------------	--------------	----------------	--

5. What projects does your organization have under way as of this date?

Contract Amount	Type of Work	Date Completed	Owner's Name & Address Contact Person & Telephone No.
-----------------	--------------	----------------	--

6. Have you ever failed to complete any work awarded to you? ___ Yes ___ No. If yes, state where and why. _____

7. Are you at present in any lawsuits involving construction work of any type?

___ Yes ___ No. If Yes, explain:

8. If this contract is awarded to you, your company's office administrative manager for the work will be Mr. (Ms.) _____, and your resident construction superintendent will be Mr. (Ms.) _____.

9. What experience in this type of work does the individual designated as resident superintendent above have? Attach resume.

10. What portion of the work do you intend to subcontract?

11. What equipment do you own that is available for the proposed work?

Description, Size, Quantity Capacity, etc.	Condition	Years in Service	Present Location

12. Have you received firm offers from suppliers or manufacturers for all major items of material and/or equipment within the price totals used in preparing your proposal?

___ Yes ___ No

Credit Available: \$ _____

Bank Name: _____

Bank Address: _____

Bank Phone: _____

Bonding capacity available: \$ _____

Contact Name: _____

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Engineer and Owner in verification of the recitals comprising this Pre-Bid Disclosure Statement.

The signatory of this questionnaire guarantees the truth and accuracy of all statements herein made and all answers herein expressed.

Date this _____ day of _____, 20____.

By: _____

Title: _____

STATE OF _____

COUNTY OF _____

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

Notary Public

My commission expires: _____

END OF SECTION

**SECTION 003100
AVAILABLE PROJECT INFORMATION**

PART 1 GENERAL

1.01 EXISTING CONDITIONS

- A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of Contract Documents, as follows:
- B. Site and Utility Survey: Entitled Plat of Survey of Block 18, in the town of George West, Live Oak County, Texas, dated June 7, 2023.
- C. Hazardous Material Survey: Entitled Limited Asbestos Inspection and Limited Lead-Based Paint Renovation, Repair, and Painting (RRP) Survey, Live Oak Courthouse, 301 Houston Street, George West, Texas 78022; CEI Project No: 18286, dated July 7, 2023.
 - 1. Original copy is available for inspection at Owner's offices during normal business hours.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 003100

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SECTION 00 4000 1
PROPOSAL

PLACE: **Live Oak County Courthouse, 301 Houston St., George West, Texas 78022**

DATE: _____

Proposal of _____ (hereafter called Bidder),

a Corporation organized and existing under the laws of the State of _____,

OR a Partnership,

OR an Individual doing business as:
 (cross out non-applicable references).

GENTLEMEN:

The Bidder, in compliance with your Invitation for Bids for the construction of "Exterior Restoration of the Live Oak County Courthouse, Architect's No. 2308 A1, having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the contract documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this Proposal is a part.

OFFER

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Fisher Heck, Inc., Architects for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Unit Prices listed in this bid form of:

_____ dollars
 (\$ _____), in lawful money of the United States of America.

We have included the required security deposit as required by the Instruction to Bidders.

All applicable federal taxes are included and State of Texas taxes are included in the Bid Sum.

All Cash and Contingency Allowances described in Section 01210 are included in the Bid Sum.

BASE BID BREAKDOWN

	Name of Subcontractor/ Supplier	Dollar Amount
Division 1 - General Requirements		
General Conditions	_____	\$ _____
Administration - Scheduling, Submittals, Pay Apps, Etc	_____	\$ _____

Live Oak County Courthouse
 Exterior Restoration

00 4000 - 1

PROPOSAL

Project Management, Foreman, Supervision	_____	\$ _____
Temporary Facilities and Controls	_____	\$ _____
Division 2 - Site Construction	_____	\$ _____
Division 3 - Concrete	_____	\$ _____
Division 4 - Masonry.....	_____	\$ _____
Division 5 - Metals	_____	\$ _____
Division 6 - Wood and Plastics	_____	\$ _____
Division 7 - Thermal and Moisture Protection.....	_____	\$ _____
Division 8 - Doors and Windows	_____	\$ _____
Division 9 - Finishes	_____	\$ _____
Division 10 - Specialties	_____	\$ _____
Division 10 - Equipment	_____	\$ _____
Division 12 - Furnishings.....	_____	\$ _____
Division 13 - Special Construction	_____	\$ _____
Division 14 - Conveying Systems	_____	\$ _____
Division 21 - Fire Suppression.....	_____	\$ _____
Division 22 Plumbing	_____	\$ _____
Division 23 HVAC	_____	\$ _____
Division 26 Electrical System	_____	\$ _____
Division 28 Electronic Safety and Security	_____	\$ _____
Division 31 Earthwork	_____	\$ _____
Division 32 Exterior Improvements.....	_____	\$ _____
Total for Divisions 1 through 32	_____	\$ _____
Overhead.....	_____	\$ _____
Profit.....	_____	\$ _____
TOTAL BASE BID	_____	\$ _____

CONTRACT TIME

If this bid is accepted, we will:

Complete the work in _____ calendar days from notice to proceed.

Bidder further agrees to perform all the work described in the specifications and shown on the plans, for the following Alternate Pricing:

ALTERNATE #1 (Add) (Deduct) \$ _____

Additional time required for Substantial Completion of Add ALT 1 in Calendar Days _____.

ALTERNATE #2 (Add) (Deduct) \$ _____

Additional time required for Substantial Completion of Add ALT 1 in Calendar Days _____.

CHANGES TO THE WORK

When Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee will be:

_____ percent overhead and profit on the net cost of our own Work;

_____ percent on the cost of work done by any Subcontractor.

Bidder acknowledges receipt of the following addenda:

BIDDER'S SIGNATURE

Award of the Contract shall be based on the Offer amount, Alternate pricing, and other considerations to be determined by Live Oak County.

(All amounts are to be shown in both words and figures. In case of a discrepancy, the amount shown in words will govern.)

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 days after the Live Oak County Courthouse

scheduled closing time for the receipt of bids.

Upon receipt of written notice of the acceptance of this bid, the Bidder will execute the formal contract attached within 15 days and deliver a Surety Bond or Bonds as required under the General Conditions. The bid security attached in the sum of:

\$ _____ (\$ _____)

is to become the property of the Owner in the event the contract and Bonds are not executed within the time above set forth, as Liquidated Damages, for the delay and additional expense to the Owner caused thereby.

Respectfully submitted,

Signature _____

Print _____

Title _____

Company _____

(Seal, If Corporation)

Address _____

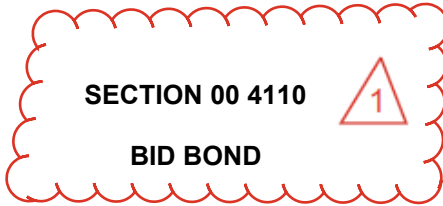
State/Zip _____

Telephone _____

Fax _____

PLEASE NOTE: Bid Bonds, Performance Bonds and Payment Bonds must be submitted from a Corporate Bonding Company licensed to transact such business in the State of Texas.

END OF SECTION



BIDDER (Name and Address):

SURETY (Name/Address/Phone Number of Principal Place of Business):

OWNER (Name and Address):

BID

BID DUE DATE:

PROJECT (Brief Description Including Location):

BOND

BOND NUMBER: _____

DATE (Not later than Bid due date): _____

PENAL SUM: _____ (Words) _____ (Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

Bidder's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title Signature and Title

Attest: _____

Note: (1) Above addresses are to be used for giving required notice.

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(2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to OWNER upon default of Bidder any difference between the total amount of Bidder's Bid and the total amount of the Bid of the next lowest, responsible and responsive Bidder as determined by OWNER for the Work required by the Contract Documents, provided that:
 - 1.1. If there is no such next lowest, responsible and responsive Bidder, and OWNER does not abandon the Project, then Bidder and Surety shall pay to OWNER the penal sum set forth on the face of this Bond, and
 - 1.2. In no event shall Bidder's and Surety's obligations hereunder exceed the penal sum set forth on the face of this Bond.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1. OWNER accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by OWNER, or
 - 3.3. OWNER fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from OWNER, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by OWNER and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power or Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable

requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer or proposal as applicable.

END OF SECTION

**SECTION 006000
GENERAL CONDITIONS OF CONTRACT**



**GENERAL CONDITIONS OF CONTRACT FOR
LIVE OAK COUNTY COURTHOUSE EXTERIOR RESTORATION
ARTICLE 1 GENERAL PROVISIONS**

BASIC DEFINITIONS

CONTRACT DOCUMENTS. THE CONTRACT DOCUMENTS CONSIST OF: THE CONTRACT FOR THE LIVE OAK COUNTY COURTHOUSE EXTERIOR RESTORATION; ANY ADDENDA ISSUED PRIOR TO EXECUTION OF THE CONTRACT; THESE GENERAL CONDITIONS OF THE CONTRACT FOR THE LIVE OAK COUNTY COURTHOUSE EXTERIOR RESTORATION; DRAWINGS INDEX ATTACHED AS EXHIBIT "B" TO THE CONTRACT; THE DRAWINGS AND THE SPECIFICATIONS BEING ON FILE IN OWNER'S FACILITIES AND PARKS DEPARTMENT; NOTICE TO PROCEED; OTHER DOCUMENTS LISTED IN ANY OF THE CONTRACT DOCUMENTS; AND AMENDMENTS ISSUED AFTER EXECUTION OF THE CONTRACT.

AN "AMENDMENT" IS: (A) A WRITTEN AMENDMENT TO THE CONTRACT SIGNED BY BOTH PARTIES; (B) A CHANGE ORDER; (C) A CONSTRUCTION CHANGE DIRECTIVE; OR (D) A WRITTEN ORDER FOR A MINOR CHANGE IN THE WORK ISSUED BY THE ARCHITECT.

CONTRACT. THE CONTRACT DOCUMENTS FORM THE CONTRACT FOR CONSTRUCTION ("CONTRACT"). 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 AMENDMENT. THE CONTRACT DOCUMENTS SHALL NOT BE CONSTRUED TO CREATE A CONTRACTUAL RELATIONSHIP OF ANY KIND: (A) BETWEEN THE ARCHITECT AND CONTRACTOR; (B) BETWEEN THE OWNER AND A SUBCONTRACTOR OR SUB-SUBCONTRACTOR; (C) BETWEEN THE OWNER AND ARCHITECT; OR (D) BETWEEN ANY PERSONS OR ENTITIES OTHER THAN THE OWNER AND 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.

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.

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 OR BY SEPARATE CONTRACTORS.

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.

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.

PROJECT MANUAL. THE "PROJECT MANUAL" IS A VOLUME ASSEMBLED FOR THE WORK WHICH MAY INCLUDE THE BIDDING REQUIREMENTS, SAMPLES, FORMS, CONTRACT DOCUMENTS, AND OTHER MATERIAL.

ADDENDA. "ADDENDA" ARE THE ADDENDA TO THE DRAWINGS OR SPECIFICATIONS FURNISHED BY CONTRACTOR DURING THE BID PROCESS COVERING ADDITIONS, DELETIONS, OR CHANGES TO THE DRAWINGS OR SPECIFICATIONS.

RETAINAGE. "RETAINAGE" MEANS THAT PART OF THE CONTRACT SUM WITHHELD BY OWNER TO SECURE PERFORMANCE OF THE CONTACT IN ACCORDANCE WITH THE TERMS OF SUBPARAGRAPH 9.11.

DATES

“SCHEDULED SUBSTANTIAL COMPLETION DATE” IS THE DATE SO SPECIFIED IN THE CONTRACT.

“SCHEDULED FINAL COMPLETION DATE” IS THE DATE SO SPECIFIED IN THE CONTRACT.

“SUBSTANTIAL COMPLETION” OCCURS ON THE DATE ALL REQUIREMENTS SPECIFIED FOR SUBSTANTIAL COMPLETION IN PARAGRAPH 9.8 HAVE BEEN COMPLETED AND A CERTIFICATE OF SUBSTANTIAL COMPLETION HAS BEEN ACCEPTED BY OWNER AND CONTRACTOR.

“FINAL COMPLETION” OCCURS ON THE DATE ALL REQUIREMENTS SPECIFIED IN PARAGRAPH 9.10 TO ENTITLE CONTRACTOR TO FINAL PAYMENT HAVE BEEN COMPLETED AND OWNER MAKES FINAL PAYMENT TO CONTRACTOR.

CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

THE INTENT OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. 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.

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.

UNLESS OTHERWISE STATED IN THE CONTRACT DOCUMENTS, WORDS WHICH HAVE WELL-KNOWN TECHNICAL OR CONSTRUCTION INDUSTRY MEANINGS ARE USED IN THE CONTRACT DOCUMENTS IN ACCORDANCE WITH SUCH RECOGNIZED MEANINGS.

IN THE EVENT OF CONFLICTS, EXPLANATORY NOTES IN THE DRAWINGS TAKE PRECEDENCE OVER GRAPHIC INDICATIONS, LARGE SCALE DRAWINGS AND DETAILS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS, AND FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. WHERE FIGURED DIMENSIONS ARE NOT INDICATED, SCALED DIMENSIONS MAY BE USED UPON APPROVAL BY THE ARCHITECT. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, BOTH FIGURED AND SCALED, BY MEASUREMENTS OF CONDITIONS AND OF WORK IN PLACE.

CAPITALIZATION TERMS CAPITALIZED IN THESE GENERAL CONDITIONS INCLUDE THOSE WHICH ARE (1) SPECIFICALLY DEFINED; OR (2) THE TITLES OF NUMBERED ARTICLES AND IDENTIFIED REFERENCES TO PARAGRAPHS, SUBPARAGRAPHS AND CLAUSES IN THE DOCUMENT.

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.

EXECUTION OF CONTRACT DOCUMENTS

THE CONTRACT DOCUMENTS SHALL BE SIGNED BY THE OWNER AND CONTRACTOR. IF EITHER THE OWNER OR CONTRACTOR OR BOTH DO NOT SIGN ALL THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL IDENTIFY SUCH UNSIGNED DOCUMENTS UPON REQUEST.

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.

BEFORE PERFORMING ANY PORTION OF THE WORK, THE CONTRACTOR SHALL FULLY INVESTIGATE ALL PHYSICAL ASPECTS OF THE PROJECT SITE AND VERIFY ALL DIMENSIONS, MEASUREMENTS, PROPERTY LINES, UTILITY LOCATIONS, GRADES AND ELEVATIONS, EXISTING IMPROVEMENTS, SURFACE AND SUBSURFACE SOIL CONDITIONS, DRAINAGE OF BOTH SURFACE AND SUBSURFACE, SOIL PLASTICITY, AND GENERAL SUITABILITY OF CONDITIONS AT THE PROJECT SITE.

OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS ALL PLANS, DRAWINGS, SPECIFICATIONS AND

COPIES THEREOF FURNISHED BY THE ARCHITECT ARE AND SHALL REMAIN THE PROPERTY OF THE OWNER. THEY SHALL NOT BE USED BY ANY PERSON ON ANY OTHER PROJECT WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER.

ARTICLE 2 OWNER

GENERAL

THE OWNER IS THE PERSON OR ENTITY IDENTIFIED AS SUCH IN THE CONTRACT AND IS REFERRED TO THROUGHOUT THE CONTRACT DOCUMENTS AS IF SINGULAR IN NUMBER. OWNER'S REPRESENTATIVE DESIGNATED IN THE CONTRACT (OR AS CHANGED BY WRITTEN NOTICE TO CONTRACTOR) SHALL HAVE EXPRESS AUTHORITY TO BIND THE OWNER WITH RESPECT TO ALL MATTERS REQUIRING THE OWNER'S APPROVAL OR AUTHORIZATION. THE ARCHITECT DOES NOT HAVE SUCH AUTHORITY. THE TERM "OWNER" FOR PURPOSES OF COMMUNICATION AND INTERACTION MEANS THE OWNER OR THE OWNER'S AUTHORIZED REPRESENTATIVE.

THE OWNER SHALL FURNISH TO THE CONTRACTOR, WITHIN FIFTEEN (15) DAYS AFTER RECEIPT OF A WRITTEN REQUEST, INFORMATION NECESSARY AND RELEVANT FOR THE CONTRACTOR TO EVALUATE, GIVE NOTICE OF OR ENFORCE MECHANIC'S LIEN RIGHTS. SUCH INFORMATION SHALL INCLUDE A CORRECT STATEMENT OF THE RECORD LEGAL TITLE TO THE PROPERTY ON WHICH THE PROJECT IS LOCATED, USUALLY REFERRED TO AS THE SITE, AND THE OWNER'S INTEREST THEREIN.

INFORMATION AND SERVICES REQUIRED OF THE OWNER

AFTER INDEPENDENT INVESTIGATION, CONTRACTOR IS SATISFIED THAT OWNER HAS THE FINANCIAL ABILITY TO FULFILL OWNER'S OBLIGATIONS UNDER THE CONTRACT DOCUMENTS.

EXCEPT FOR PERMITS AND FEES, INCLUDING THOSE REQUIRED UNDER SUBPARAGRAPH 3.7.1, WHICH ARE THE RESPONSIBILITY OF THE CONTRACTOR UNDER THE CONTRACT DOCUMENTS, 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.

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 SUCH INFORMATION FURNISHED BY THE OWNER BUT SHALL EXERCISE PROPER PRECAUTIONS RELATING TO THE SAFE PERFORMANCE OF THE WORK.

INFORMATION OR SERVICES REQUIRED OF THE OWNER BY THE CONTRACT DOCUMENTS SHALL BE FURNISHED BY THE OWNER WITH REASONABLE PROMPTNESS. ANY OTHER INFORMATION OR SERVICES RELEVANT TO THE CONTRACTOR'S PERFORMANCE OF THE WORK UNDER THE OWNER'S CONTROL SHALL BE FURNISHED BY THE OWNER AFTER RECEIPT FROM THE CONTRACTOR OF A WRITTEN REQUEST FOR SUCH INFORMATION OR SERVICES.

UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR WILL BE FURNISHED, FREE OF CHARGE, SUCH COPIES OF DRAWINGS AND PROJECT MANUALS AS ARE REASONABLY NECESSARY FOR EXECUTION OF THE WORK.

OWNER'S RIGHT TO STOP WORK IF THE CONTRACTOR FAILS TO CORRECT WORK WHICH IS NOT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AS REQUIRED BY PARAGRAPH 12.2 OR 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 SUBPARAGRAPH 6.1.3. THIS RIGHT SHALL BE IN ADDITION TO, NOT IN RESTRICTION OF, OWNER'S RIGHTS UNDER PARAGRAPH 12.2.

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 PERIOD OF FORTY-EIGHT (48) HOURS 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 DEFICIENCIES. IN SUCH CASE, AN APPROPRIATE CHANGE ORDER SHALL BE ISSUED (WHICH MAY BE SIGNED ONLY BY OWNER) DEDUCTING FROM PAYMENTS THEN OR THEREAFTER DUE THE CONTRACTOR THE REASONABLE COST OF CORRECTING SUCH DEFICIENCIES, INCLUDING OWNER'S EXPENSES AND COMPENSATION FOR THE ARCHITECT'S ADDITIONAL SERVICES MADE NECESSARY BY SUCH DEFAULT, NEGLIGENCE OR FAILURE. IF PAYMENTS THEN OR THEREAFTER DUE THE CONTRACTOR ARE NOT SUFFICIENT TO COVER SUCH AMOUNTS, THE CONTRACTOR SHALL PAY THE DIFFERENCE TO THE OWNER.

ARTICLE 3 CONTRACTOR

GENERAL

THE CONTRACTOR IS THE PERSON OR ENTITY IDENTIFIED AS SUCH IN THE CONTRACT AND IS REFERRED TO THROUGHOUT THE CONTRACT DOCUMENTS AS IF SINGULAR IN NUMBER. THE TERM "CONTRACTOR" FOR PURPOSES OF COMMUNICATION AND INTERACTION MEANS THE CONTRACTOR OR THE CONTRACTOR'S AUTHORIZED REPRESENTATIVE AS SPECIFIED IN THE CONTRACT OR CHANGED ACCORDING TO ITS TERMS.

ARTICLE 5 SUBCONTRACTORS

DEFINITIONS

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 OR OTHERWISE FURNISHES LABOR OR MATERIALS. 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 SUBCONTRACTORS OF A SEPARATE CONTRACTOR.

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 OR OTHERWISE FURNISHES LABOR OR MATERIALS. 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.

ARTICLE 6

CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

THE OWNER RESERVES THE RIGHT TO PERFORM CONSTRUCTION OR OPERATIONS RELATED TO THE PROJECT WITH THE OWNER'S OWN FORCES AND/OR TO AWARD SEPARATE CONTRACTS IN CONNECTION WITH OTHER PORTIONS OF THE PROJECT OR OTHER CONSTRUCTION OR OPERATIONS ON THE SITE.

WHEN SEPARATE CONTRACTS ARE AWARDED FOR DIFFERENT PORTIONS OF THE PROJECT OR OTHER CONSTRUCTION OR OPERATIONS ON THE SITE, THE TERM "CONTRACTOR" IN THE APPLICABLE "CONTRACT DOCUMENTS" IN EACH CASE SHALL MEAN THE CONTRACTOR WHO EXECUTES EACH SEPARATE OWNER-CONTRACTOR AGREEMENT.

IF OWNER EXERCISES OWNER'S RIGHT TO PERFORM CONSTRUCTION OR OPERATIONS UNDER SUBPARAGRAPH 6.1.1, 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. CONTRACTOR AGREES TO COOPERATE WITH OWNER'S OWN FORCES AND/OR EACH SEPARATE CONTRACTOR. THE CONTRACTOR SHALL PARTICIPATE WITH OTHER SEPARATE CONTRACTORS AND THE OWNER IN REVIEWING THE CONSTRUCTION SCHEDULES OF ALL PARTIES. THE CONTRACTOR SHALL MAKE ANY REVISIONS TO THE CONSTRUCTION SCHEDULE DEEMED NECESSARY BY OWNER AND CONTRACTOR, AFTER A JOINT REVIEW OF ALL PARTIES' CONSTRUCTION SCHEDULES AND MUTUAL AGREEMENT THEREON. UNTIL MUTUAL AGREEMENT ON A REVISED CONSTRUCTION SCHEDULE IS REACHED, THE CONSTRUCTION SCHEDULES OF EACH PARTY SHALL CONSTITUTE THE SCHEDULES TO BE USED BY THE CONTRACTOR, SEPARATE CONTRACTORS AND THE OWNER UNTIL SUBSEQUENTLY REVISED.

ARTICLE 7 CHANGES IN THE WORK

GENERAL

CHANGES IN THE WORK MAY BE ACCOMPLISHED AFTER EXECUTION OF THE CONTRACT, AND WITHOUT INVALIDATING THE CONTRACT, ONLY 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.

ARTICLE 8 TIME

DEFINITIONS

UNLESS OTHERWISE PROVIDED, CONTRACT TIME BEGINS ON THE DATE OF COMMENCEMENT SPECIFIED IN THE CONTRACT AND IS THE PERIOD OF TIME, INCLUDING AUTHORIZED ADJUSTMENTS, ALLOTTED IN THE CONTRACT DOCUMENTS FOR SUBSTANTIAL COMPLETION OF THE WORK.

THE DATE OF COMMENCEMENT OF THE WORK IS THE DATE ESTABLISHED IN THE CONTRACT AS THE DATE STIPULATED IN THE NOTICE TO PROCEED.

THE DATE OF ACTUAL SUBSTANTIAL COMPLETION IS THE DATE CERTIFIED BY THE ARCHITECT AND APPROVED IN WRITING BY OWNER IN ACCORDANCE WITH PARAGRAPH 9.8.

THE TERM "DAY" AS USED IN THE CONTRACT DOCUMENTS SHALL MEAN CALENDAR DAY UNLESS OTHERWISE SPECIFICALLY DEFINED.

ARTICLE 9 PAYMENTS AND COMPLETION

CONTRACT SUM THE CONTRACT SUM IS STATED IN THE CONTRACT AND, INCLUDING PROPERLY AUTHORIZED ADJUSTMENTS, IS THE TOTAL AMOUNT PAYABLE BY THE OWNER TO THE CONTRACTOR FOR PERFORMANCE OF THE WORK UNDER THE CONTRACT DOCUMENTS.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

SAFETY PRECAUTIONS AND PROGRAMS NOTWITHSTANDING ANYTHING IN THE CONTRACT DOCUMENTS TO THE CONTRARY, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS AS MAY BE PRUDENT UNDER THE CIRCUMSTANCES TO INSURE THE SAFE COMPLETION OF THE PROJECT. SUCH SAFETY PRECAUTIONS AND PROGRAMS SHALL INCLUDE, BUT NOT BE LIMITED TO ALCOHOL AND SUBSTANCE ABUSE PREVENTION AND TESTING FOR PERSONS PERFORMING THE WORK ON THE PROJECT SITE.

ARTICLE 11

INSURANCE, INDEMNIFICATION, AND BONDS

INSURANCE PROVIDED BY CONTRACTOR

CONTRACTOR SHALL, AT ITS SOLE EXPENSE, MAINTAIN IN EFFECT AT ALL TIMES DURING THE FULL TERM OF ITS WORK UNDER THE CONTRACT DOCUMENTS (INCLUDING, WITHOUT LIMITATION, ANY POST ACCEPTANCE WARRANTY WORK OF CONTRACTOR OR ANY SUBCONTRACTOR) AND AS OTHERWISE REQUIRED UNDER THE CONTRACT DOCUMENTS, INSURANCE COVERAGE WITH LIMITS NOT LESS THAN THOSE SET FORTH IN THE CONTRACT DOCUMENTS. INSURANCE COVERAGE SHALL BE PROCURED FROM INSURERS LICENSED TO DO BUSINESS IN THE STATE OF TEXAS, ACCEPTABLE TO OWNER AND UNDER FORMS OF POLICIES SATISFACTORY TO OWNER. NONE OF THE REQUIREMENTS CONTAINED IN THIS ARTICLE 11 AS TO TYPES, LIMITS OR OWNER'S APPROVAL OF INSURANCE COVERAGE TO BE MAINTAINED BY CONTRACTOR IS INTENDED TO AND SHALL NOT IN ANY MANNER LIMIT, QUALIFY OR QUANTIFY THE LIABILITIES AND OBLIGATIONS ASSUMED BY CONTRACTOR UNDER THE CONTRACT DOCUMENTS OR OTHERWISE PROVIDED BY LAW. IN THE EVENT OF ANY FAILURE BY CONTRACTOR TO COMPLY WITH THE PROVISIONS OF THIS PARAGRAPH 11.1, OWNER MAY, WITHOUT IN ANY WAY COMPROMISING OR WAIVING ANY RIGHT OR REMEDY AT LAW OR IN EQUITY, ON NOTICE TO CONTRACTOR, PURCHASE SUCH INSURANCE, AT CONTRACTOR'S EXPENSE (WHICH MAY BE DEDUCTED FROM ANY PAYMENT DUE BY OWNER TO CONTRACTOR UNDER THE CONTRACT DOCUMENTS), PROVIDED THAT OWNER SHALL HAVE NO OBLIGATION TO OBTAIN AND MAINTAIN SUCH INSURANCE AMOUNTS AND COVERAGES.

SCHEDULE OF CONTRACTOR'S INSURANCE COVERAGES

MINIMUM AMOUNTS AND LIMITS

WORKER'S COMPENSATION

STATUTORY LIMITS

\$1,000,000

THE COVERAGE SET FORTH IN THIS SUBPARAGRAPH 11.1.2.1 SHALL INCLUDE ALL OPERATIONS OF THE CONTRACTOR AND ALL SUBCONTRACTORS. THIS COVERAGE SHALL INCLUDE A WAIVER OF SUBROGATION IN FAVOR OF THE OWNER.

COMMERCIAL GENERAL LIABILITY

\$1,000,000 EACH OCCURRENCE, OR EQUIVALENT,

SUBJECT TO A \$1,000,000 AGGREGATE APPLICABLE TO THE PROJECT

THIS POLICY SHALL BE ON A FORM ACCEPTABLE TO OWNER, ENDORSED TO INCLUDE THE OWNER AS ADDITIONAL INSURED, CONTAIN CROSS-LIABILITY AND SEVERABILITY OF INTEREST ENDORSEMENTS, STATE THAT THIS INSURANCE IS PRIMARY AND NON-CONTRIBUTORY INSURANCE AS REGARDS ANY OTHER INSURANCE CARRIED BY THE OWNER, AND SHALL INCLUDE THE FOLLOWING COVERAGES:

PREMISES/OPERATIONS;

INDEPENDENT CONTRACTORS;

COMPLETED OPERATIONS FOR A PERIOD OF TWO YEARS FOLLOWING THE ACCEPTANCE OF CONTRACTOR'S WORK;

BROAD FORM CONTRACTUAL LIABILITY

BROAD FORM PROPERTY DAMAGE;

HAZARDS.

THE COVERAGE REQUIRED IN THIS SUBPARAGRAPH 11.1.2.2 SHALL COVER CONTRACTOR AND ANY APPLICABLE SUBCONTRACTOR.

UMBRELLA EXCESS LIABILITY INSURANCE

\$3,000,000 PER OCCURRENCE

\$3,000,000 AGGREGATE

THIS POLICY SHALL BE ON A FORM ACCEPTABLE TO OWNER, WRITTEN ON AN UMBRELLA EXCESS BASIS ABOVE COVERAGES AS DESCRIBED IN 11.1.2.1 AND 11.1.2.2 ABOVE AND 11.1.2.5 BELOW, ENDORSED TO INCLUDE OWNER AS AN ADDITIONAL INSURED (OWNER SHALL BE NAMED AS ADDITIONAL INSURED ON THE POLICIES REQUIRED IN 11.1.2.2 AND 11.1.2.3), CONTAIN CROSS-LIABILITY AND SEVERABILITY OF INTEREST ENDORSEMENTS, AND STATE THAT THIS INSURANCE IS PRIMARY AND NON-CONTRIBUTORY INSURANCE AS REGARDS ANY OTHER INSURANCE CARRIED BY OWNER. IN ADDITION, THE POLICY SHALL BE ENDORSED TO PROVIDE DEFENSE COVERAGE OBLIGATIONS. THE COVERAGE REQUIRED IN THIS SUBPARAGRAPH 11.1.2.3 SHALL COVER CONTRACTOR AND SUBCONTRACTORS.

BUILDER'S RISK INSURANCE. CONTRACTOR SHALL CARRY, AT ITS SOLE EXPENSE, COMPLETED VALUE FORM BUILDER'S RISK PROPERTY INSURANCE (SUBJECT TO A DEDUCTIBLE PER LOSS NOT TO EXCEED TWENTY FIVE THOUSAND DOLLARS (\$25,000.00)) UPON THE ENTIRE WORK, INCLUDING WITHOUT LIMITATION, COVERAGE FOR ALL OWNER SUPPLIED MATERIALS, FOR ONE HUNDRED PERCENT (100%) OF THE FULL REPLACEMENT COST VALUE OF SUCH OWNER SUPPLIED MATERIALS (100% INCLUDES ADDITIONAL COSTS OF ARCHITECTURAL AND ENGINEERING SERVICES IN THE EVENT OF A LOSS). THIS POLICY SHALL INCLUDE THE INTERESTS OF THE OWNER, CONTRACTOR, AND SUBCONTRACTORS IN THE WORK AS NAMED INSURED'S, AS THEIR INTERESTS MAY APPEAR, AND SHALL BE ON AN "ALL RISK" BASIS FOR PHYSICAL LOSS OR DAMAGE RESULTING FROM, WITHOUT LIMITATION, FIRE, FLOOD, EARTHQUAKE, SUBSIDENCE, HAIL, THEFT, VANDALISM AND MALICIOUS MISCHIEF. THIS POLICY SHALL ALSO INCLUDE COVERAGE FOR PORTIONS OF THE WORK WHILE IT IS STORED OFF THE SITE OR IS IN TRANSIT. THIS POLICY SHALL FURTHER PROVIDE, BY ENDORSEMENT OR OTHERWISE, THAT CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL PREMIUMS UNDER THE POLICY, AND THAT OWNER SHALL HAVE NO OBLIGATION FOR THE PREMIUM PAYMENT, NOTWITHSTANDING THAT OWNER IS A NAMED INSURED UNDER THE POLICY. ANY INSURED LOSS OR CLAIM OF LOSS SHALL BE ADJUSTED BY THE OWNER, AND ANY SETTLEMENT PAYMENTS SHALL BE MADE PAYABLE TO THE OWNER. UPON THE OCCURRENCE OF AN INSURED LOSS OR CLAIM OF LOSS, MONIES RECEIVED WILL BE HELD BY OWNER, WHO SHALL MAKE DISTRIBUTION IN ACCORDANCE WITH AN AGREEMENT TO BE REACHED IN SUCH EVENT BETWEEN OWNER AND CONTRACTOR. IF THE PARTIES ARE UNABLE TO AGREE BETWEEN THEMSELVES ON THE SETTLEMENT OF THE LOSS, SUCH DISPUTE SHALL BE SUBMITTED FIRST TO MEDIATION AS DESCRIBED IN PARAGRAPH 4.5, BUT THE WORK OF THE PROJECT SHALL, NEVERTHELESS PROGRESS DURING ANY SUCH PERIOD OF DISPUTE WITHOUT PREJUDICE TO THE RIGHTS OF ANY PARTY TO THE DISPUTE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LOSS, THE VALUE OF WHICH IS WITHIN THE DEDUCTIBLE OF THE POLICY.

COMPREHENSIVE AUTOMOBILE LIABILITY

COMBINED SINGLE LIMIT OF \$1,000,000 PER OCCURRENCE

THIS POLICY SHALL BE ON A FORM ACCEPTABLE TO OWNER, WRITTEN TO COVER ALL OWNED, HIRED AND NON-OWNED AUTOMOBILES. THE POLICY SHALL BE ENDORSED TO INCLUDE THE OWNER AS ADDITIONAL INSURED, CONTAIN CROSS-LIABILITY AND SEVERABILITY OF INTEREST ENDORSEMENTS, AND STATE THAT THIS INSURANCE IS PRIMARY AND NON-CONTRIBUTORY INSURANCE AS REGARDS ANY OTHER INSURANCE CARRIED BY THE OWNER.

CONTRACTOR'S EQUIPMENT ANY SUCH INSURANCE POLICY COVERING THE EQUIPMENT OF CONTRACTOR OR ITS SUBCONTRACTORS AGAINST LOSS BY PHYSICAL DAMAGE SHALL INCLUDE AN ENDORSEMENT WAIVING THE INSURER'S RIGHT OF SUBROGATION AGAINST THE OWNER. THE INSURANCE COVERING EQUIPMENT SHALL BE THE SOLE AND COMPLETE MEANS OF RECOVERY FOR ANY LOSS OF SUCH EQUIPMENT BY CONTRACTOR OR ITS SUBCONTRACTORS. SHOULD CONTRACTOR OR ITS SUBCONTRACTORS CHOOSE TO SELF INSURE THE RISK, IT IS EXPRESSLY AGREED THAT THE CONTRACTOR AND ITS SUBCONTRACTORS HEREBY WAIVE ANY CLAIM FOR DAMAGE OR LOSS TO SAID EQUIPMENT, IN FAVOR OF THE OWNER.

EVIDENCE OF INSURANCE EVIDENCE OF THE INSURANCE COVERAGE REQUIRED TO BE MAINTAINED BY THE CONTRACTOR UNDER THIS PARAGRAPH 11.1, REPRESENTED BY CERTIFICATES OF INSURANCE AND ENDORSEMENTS ISSUED BY THE INSURANCE CARRIER, MUST BE FURNISHED TO THE OWNER AT THE ADDRESS BELOW, PRIOR TO EXECUTION OF THE CONTRACT BY OWNER. CERTIFICATES OF INSURANCE SHALL SPECIFY THE INSURED STATUS MENTIONED ABOVE IN THIS PARAGRAPH 11.1, AS WELL AS THE WAIVERS OF SUBROGATION. THE CERTIFICATES OF INSURANCE SHALL STATE THAT OWNER WILL BE NOTIFIED IN WRITING THIRTY (30) DAYS PRIOR TO A CANCELLATION, MATERIAL CHANGE, OR NON-RENEWAL OF INSURANCE. CONTRACTOR SHALL PROVIDE TO OWNER A CERTIFIED COPY OF ANY AND ALL APPLICABLE INSURANCE POLICIES, UPON REQUEST OF OWNER. TIMELY RENEWAL CERTIFICATES WILL BE PROVIDED TO OWNER AS THE COVERAGE OF EACH POLICY RENEWS.

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SUBCONTRACTORS' INSURANCE SIMILAR TO THAT REQUIRED OF CONTRACTOR, INCLUDING AN ENDORSEMENT BY THE INSURANCE COMPANY OF OWNER AS AN ADDITIONAL INSURED, WITH LIMITS OF LIABILITY AS DETERMINED BY OWNER, SHALL BE PROVIDED BY OR ON BEHALF OF ALL SUBCONTRACTORS TO COVER OPERATIONS PERFORMED BY SUCH SUBCONTRACTORS UNDER THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY MODIFICATION IN THE INSURANCE REQUIREMENTS OF PARAGRAPH 11.1, AS THEY APPLY TO SUBCONTRACTORS. CONTRACTOR SHALL MAINTAIN CERTIFICATES OF INSURANCE FROM ALL SUBCONTRACTORS, ENUMERATING, AMONG OTHER THINGS, THE WAIVERS IN FAVOR OF, AND INSURED STATUS OF, THE OWNER, AS REQUIRED HEREIN, AND SHALL MAKE SUCH CERTIFICATES AVAILABLE TO OWNER IN ACCORDANCE WITH THE TIME FRAME DESCRIBED IN PARAGRAPH 11.1.4. THE TERM "SUBCONTRACTOR(S)" FOR THE PURPOSES OF THIS ARTICLE 11 SHALL INCLUDE SUBCONTRACTORS OF ANY TIER.

RELEASE AND WAIVER CONTRACTOR HEREBY RELEASES, AND SHALL CAUSE ITS SUBCONTRACTORS TO RELEASE, OWNER FROM ANY AND ALL CLAIMS OR CAUSES OF ACTION, WHATSOEVER, WHICH CONTRACTOR AND/OR ITS SUBCONTRACTORS MIGHT OTHERWISE POSSESS RESULTING IN OR FROM OR IN ANY WAY CONNECTED WITH ANY LOSS COVERED OR WHICH SHOULD HAVE BEEN COVERED BY INSURANCE (INCLUDING THE DEDUCTIBLE PORTION THEREOF), MAINTAINED AND/OR REQUIRED TO BE MAINTAINED BY CONTRACTOR AND/OR ITS SUBCONTRACTORS PURSUANT TO THE CONTRACT DOCUMENTS.

CLAIMS MADE POLICIES WITH RESPECT TO ANY OF THE INSURANCE POLICIES PROVIDED BY CONTRACTOR PURSUANT TO THE CONTRACT DOCUMENTS WHICH ARE "CLAIMS MADE" POLICIES, IN THE EVENT AT ANY TIME ANY SUCH POLICIES ARE CANCELED OR NOT RENEWED, CONTRACTOR SHALL PROVIDE TO OWNER A SUBSTITUTE INSURANCE POLICY(IES) WITH TERMS AND CONDITIONS AND IN AMOUNTS WHICH COMPLY WITH THE TERMS OF THE CONTRACT DOCUMENTS AND WHICH PROVIDES FOR RETROACTIVE COVERAGE TO THE DATE OF CANCELLATION OR NON-RENEWAL TO FILL ANY GAPS IN COVERAGE WHICH MAY EXIST DUE TO THE CANCELLATION OR NON-RENEWAL OF THE PRIOR "CLAIMS MADE" POLICIES. WITH RESPECT TO ALL "CLAIMS MADE" POLICIES WHICH ARE RENEWED, CONTRACTOR SHALL PROVIDE COVERAGE RETROACTIVE TO THE DATE OF COMMENCEMENT OF THE WORK IN SAID RENEWED POLICY. ALL SUBSTITUTE OR RENEWED "CLAIMS MADE" POLICIES SHALL BE MAINTAINED IN FULL FORCE AND EFFECT FOR THE LONGER OF (A) TWO (2) YEARS FROM THE DATE OF FINAL COMPLETION OF THE WORK; OR (B) AS OTHERWISE REQUIRED BY THE CONTRACT DOCUMENTS. A CERTIFICATE EVIDENCING CONTINUATION OF SUCH POLICIES SHALL BE SUBMITTED WITH THE FINAL APPLICATION FOR PAYMENT, AS REQUIRED BY SUBPARAGRAPH 9.10.2. NOTHING HEREIN SHALL AFFECT THE CONTINUING EFFECT OF THE INDEMNITY CLAUSES IN THE CONTRACT DOCUMENTS.

OWNER MAY ELECT AT ANY TIME DURING THE TERM OF THE CONTRACT TO REQUIRE CONTRACTOR TO PROCURE AND MAINTAIN OTHER OR ADDITIONAL INSURANCE. NOTICE OF SUCH ELECTION SHALL BE GIVEN AT LEAST SIXTY (60) DAYS PRIOR TO THE EFFECTIVE DATE OF THE REQUIRED MODIFICATIONS. ANY ADDITIONAL REASONABLE COSTS INCURRED BY CONTRACTOR IN SECURING SUCH INSURANCE SHALL BE BY CHANGE ORDER IN ACCORDANCE WITH SUBPARAGRAPH 7.2 ABOVE.

INDEMNIFICATION TO THE FULLEST EXTENT PERMITTED BY LAW, CONTRACTOR SHALL, AND DOES, AGREE TO INDEMNIFY, PROTECT, DEFEND, AND HOLD HARMLESS THE OWNER, ITS OFFICIALS, EMPLOYEES, AND AGENTS THEREOF (COLLECTIVELY THE "INDEMNITEES") FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES, LIENS, CAUSES OF ACTION, SUITS, JUDGMENTS, AND EXPENSES, INCLUDING ATTORNEY FEES, OF ANY NATURE, KIND OR DESCRIPTION OF ANY PERSON OR ENTITY, DIRECTLY OR INDIRECTLY ARISING OUT OF, CAUSED BY, OR RESULTING FROM (IN WHOLE OR IN PART): (A) THE WORK PERFORMED HEREUNDER, OR ANY PART THEREOF; (B) WORK NOT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT; (C) THE CONTRACT; OR (D) ANY ACT OR OMISSION OF CONTRACTOR, ANY SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY THEM, OR ANYONE THAT THEY CONTROL OR EXERCISE CONTROL OVER (COLLECTIVELY, "THE LIABILITIES"). CONTRACTOR SHALL PROMPTLY ADVISE OWNER, IN WRITING, OF ANY ACTION, ADMINISTRATIVE OR LEGAL PROCEEDING OR INVESTIGATION TO WHICH THIS INDEMNIFICATION MAY APPLY, AND CONTRACTOR, AT CONTRACTOR'S EXPENSE, SHALL ASSUME, ON BEHALF OF OWNER (AND OTHER INDEMNITEES) AND SHALL CONDUCT, WITH DUE DILIGENCE AND IN GOOD FAITH, THE DEFENSE THEREOF WITH COUNSEL SATISFACTORY TO OWNER; PROVIDED, HOWEVER, THAT OWNER SHALL HAVE THE RIGHT, AT ITS OPTION, TO BE REPRESENTED BY ADVISORY COUNSEL OF ITS OWN SELECTION AND AT ITS OWN EXPENSE. IN THE EVENT OF FAILURE BY THE CONTRACTOR TO FULLY PERFORM, IN ACCORDANCE WITH THIS INDEMNIFICATION PARAGRAPH, OWNER, AT ITS OPTION, AND WITHOUT RELIEVING CONTRACTOR OF ITS OBLIGATIONS HEREUNDER, MAY SO PERFORM, BUT ALL COSTS AND EXPENSES SO INCURRED BY OWNER IN THAT EVENT SHALL BE REIMBURSED BY CONTRACTOR TO OWNER, TOGETHER WITH INTEREST ON THE SAME FROM THE DATE ANY SUCH EXPENSE WAS PAID BY OWNER UNTIL REIMBURSED BY CONTRACTOR, AT THE HIGHEST LAWFUL RATE OF INTEREST. FURTHER, SHOULD OWNER ELECT TO PERFORM, ALL COSTS AND EXPENSES INCURRED BY OWNER SHALL, AT THE OPTION OF OWNER, BE DEDUCTED FROM ANY PAYMENT DUE BY OWNER TO CONTRACTOR, PURSUANT TO THE CONTRACT. THIS INDEMNIFICATION

SHALL NOT BE LIMITED TO DAMAGES, COMPENSATION, OR BENEFITS PAYABLE UNDER INSURANCE POLICIES, WORKERS' COMPENSATION ACTS, DISABILITY BENEFIT ACTS, OR OTHER EMPLOYEES' BENEFIT ACTS.

IT IS UNDERSTOOD AND AGREED THAT PARAGRAPH 11.2 ABOVE IS SUBJECT TO, AND EXPRESSLY LIMITED BY, THE TERMS AND CONDITIONS OF TEX. CIV. PRACT. & REM. CODE ANN. "130.001-130.005 (VERNON SUPP. 1989), AS AMENDED OR REVISED AND AS IN EFFECT AT THE TIME OF THE EXECUTION OF THE CONTRACT. CONTRACTOR SHALL NOT BE OBLIGATED UNDER PARAGRAPH 11.2 TO INDEMNIFY OR HOLD HARMLESS ARCHITECT OR ANY AGENT, SERVANT, OR EMPLOYEE OF ARCHITECT FROM LIABILITY OR DAMAGE THAT:

IS CAUSED BY OR RESULTS FROM:

DEFECTS IN PLANS, DESIGNS, OR SPECIFICATIONS PREPARED, APPROVED, OR USED BY THE ARCHITECT; OR

NEGLIGENCE OF THE ARCHITECT IN THE RENDITION OR CONDUCT OF PROFESSIONAL DUTIES CALLED FOR OR ARISING OUT OF THE CONTRACT DOCUMENTS AND THE PLANS, DESIGNS, OR SPECIFICATIONS THAT ARE A PART OF THE CONTRACT DOCUMENTS; AND

ARISES FROM:

PERSONAL INJURY OR DEATH;

PROPERTY INJURY; OR

ANY OTHER EXPENSE THAT ARISES FROM PERSONAL INJURY, DEATH, OR PROPERTY INJURY.

IT IS AGREED WITH RESPECT TO ANY LEGAL LIMITATIONS NOW OR HEREAFTER IN EFFECT AND AFFECTING THE VALIDITY OR ENFORCEABILITY OF THE INDEMNIFICATION OBLIGATION UNDER THIS PARAGRAPH 11.2, SUCH LEGAL LIMITATIONS ARE MADE A PART OF THE INDEMNIFICATION OBLIGATION AND SHALL OPERATE TO AMEND THE INDEMNIFICATION OBLIGATION TO THE MINIMUM EXTENT NECESSARY TO BRING THE PROVISION INTO CONFORMITY WITH THE REQUIREMENTS OF SUCH LIMITATIONS, AND AS SO MODIFIED, THE INDEMNIFICATION OBLIGATION SHALL CONTINUE IN FULL FORCE AND EFFECT. CONTRACTOR'S OBLIGATIONS UNDER PARAGRAPH 11.2 AND ALL OTHER INDEMNITIES BY CONTRACTOR IN THE CONTRACT DOCUMENTS SHALL SURVIVE THE COMPLETION OF THE WORK AND THE TERMINATION OF THE CONTRACT.

PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

CONTRACTOR SHALL OBTAIN A PERFORMANCE BOND AND A PAYMENT BOND IN THE AMOUNT OF ONE HUNDRED PERCENT (100%) OF THE CONTRACT SUM, THE COST OF WHICH BONDS, SHOULD BE INCLUDED IN THE CONTRACT SUM, ADDITIONAL WORK SHALL BE ADDED BY A CHANGE ORDER IN ACCORDANCE WITH SUBPARAGRAPH 7.2.1. CONTRACTOR SHALL DELIVER THE EXECUTED ORIGINALS AND TWO EXECUTED COPIES OF EACH OF THE REQUIRED BONDS TO OWNER, NOT LATER THAN THE DATE OF EXECUTION OF THE AGREEMENT, AND SHALL DELIVER THE EXECUTED ORIGINALS AND TWO EXECUTED COPIES OF EACH OF THE REQUIRED SUBCONTRACTOR BONDS TO OWNER, NOT LATER THAN THE DATE OF EXECUTION OF THE SUBCONTRACTOR AGREEMENT WITH CONTRACTOR.

THE BONDS SHALL, IN ALL RESPECTS, CONFORM TO THE REQUIREMENTS OF THE LAWS OF THE STATE OF TEXAS.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

UNCOVERING OF WORK.

IF A PORTION OF THE WORK IS COVERED, CONTRARY TO THE ARCHITECT'S REQUEST OR TO REQUIREMENTS SPECIFICALLY EXPRESSED IN THE CONTRACT DOCUMENTS, SUCH PORTION OF THE WORK MUST, IF REQUIRED IN WRITING BY THE ARCHITECT, BE UNCOVERED OR MADE VISIBLE FOR THE ARCHITECT'S EXAMINATION AND MUST BE REPLACED, AT THE CONTRACTOR'S EXPENSE, WITHOUT CHANGE IN THE CONTRACT TIME.

IF A PORTION OF THE WORK HAS BEEN COVERED WHICH THE ARCHITECT HAS NOT SPECIFICALLY REQUESTED TO EXAMINE PRIOR TO ITS BEING COVERED OR OBSTRUCTED, THE ARCHITECT MAY REQUEST TO SEE SUCH WORK AND SUCH WORK SHALL BE UNCOVERED BY THE CONTRACTOR. IF THE PORTION OF WORK IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, COSTS OF UNCOVERING AND REPLACEMENT SHALL, BY APPROPRIATE CHANGE ORDER, BE AT THE OWNER'S EXPENSE. IF THE PORTION OF WORK IS NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, COSTS OF UNCOVERING AND REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE, UNLESS THE CONDITION WAS CAUSED BY THE OWNER OR A SEPARATE CONTRACTOR, IN WHICH EVENT THE OWNER SHALL BE RESPONSIBLE FOR PAYMENT OF SUCH COSTS.

CORRECTION OF WORK

BEFORE FINAL COMPLETION.

PRIOR TO FINAL COMPLETION, THE CONTRACTOR SHALL PROMPTLY CORRECT WORK REJECTED BY THE ARCHITECT OR WORK THAT FAILS TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, WHETHER DISCOVERED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. COSTS OF CORRECTING SUCH REJECTED WORK, INCLUDING ADDITIONAL TESTING AND INSPECTIONS AND COMPENSATION FOR THE ARCHITECT'S SERVICES AND EXPENSES MADE NECESSARY THEREBY, SHALL BE AT THE CONTRACTOR'S EXPENSE.

AFTER FINAL COMPLETION

IN ADDITION TO THE CONTRACTOR'S OBLIGATIONS UNDER PARAGRAPH 3.5, IF, WITHIN ONE (1) YEAR AFTER THE DATE OF FINAL COMPLETION OF THE WORK OR DESIGNATED PORTION THEREOF, OR AFTER COMMENCEMENT OF WARRANTIES BY TERMS OF AN APPLICABLE WARRANTY REQUIRED BY THE CONTRACT DOCUMENTS, WHICHEVER IS LONGER, ANY OF THE WORK IS FOUND TO BE NOT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL COMMENCE TO CORRECT SUCH WORK WITHIN SEVENTY-TWO (72) HOURS AFTER RECEIPT OF WRITTEN NOTICE FROM THE OWNER TO DO SO, AND THEREAFTER PROMPTLY AND DILIGENTLY CORRECT IT. IF THE CONTRACTOR FAILS TO COMMENCE OR CORRECT NONCONFORMING WORK WITHIN SUCH TIME, THE OWNER MAY CORRECT IT AND CONTRACTOR SHALL WITHIN FIVE (5) BUSINESS DAYS FOLLOWING REQUEST THEREFOR REPAY OWNER THE ACTUAL COST OF SUCH CORRECTIVE WORK. IF RETAINED FUNDS ARE STILL HELD BY OWNER, OWNER MAY OFFSET SUCH COSTS OF CORRECTION AGAINST RETAINED FUNDS. CORRECTION OF WORK AFTER FINAL COMPLETION SHALL BE WARRANTY WORK AND NOT A CONTINUATION OF THE WORK. THE ONE (1) YEAR PERIOD FOR CORRECTION OF WORK SHALL NOT BE EXTENDED BY CORRECTIVE WORK PERFORMED BY THE CONTRACTOR PURSUANT TO THIS PARAGRAPH 12.2, EXCEPT THAT ANY CORRECTIVE WORK SHALL ITSELF BE WARRANTIED ONE (1) YEAR FROM COMPLETION OF THE CORRECTIVE WORK.

THE CONTRACTOR SHALL REMOVE FROM THE SITE PORTIONS OF THE WORK OR REPAIR THE WORK TO OWNER'S SATISFACTION, WHICH ARE NOT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND ARE NEITHER CORRECTED BY THE CONTRACTOR NOR ACCEPTED BY THE OWNER.

THE CONTRACTOR SHALL BEAR THE COST OF CORRECTING DESTROYED OR DAMAGED CONSTRUCTION, WHETHER COMPLETED OR PARTIALLY COMPLETED, OF THE OWNER OR SEPARATE CONTRACTORS CAUSED IN WHOLE OR IN PART BY THE CONTRACTOR'S CORRECTION OR REMOVAL OF WORK WHICH IS NOT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

NOTHING CONTAINED IN PARAGRAPH 12.2 SHALL BE CONSTRUED TO ESTABLISH A PERIOD OF LIMITATION WITH RESPECT TO OTHER OBLIGATIONS WHICH THE CONTRACTOR MIGHT HAVE UNDER THE CONTRACT DOCUMENTS. ESTABLISHMENT OF THE ONE (1) YEAR PERIOD FOR CORRECTION OF WORK AS DESCRIBED IN SUBPARAGRAPH 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.

THE CORRECTIVE REMEDIES SET FORTH IN THIS PARAGRAPH 12.2 ARE NOT EXCLUSIVE AND SHALL NOT DEPRIVE THE OWNER OF ANY ACTION, RIGHT OR REMEDY OTHERWISE AVAILABLE TO IT FOR BREACH OF ANY OF THE PROVISIONS OF THE CONTRACT DOCUMENTS. WARRANTIES MAY BE REQUIRED IN THE RETAINAGE PAYMENT PACKAGE WHICH WILL EXPAND, LENGTHEN, OR OTHERWISE ADD TO THE WARRANTIES REQUIRED IN PARAGRAPH 3.5 AND PARAGRAPH 12.2.

ACCEPTANCE OF NONCONFORMING WORK

IF THE OWNER PREFERS TO ACCEPT WORK WHICH 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 DEEMED APPROPRIATE BY THE ARCHITECT. ANY ADJUSTMENT SHALL BE EFFECTIVE, WHETHER OR NOT FINAL PAYMENT HAS BEEN MADE.

NO CHANGE IN THE WORK, WHETHER BY WAY OF ALTERATION OR ADDITION TO THE WORK, SHALL BE THE BASIS OF AN ADDITION TO THE CONTRACT SUM OR A CHANGE IN THE CONTRACT TIME UNLESS AND UNTIL SUCH ALTERATION OR ADDITION HAS BEEN AUTHORIZED BY A CHANGE ORDER, EXECUTED AND ISSUED IN ACCORDANCE WITH AND IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE REQUIREMENT OF A CHANGE ORDER IS OF THE ESSENCE OF THE CONTRACT DOCUMENTS; ACCORDINGLY, NO COURSE OF CONDUCT OR DEALINGS BETWEEN THE PARTIES, NO EXPRESS OR IMPLIED ACCEPTANCE OF ALTERATIONS OR ADDITIONS TO THE WORK, AND/OR NO CLAIM THAT THE OWNER HAS BEEN UNJUSTLY ENRICHED BY ANY ALTERATION OR ADDITION TO THE WORK, WHETHER OR NOT THERE IS IN FACT ANY SUCH UNJUST ENRICHMENT, SHALL BE THE BASIS FOR ANY CLAIM TO AN INCREASE IN THE CONTRACT SUM OR CHANGE IN THE CONTRACT TIME.

ARTICLE 13 MISCELLANEOUS PROVISION

GOVERNING LAW THE CONTRACT SHALL BE GOVERNED BY THE LAWS OF THE STATE OF TEXAS, AND THE PARTIES HERETO AGREE THAT THE CONTRACT IS TO BE PERFORMED IN LIVE OAK COUNTY, TEXAS AND THAT ANY CAUSE OF ACTION, CLAIM, OR SUIT ARISING FROM OR RELATED TO THIS CONTRACT SHALL BE BROUGHT IN LIVE OAK COUNTY, TEXAS.

SUCCESSORS AND ASSIGNS

CONTRACTOR MAY NOT ASSIGN ITS RIGHTS UNDER THE CONTRACT DOCUMENTS OR ASSIGN ANY RIGHTS TO ANY MONEYS DUE OR TO BECOME DUE. ANY ASSIGNMENT BY CONTRACTOR, OR WITHOUT PRIOR WRITTEN CONSENT FROM OWNER, IS VOID.

WRITTEN NOTICE WRITTEN NOTICE SHALL BE DEEMED TO HAVE BEEN DULY SERVED IF DELIVERED IN PERSON OR IF DELIVERED AT OR SENT BY REGISTERED OR CERTIFIED MAIL TO THE REPRESENTATIVE OF THE NOTIFIED PARTY SPECIFIED IN THE CONTRACT.

RIGHTS AND REMEDIES

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.

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 IN WRITING.

THE INVALIDITY OF ANY PART OR PROVISION OF THE CONTRACT DOCUMENTS SHALL NOT IMPAIR OR AFFECT, IN ANY MANNER WHATSOEVER, THE VALIDITY, ENFORCEABILITY OR EFFECT OF THE REMAINDER OF THE CONTRACT DOCUMENTS.

ARTICLE 14

TERMINATION OR SUSPENSION OF THE CONTRACT

TERMINATION BY THE CONTRACTOR

THE CONTRACTOR MAY TERMINATE THE CONTRACT IF THE WORK IS STOPPED FOR A PERIOD OF SIXTY (60) CONSECUTIVE DAYS THROUGH NO ACT OR FAULT OF THE CONTRACTOR OR A SUBCONTRACTOR, SUB-SUBCONTRACTOR OR THEIR AGENTS OR EMPLOYEES THEREOF OR ANY OTHER PERSONS OR ENTITIES PERFORMING PORTIONS OF THE WORK UNDER DIRECT OR INDIRECT CONTRACT WITH THE CONTRACTOR, FOR ANY OF THE FOLLOWING REASONS:

ISSUANCE OF AN ORDER OF A COURT OR OTHER PUBLIC AUTHORITY HAVING JURISDICTION WHICH REQUIRES ALL WORK TO BE STOPPED;

AN ACT OF GOVERNMENT, SUCH AS A DECLARATION OF NATIONAL EMERGENCY WHICH REQUIRES ALL WORK TO BE STOPPED; OR

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 SUBPARAGRAPH 9.4.1, OR BECAUSE THE OWNER HAS NOT MADE PAYMENT ON A CERTIFICATE FOR PAYMENT WITHIN THE TIME STATED IN THE CONTRACT DOCUMENTS.

THE CONTRACTOR MAY TERMINATE THE CONTRACT IF, THROUGH NO ACT OR FAULT OF THE CONTRACTOR OR A SUBCONTRACTOR, SUB-SUBCONTRACTOR OR AGENTS OR EMPLOYEES THEREOF OR ANY OTHER PERSONS OR ENTITIES PERFORMING PORTIONS OF THE WORK UNDER DIRECT OR INDIRECT CONTRACT WITH THE CONTRACTOR, REPEATED SUSPENSIONS, DELAYS OR INTERRUPTIONS OF THE ENTIRE WORK BY THE OWNER, AS DESCRIBED IN PARAGRAPH 14.3, CONSTITUTE, IN THE AGGREGATE, MORE THAN ONE HUNDRED PERCENT (100%) OF THE TOTAL NUMBER OF DAYS SCHEDULED FOR COMPLETION, OR ONE HUNDRED TWENTY (120) DAYS IN ANY THREE HUNDRED SIXTY FIVE (365) DAY PERIOD, WHICHEVER IS LESS.

IF ONE (1) OF THE REASONS DESCRIBED IN SUBPARAGRAPH 14.1.1 OR 14.1.2 EXISTS, THE CONTRACTOR MAY, UPON FOURTEEN (14) DAYS' WRITTEN NOTICE TO THE OWNER AND ARCHITECT, TERMINATE THE CONTRACT AND RECOVER FROM THE OWNER PAYMENT FOR WORK EXECUTED.

TERMINATION BY THE OWNER FOR CAUSE

THE OWNER MAY, IN THE EXERCISE OF ITS SOLE DISCRETION, TERMINATE THE CONTRACT IF THE CONTRACTOR:

REFUSES OR FAILS TO SUPPLY ENOUGH PROPERLY SKILLED WORKERS OR PROPER MATERIALS;

FAILS TO MAKE PROMPT AND FULL PAYMENT TO SUBCONTRACTORS FOR MATERIALS OR LABOR IN ACCORDANCE WITH THE RESPECTIVE AGREEMENTS BETWEEN THE CONTRACTOR AND THE SUBCONTRACTORS;

DISREGARDS LAWS, ORDINANCES, OR RULES, REGULATIONS OR ORDERS OF A PUBLIC AUTHORITY HAVING JURISDICTION OVER THE PROJECT INCLUDING, WITHOUT LIMITATION, OSHA REGULATIONS AND WORKERS' COMPENSATION LAWS;

DISREGARDS THE INSTRUCTION OF ARCHITECT OR OWNER (WHEN SUCH INSTRUCTIONS ARE BASED ON THE REQUIREMENTS OF THE CONTRACT DOCUMENTS);

FILES OR RECORDS OR ALLOWS ANYONE CLAIMING BY, THROUGH OR UNDER CONTRACTOR TO FILE OR RECORD A LIEN OR OTHER CLAIM AGAINST OWNER, OWNER'S LOAN PROCEEDS, IF ANY, OR OWNER'S PROPERTY WITHOUT REMOVING AND DISCHARGING SAME AS REQUIRED UNDER THE CONTRACT DOCUMENTS;

FAILS TO TIMELY PROSECUTE THE WORK OR PERFORM THE WORK IN STRICT ACCORDANCE WITH THE CONSTRUCTION SCHEDULE APPROVED BY OWNER UNDER PARAGRAPH 3.10; OR OTHERWISE DOES NOT FULLY COMPLY WITH THE CONTRACT DOCUMENTS.

WHEN ANY OF THE REASONS DESCRIBED IN SUBPARAGRAPH 14.2.1 EXIST, THE OWNER MAY, WITHOUT PREJUDICE TO ANY OTHER RIGHTS OR REMEDIES OF THE OWNER AND AFTER GIVING THE CONTRACTOR AND CONTRACTOR'S SURETY, IF ANY, IMMEDIATE WRITTEN NOTICE, TERMINATE EMPLOYMENT OF THE CONTRACTOR AND MAY, SUBJECT TO ANY PRIOR RIGHTS OF THE SURETY:

TAKE POSSESSION OF THE SITE AND OF ALL MATERIALS, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT AND MACHINERY LOCATED THEREON OWNED BY THE CONTRACTOR;

ACCEPT ASSIGNMENT OF SUBCONTRACTS PURSUANT TO PARAGRAPH 5.4; AND

FINISH THE WORK BY WHATEVER REASONABLE METHOD THE OWNER MAY DEEM EXPEDIENT. UPON 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.

WHEN THE OWNER TERMINATES THE CONTRACT FOR ONE OF THE REASONS STATED IN SUBPARAGRAPH 14.2.1, THE CONTRACTOR SHALL NOT BE ENTITLED TO RECEIVE FURTHER PAYMENT ON THE PROJECT.

IF COSTS AND DAMAGES OF FINISHING THE WORK, INCLUDING COMPENSATION FOR THE ARCHITECT'S SERVICES AND EXPENSES MADE NECESSARY THEREBY, AND OTHER CHARGES INCURRED BY OWNER AND NOT EXPRESSLY WAIVED EXCEED THE UNPAID BALANCE OF THE CONTRACT SUM, THE CONTRACTOR SHALL PAY THE DIFFERENCE TO THE OWNER. THE AMOUNT TO BE PAID TO OWNER SHALL BE CERTIFIED BY THE ARCHITECT, UPON APPLICATION, AND THIS OBLIGATION FOR PAYMENT SHALL SURVIVE TERMINATION OF THE CONTRACT.

SUSPENSION BY THE OWNER FOR CONVENIENCE

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.

THE CONTRACT SUM AND CONTRACT TIME SHALL BE ADJUSTED FOR INCREASES IN THE COST AND TIME CAUSED BY SUSPENSION, DELAY OR INTERRUPTION AS DESCRIBED IN SUBPARAGRAPH 14.3.1 FOR GREATER THAN THIRTY (30) CONSECUTIVE DAYS. NO ADJUSTMENT SHALL BE MADE TO THE EXTENT:

THAT PERFORMANCE IS, WAS OR WOULD HAVE BEEN SO SUSPENDED, DELAYED OR INTERRUPTED BY ANOTHER CAUSE FOR WHICH THE CONTRACTOR IS RESPONSIBLE; OR THAT AN EQUITABLE ADJUSTMENT IS MADE OR DENIED UNDER ANOTHER PROVISION OF THE CONTRACT.

TERMINATION BY THE OWNER FOR CONVENIENCE

THE OWNER MAY, AT ANY TIME, TERMINATE THE CONTRACT FOR THE OWNER'S CONVENIENCE AND WITHOUT CAUSE.

UPON RECEIPT OF WRITTEN NOTICE FROM THE OWNER OF TERMINATION FOR THE OWNER'S CONVENIENCE, THE CONTRACTOR SHALL:

CEASE OPERATIONS AS DIRECTED BY THE OWNER IN THE NOTICE;

TAKE ACTIONS NECESSARY, OR THAT THE OWNER MAY DIRECT, FOR THE PROTECTION AND PRESERVATION OF THE WORK; AND

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.

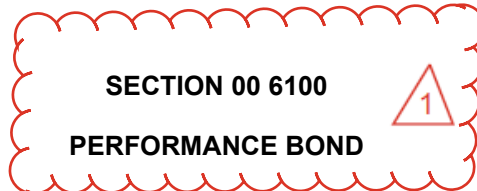
IN THE EVENT OF TERMINATION AS DESCRIBED IN SUBPARAGRAPH 14.4.1, OWNER SHALL PAY, AS THE SOLE AMOUNT DUE TO CONTRACTOR IN CONNECTION WITH THIS PROJECT: (A) SUMS DUE FOR WORK PERFORMED TO DATE (EXCEPT RETAINAGE SUMS SHALL NOT BE PAID PRIOR TO NINETY (90) DAYS FOLLOWING THE DATE OF TERMINATION); AND (B) REASONABLE COSTS OF TERMINATION.

END OF GENERAL CONDITIONS

END OF SECTION 006000

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SECTION 00 6100
PERFORMANCE BOND



Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR:
(Name)
(Address 1)
(Address 2)

SURETY:
(Name)
(Address 1)
(Address 2)

OWNER:
Live Oak County
301 Houston St.,
George West, Texas 78022

CONTRACT
Date:
Amount: \$
Description:
2308 A1 Restoration of the Live Oak County Courthouse
Live Oak County

BOND
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL
Company: _____ (Corp. Seal)
Signature: _____
Name and Title: _____
(Space below is for additional signatures, if required.)

SURETY
Company: _____ (Corp. Seal)
Signature: _____
Name and Title: _____
(Attach Power of Attorney)

CONTRACTOR AS PRINCIPAL
Company: _____ (Corp. Seal)
Signature: _____
Name and Title: _____

SURETY
Company: _____ (Corp. Seal)
Signature: _____
Name and Title: _____

EJCDC No. 1910-28-A (1996 Edition)
Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

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1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.
2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.
3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:
 - 3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and
 - 3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and
 - 3.3. The OWNER has agreed to pay the Balance of the Contract Price to:
 - 3.3.1. The Surety in accordance with the terms of the Contract;
 - 3.3.2. Another contractor selected pursuant to paragraph 4.3 to perform the Contract.
4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or
 - 4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or
 - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;
 - 4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or
 - 4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.
5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice

from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied pliability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

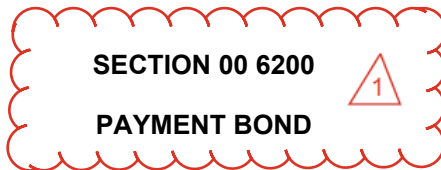
6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:
 - 6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;
 - 6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and
 - 6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.
7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.
11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Definitions.
 - 12.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.
 - 12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the

signature page, including all Contract Documents and changes thereto.

- 12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
- 12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

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SECTION 00 6200
PAYMENT BOND



Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR:
(Name)
(Address 1)
(Address 2)

SURETY:
(Name)
(Address 1)
(Address 2)

OWNER:
Live Oak County
301 Houston St.,
George West, Texas 78022

CONTRACT
Date:
Amount: \$
Description:
2308 A1 Restoration of the Live Oak County Courthouse
Live Oak County

BOND
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL
Company: _____ (Corp. Seal)
Signature: _____
Name and Title: _____
(Space below is for additional signatures, if required.)

SURETY
Company: _____ (Corp. Seal)
Signature: _____
Name and Title: _____
(Attach Power of Attorney)

CONTRACTOR AS PRINCIPAL
Company: _____ (Corp. Seal)
Signature: _____
Name and Title: _____

Company: _____ (Corp. Seal)
Signature: _____
Name and Title: _____

EJCDC No. 1910-28-B (1996 Edition)
Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

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1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.
3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
 - 4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2. Claimants who do not have a direct contract with the CONTRACTOR:
 - 4.2.1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
 - 4.2.2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and
 - 4.2.3. Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.
5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.
6. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2. Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the Work.
9. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory Bond and not as a common law bond.
14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.
15. DEFINITIONS
 - 15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a Subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the CONTRACTOR and the CONTRACTOR's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
 - 15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.
 - 15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

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**SECTION 006325
SUBSTITUTION REQUEST FORM - DURING CONSTRUCTION
END OF SECTION 006325**

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**SECTION 007200
GENERAL CONDITIONS**

FORM OF GENERAL CONDITIONS

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

RELATED REQUIREMENTS

2.01 SECTION 007300 - SUPPLEMENTARY CONDITIONS.

END OF SECTION 007200

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**SECTION 007300
SUPPLEMENTARY CONDITIONS**

PART 1 GENERAL

1.01 SUMMARY

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 007200 - General Conditions and other provisions of Contract Documents as indicated below. Provisions that are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.

1.02 MODIFICATIONS TO GENERAL CONDITIONS

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 007300

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**SECTION 011000
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Live Oak County Courthouse Exterior Restoration
- B. Owner's Name: Live Oak County, Texas.
- C. Architect's Name: Fisher Heck Architects.
- D. The Project consists of the restoration of the exterior south facade of the Live Oak County Courthouse.

1.02 CONTRACT DESCRIPTION

1.03 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings and specified in Section 024100.
- B. Scope of alterations work is indicated on drawings.
- C. Plumbing: Alter existing system and add new construction, keeping existing in operation.
- D. HVAC: Alter existing system and add new construction, keeping existing in operation.
- E. Electrical Power and Lighting: Alter existing system and add new construction, keeping existing in operation.
- F. Fire Suppression Sprinklers: N/A this phase. _____.
- G. Fire Alarm: Alter existing system and add new construction, keeping existing in operation.
- H. Telephone: Alter existing system and add new construction, keeping existing in operation.
- I. Security System: Alter existing system and add new construction, keeping existing in operation.

1.04 OWNER OCCUPANCY

- A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.
- B. Owner intends to occupy the Project upon Substantial Completion.
- C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- D. Schedule the Work to accommodate Owner occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Work by Others.
 - 3. Work by Owner.
 - 4. Use of site and premises by the public.
- B. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- C. Existing building spaces may not be used for storage.
- D. Time Restrictions:
 - 1. Coordinate with County officials when loud, malodorous work is to occur and whether it may be in conflict with courtroom activities..
- E. Utility Outages and Shutdown:
 - 1. Limit disruption of utility services to hours the building is unoccupied.

2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
3. Prevent accidental disruption of utility services to other facilities.

1.06 WORK SEQUENCE

- A. Coordinate construction schedule and operations with Owner.
- B. Coordinate construction schedule and operations with Architect.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 011000

**SECTION 012000
PRICE AND PAYMENT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Correlation of Contractor submittals based on changes.
- D. Procedures for preparation and submittal of application for final payment.

1.02 SCHEDULE OF VALUES

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization.
- F. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.
- G. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- H. Revise schedule to list approved Change Orders, with each Application For Payment.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- D. Forms filled out by hand will not be accepted.
- E. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Balance to Finish.
 - 9. Retainage.
- F. Execute certification by signature of authorized officer.
- G. Submit one electronic and three hard-copies of each Application for Payment.

1.04 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.

1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.
- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.

1.05 APPLICATION FOR FINAL PAYMENT

END OF SECTION 012000

**SECTION 012500
SUBSTITUTION PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
- D. Limit each request to a single proposed substitution item.

3.02 RESOLUTION

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.

3.03 ACCEPTANCE

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

3.04 CLOSEOUT ACTIVITIES

- A. See Section 017800 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

END OF SECTION 012500

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**SECTION 013000
ADMINISTRATIVE REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preconstruction meeting.
- B. Site mobilization meeting.
- C. Progress meetings.
- D. Submittals for review, information, and project closeout.
- E. Number of copies of submittals.
- F. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 013216 - Construction Progress Schedule: Form, content, and administration of schedules.
- B. Section 017000 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 017800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

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

3.02 PROGRESS MEETINGS

- A. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- B. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.

3. Field observations, problems, and decisions.
 4. Identification of problems that impede, or will impede, planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Maintenance of progress schedule.
 7. Corrective measures to regain projected schedules.
 8. Planned progress during succeeding work period.
 9. Maintenance of quality and work standards.
 10. Effect of proposed changes on progress schedule and coordination.
 11. Other business relating to work.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.03 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
1. Product data.
 2. Shop drawings.
 3. Samples for selection.
 4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 017800 - Closeout Submittals.

3.04 SUBMITTALS FOR INFORMATION

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

3.05 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 017800 - Closeout Submittals:
1. Project record documents.
 2. Operation and maintenance data.
 3. Warranties.
 4. Bonds.
 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.06 SUBMITTAL PROCEDURES

- A. General Requirements:

END OF SECTION 013000

**SECTION 013216
CONSTRUCTION PROGRESS SCHEDULE**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 REFERENCE STANDARDS

- A. AGC (CPSM) - Construction Planning and Scheduling Manual; 2004.
- B. M-H (CPM) - CPM in Construction Management - Project Management with CPM; 2016.

1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, submit preliminary schedule.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.
- F. Submit in PDF format.

1.04 QUALITY ASSURANCE

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

1.05 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Diagram Sheet Size: Maximum 22 x 17 inches.
- C. Sheet Size: Multiples of 8-1/2 x 11 inches.
- D. Scale and Spacing: To allow for notations and revisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

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

3.02 CONTENT

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

3.03 BAR CHARTS

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

3.04 REVIEW AND EVALUATION OF SCHEDULE

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

3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.
- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.
- G. Provide narrative report to define problem areas, anticipated delays, and impact on the schedule. Report corrective action taken or proposed and its effect.

3.06 DISTRIBUTION OF SCHEDULE

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

END OF SECTION 013216

**SECTION 013553
SECURITY PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Security measures including formal security program, entry control, personnel identification, guard service, and miscellaneous restrictions.

1.02 RELATED REQUIREMENTS

- A. Section 015000 - Temporary Facilities and Controls: Temporary lighting.

1.03 SECURITY PROGRAM

- A. Protect Work , existing premises and Owner's operations from theft, vandalism, and unauthorized entry.
- B. Initiate program in coordination with Owner's existing security system at project mobilization.
- C. Maintain program throughout construction period until Owner acceptance precludes the need for Contractor security.

1.04 ENTRY CONTROL

- A. Restrict entrance of persons and vehicles into Project site and existing facilities.
- B. Allow entrance only to authorized persons with proper identification.
- C. Owner will control entrance of persons and vehicles related to Owner's operations.
- D. Coordinate access of Owner's personnel to site in coordination with Owner's security forces.

1.05 GUARD SERVICE

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 013553

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**SECTION 014000
QUALITY REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. References and standards.
- C. Testing and inspection agencies and services.
- D. Control of installation.
- E. Mock-ups.
- F. Tolerances.
- G. Manufacturers' field services.
- H. Defect Assessment.

1.02 RELATED REQUIREMENTS

- A. Document 007200 - General Conditions: Inspections and approvals required by public authorities.
- B. Section 012100 - Allowances: Allowance for payment of testing services.
- C. Section 013000 - Administrative Requirements: Submittal procedures.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- C. Test Reports: After each test/inspection, promptly submit electronic copies of report to Architect and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Compliance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
 - 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
 - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.04 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.05 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. Owner will employ services of an independent testing agency to perform certain specified testing; payment for cost of services will be derived from allowance specified in Section 012100; see Section 012100 and applicable sections for description of services included in allowance.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

- A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
- B. Accepted mock-ups establish the standard of quality the Architect will use to judge the Work.
- C. Notify Architect fifteen (15) working days in advance of dates and times when mock-ups will be constructed.
- D. Provide supervisory personnel who will oversee mock-up construction. Provide workers that will be employed during the construction at Project.

- E. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- F. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- G. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.
 - 1. Architect will issue written comments within seven (7) working days of initial review and each subsequent follow up review of each mock-up.
- H. Architect will use accepted mock-ups as a comparison standard for the remaining Work.
- I. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.
- J. Where possible salvage and recycle the demolished mock-up materials.

3.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

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

5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
 - F. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.05 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.06 DEFECT ASSESSMENT

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

END OF SECTION 014000

**SECTION 015000
TEMPORARY FACILITIES AND CONTROLS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary sanitary facilities.
- C. Temporary Controls: Barriers, enclosures, and fencing.
- D. Security requirements.
- E. Waste removal facilities and services.

1.02 RELATED REQUIREMENTS

- A. Section 013553 - Security Procedures
- B. Section 015100 - Temporary Utilities.
- C. Section 015213 - Field Offices and Sheds.

1.03 TEMPORARY UTILITIES - SEE SECTION 015100

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

1.04 TEMPORARY SANITARY FACILITIES

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

1.05 BARRIERS

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

1.06 FENCING

- A. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.07 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:

1.08 SECURITY - SEE SECTION 013553

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

1.09 WASTE REMOVAL

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

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

1.10 FIELD OFFICES - SEE SECTION 015213

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack, and drawing display table.
- B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.
- C. Locate offices a minimum distance of 30 feet from existing and new structures.

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.
- E. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 015000

**SECTION 015813
TEMPORARY PROJECT SIGNAGE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project identification sign.

1.02 QUALITY ASSURANCE

- A. Design sign and structure to withstand 50 miles/hr wind velocity.
- B. Finishes, Painting: Adequate to withstand weathering, fading, and chipping for duration of construction.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawing: Show content, layout, lettering, color, foundation, structure, sizes and grades of members.

PART 2 PRODUCTS

2.01 SIGN MATERIALS

- A. Structure and Framing: New, wood, structurally adequate.
- B. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4 inch thick, standard large sizes to minimize joints.
- C. Paint and Primers: Exterior quality, two coats; sign background of white color.
- D. Lettering: Pre-cut vinyl self-adhesive products, white.

2.02 PROJECT IDENTIFICATION SIGN

- A. One painted sign, 48 sq ft area, bottom 6 feet above ground.
- B. Graphic Design, Colors, Style of Lettering: Designated by Architect and approved by owner and the THC.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install project identification sign within 30 days after date fixed by Notice to Proceed.
- B. Erect at designated location.
- C. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
- D. Install sign surface plumb and level, with butt joints. Anchor securely.
- E. Paint exposed surfaces of sign, supports, and framing.

3.02 MAINTENANCE

- A. Maintain signs and supports clean, repair deterioration and damage.

3.03 REMOVAL

- A. Remove signs, framing, supports, and foundations at completion of Project and restore the area.

END OF SECTION 015813

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**SECTION 016000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 012500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.
- C. Section 017419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 SUBMITTALS

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

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- B. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
 - 1. Containing lead, cadmium, or asbestos.
- C. Where other criteria are met, Contractor shall give preference to products that:
 - 1. If used on interior, have lower emissions, as defined in Section 016116.
 - 2. If wet-applied, have lower VOC content, as defined in Section 016116.

2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.04 MAINTENANCE MATERIALS

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

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 012500 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

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

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 017419.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Do not store products directly on the ground.
- I. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- J. Prevent contact with material that may cause corrosion, discoloration, or staining.
- K. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

- L. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION 016000

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**SECTION 017000
EXECUTION AND CLOSEOUT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 013000 - Administrative Requirements: Submittals procedures, Electronic document submittal service.
- C. Section 014000 - Quality Requirements: Testing and inspection procedures.
- D. Section 015000 - Temporary Facilities and Controls: Temporary exterior enclosures.
- E. Section 015000 - Temporary Facilities and Controls: Temporary interior partitions.
- F. Section 017800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- G. Section 078400 - Firestopping.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
 - 3. Submit surveys and survey logs for the project record.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 QUALIFICATIONS

- A. For demolition work, employ a firm specializing in the type of work required.
 - 1. Minimum of 5 years of documented experience.
- B. For surveying work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of surveyor's Errors and Omissions

insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

- C. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

1.05 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
 - 1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
 - 2. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.
- D. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

1.06 COORDINATION

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

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 016000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

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

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

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

3.04 LAYING OUT THE WORK

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

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 015000 in locations indicated on drawings.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
 - 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
 - 2. Relocate items indicated on drawings.
 - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 - 4. Verify that abandoned services serve only abandoned facilities.
 - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.

- 3. Repair adjacent construction and finishes damaged during removal work.
- G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
- H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- I. Refinish existing surfaces as indicated:
 - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- J. Clean existing systems and equipment.
- K. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- L. Do not begin new construction in alterations areas before demolition is complete.
- M. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 078400, to full thickness of the penetrated element.
- J. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.08 PROGRESS CLEANING

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

3.09 PROTECTION OF INSTALLED WORK

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

3.10 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- D. Verify that wiring and support components for equipment are complete and tested.
- E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- F. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.11 DEMONSTRATION AND INSTRUCTION

- A. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- C. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of Owner's personnel.

3.12 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.13 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
 - 1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.
- B. Use cleaning materials that are nonhazardous.

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

3.14 CLOSEOUT PROCEDURES

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

3.15 MAINTENANCE

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

END OF SECTION 017000

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**SECTION 017800
CLOSEOUT SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project record documents.
- B. Operation and maintenance data.
- C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 007200 - General Conditions and 007300 - Supplementary Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 013000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 017000 - Execution and Closeout Requirements: Contract closeout procedures.
- D. Individual Product Sections: Specific requirements for operation and maintenance data.
- E. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

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

- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 1. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 1. Field changes of dimension and detail.
 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- B. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- C. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

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

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 1. Description of unit or system, and component parts.
 2. Identify function, normal operating characteristics, and limiting conditions.
 3. Include performance curves, with engineering data and tests.
 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- E. Provide servicing and lubrication schedule, and list of lubricants required.
- F. Include manufacturer's printed operation and maintenance instructions.
- G. Include sequence of operation by controls manufacturer.
- H. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

- I. Provide control diagrams by controls manufacturer as installed.
- J. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- K. Include test and balancing reports.
- L. Additional Requirements: As specified in individual product specification sections.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

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

3.06 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- F. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.

END OF SECTION 017800

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**SECTION 024100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 011000 - Summary: Sequencing and staging requirements.
- C. Section 011000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- D. Section 015000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- E. Section 016000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- F. Section 017000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.05 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.
 - 1. Minimum of five years of documented experience similar in complexity of Scope.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 SCOPE

- A. Remove portions of existing buildings as indicated on Drawings.
- B. Remove other items indicated, for salvage, relocation, recycling, and reinstallation.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 6. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from

removal operations.

- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until built elements to be salvaged or relocated have been removed.
- D. Protect existing structures and other elements that are not to be removed.
- E. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- F. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- G. Perform demolition in a manner that maximizes salvage and recycling of materials.
 - 1. Dismantle existing construction and separate materials.
 - 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

3.03 EXISTING UTILITIES

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

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- C. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready

- for service.
3. Verify that abandoned services serve only abandoned facilities before removal.
 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch as specified for patching new work.

3.05 DEBRIS AND WASTE REMOVAL

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

END OF SECTION 024100

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**SECTION 034500
PRECAST ARCHITECTURAL CONCRETE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Architectural precast concrete architectural features.
- B. Supports, anchors, and attachments.

1.02 RELATED REQUIREMENTS

- A. Section 076200 - Sheet Metal Flashing and Trim: Reglets recessed in units.
- B. Section 079200 - Joint Sealants: Sealing perimeter and intermediate joints.

1.03 REFERENCE STANDARDS

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary; 2019 (Reapproved 2022).
- B. ACI SPEC-301 - Specifications for Concrete Construction; 2020.
- C. PCI MNL-117 - Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products; 2013.
- D. PCI MNL-120 - PCI Design Handbook; 2017, with Errata (2021).
- E. PCI MNL-122 - Architectural Precast Concrete: Fully Revised Manual Including New Sections, Extensive Updates, and Detailed Specifications to Meet Today's Construction Needs.; 2007.
- F. PCI MNL-123 - Connections Manual: Design and Typical Details of Connections for Precast and Prestressed Concrete; 1988.
- G. PCI MNL-135 - Tolerance Manual for Precast and Prestressed Concrete Construction; 2000.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's information on accessory products, including pigments, admixtures, inserts, plates, etc.
- C. Shop Drawings: Indicate layout, unit locations, configuration, unit identification marks, reinforcement, integral insulation, insulated panel system connectors, connection details, support items, location of lifting devices, dimensions, openings, and relationship to adjacent materials. Provide erection drawings.
 - 1. Include details of mix designs.
- D. Fabricator's Qualification Statement: Provide documentation showing precast concrete fabricator is accredited under IAS AC157.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications:
 - 1. Firm having at least 5 years of documented experience in production of precast concrete of the type required.

1.06 MOCK-UPS

- A. Provide one mock-up, full size, with lifting device, and attachment points, and finish in accordance with approved sample.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Handling: Lift and support precast units only from support points.
- B. Blocking and Lateral Support During Transport and Storage: Use materials that are clean, non-staining, and non-harmful to exposed surfaces. Provide temporary lateral support to prevent bowing and warping.
- C. Protect units to prevent staining, chipping, or spalling of concrete.

PART 2 PRODUCTS

2.01 PRECAST UNITS, GENERAL

- A. Precast Architectural Concrete Units: Comply with PCI MNL-120, PCI MNL-122, PCI MNL-123, PCI MNL-135, and ACI CODE-318.
 - 1. Concrete Face Mix: Minimum 5000 psi, 28 day strength, air entrained to 5 to 7 percent; comply with ACI SPEC-301.
 - 2. Design Loads: Static loads, anticipated dynamic loading, including positive and negative wind loads, thermal movement loads, and erection forces as defined by applicable code.
 - 3. Calculate structural properties of units in accordance with ACI CODE-318.
 - 4. Accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.
 - 5. Provide connections that accommodate building movement and thermal movement and adjust to misalignment of structure without unit distortion or damage.

2.02 REINFORCEMENT

2.03 CONCRETE MATERIALS

2.04 FABRICATION

- A. Fabricate in compliance with PCI MNL-117 and PCI MNL-135.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that building structure, anchors, devices, and openings are ready to receive work of this section.

3.02 PREPARATION

- A. Provide for erection procedures and induced loads during erection. Maintain temporary bracing in place until final support is provided.

3.03 ERECTION

- A. Erect units without damage to shape or finish. Replace or repair damaged panels.
- B. Erect units level and plumb within allowable tolerances.
- C. Align and maintain uniform horizontal and vertical joints as erection progresses.
- D. Fasten units in place with mechanical connections.
- E. Exposed Joint Dimension: 3/8 inch. Adjust units so that joint dimensions are within tolerances.

3.04 CLEANING

- A. Clean fabricated elements after installed in preparation for plaster coating..

3.05 PROTECTION

- A. Protect installed precast features from subsequent construction operations.

END OF SECTION 034500

**SECTION 040140
MASONRY RESTORATION AND CLEANING**

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Restoration of exposed exterior brick masonry.
 - 2. Repointing of existing mortar at existing brick masonry.
 - 3. Low-pressure cleaning.

1.02 SALVAGE AND REUSE OF MASONRY

- A. Damaged and deteriorated masonry units will be completely replaced. Masonry dutchman will be used only for special conditions after visual review by Architect.
- B. Cut out damaged and deteriorated masonry with care in a manner to prevent damage to any adjacent remaining materials and store for reuse.
- C. Install salvaged masonry with coursing to match and align with existing joints, faces, plumb, and in line.

1.03 SPECIAL PROPERTIES

- A. Mortar shall contain admixtures, such as pigments, to match the characteristics of the original mortar. Use of all admixtures shall be subject to approval.

1.04 CLEANING AND RESTORATION METHODS

- A. Submit for approval the cleaning and restoration methods, and materials selected for a specific structure, before work starts, taking into account the total construction system of the building to be worked upon, including different masonry and mortar materials, as well as non-masonry elements which may be affected by the work.

1.05 SUBMITTALS

- A. Mortar Material Testing: Provide laboratory testing of original mortar to determine required matching for composition and color of new mortar.

1.06 QUALITY ASSURANCE

- A. Basis for Standard of Care: U.S. Department of the Interior – National Park Service – Standards and Guidelines.
- B. Provide required qualifications for workers trained and experienced in restoration of masonry in historic structures, and furnish documentation of 5 consecutive years of work of this type.
- C. No masonry or mortar shall be used in the work until the samples and the represented mixture have been approved.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Furnish mortar in suitable bags used for packaging mortars. Labeling of packages shall clearly define contents, manufacturer, and batch identification.
- B. Detergents, masonry cleaners, paint removers, solvents, epoxies and other chemicals used for masonry cleaning shall be in sealed containers that legibly show the designated name, formula or specification number, quantity, date of manufacture, manufacturer's formulation number, manufacturer's directions including any warnings and special precautions, and name of manufacturer.
- C. Store materials in weathertight structures which will exclude moisture and contaminants. Accessories shall be stored avoiding contamination and deterioration.
- D. Admixtures which have been in storage onsite for six months or longer, or which have been subjected to freezing, shall not be used unless retested and proven to meet the specified requirements.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Masonry, mortar, and epoxy adhesives shall not be placed when weather conditions detrimentally affect the quality of the finished product. No masonry or mortar shall be placed when the air temperature is below 40 degrees F in the shade.
- B. When air temperature is likely to exceed 90 degrees F masonry and mortar shall have a temperature not exceeding 90 degrees F when deposited. Materials to be used in the work shall be neither produced nor placed during periods of rain or other precipitation. Stop material placements, and protect all in-place material from exposure, during periods of rain or other precipitation.
- C. Masonry surfaces shall be cleaned only when air temperatures are above 40 degrees F and will remain so until masonry has dried out, but for not less than 7 days after completion of the work.

1.09 WARRANTIES

- A. Cleaning Warranty: Cleaning procedures shall be warranted for a period of two years against harm to substrate (masonry and mortar) or to adjacent materials including, but not limited to, discoloration of substrate from improper procedures or usage, chemical damage from inadequate rinse procedures, and abrasive damage from improper procedures.
- B. Repair Warranty: Repair procedures, including repointing, shall be warranted for a period of two years against: discoloration or mismatch of new mortar to adjacent original historic mortar, discoloration or damage to masonry from improper mortar clean-up, loss of bond between masonry and mortar, fracturing of masonry edges from improper mortar joint preparation procedures or improper mortar formulation, and occurrence of efflorescence.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials, physical and chemical properties, and composition of masonry and mortar used in renovation work shall match that of original existing masonry and mortar to be repaired, unless samples and testing determine that existing mixtures and materials are faulty or non-performing.

2.02 EQUIPMENT AND TECHNIQUES DEMONSTRATION

- A. Sandblasting equipment will not be allowed for cleaning masonry surfaces.
- B. Water Cleaning
 - 1. Provide water cleaning equipment including a trailer-mounted water tank, pumps, high-pressure hose, wand with safety release cutoff control, nozzle, and auxiliary water re-supply equipment.
 - 2. The equipment shall not be operated at a pressure which will cause etching or other damage to the masonry surface or mortar joints.
 - 3. Operate the equipment at a discharge capacity of 55 psi and 2.5 to 3 gpm for general surface cleaning operations.
 - 4. The water tank and auxiliary re-supply equipment shall be of sufficient capacity to permit continuous operations.
 - 5. Provide protective covers and barriers as required to prevent over-spray onto adjacent surfaces.
- C. Equipment and hand tools used for placing, finishing and texturing masonry and mortar shall be commercially available and commonly used in masonry construction and repair.
 - 1. Surface grinders, impact tools, and other equipment shall conform to the specified requirements, except as specifically required by the type of finish and texture.
- D. Compressed air equipment shall deliver clean, oil and moisture free compressed air at the surface to be cleaned.
 - 1. The compressed air line shall have at least two in-line air filters to remove oil and moisture from the air supply. Test the compressed air supply during each shift for the presence of oil and moisture.

2.03 MATERIAL HANDLING AND ASSOCIATED EQUIPMENT

- A. Provide equipment used for mixing, transporting, placing, and confining masonry and mortar placements capable of satisfactorily mixing material and supporting placement operations in an uninterrupted manner.
- B. Defects and deficiencies in operation or capacity shall be resolved prior to use in the work.
- C. Equipment used for mixing, conveying, and placing of materials shall be clean, free of old materials and contaminants, and shall conform to the material manufacturer's recommendations.
- D. Provide associated equipment, such as mixer timing equipment, valves, pressure gauges, pressure hoses, other hardware, and tools, as required to ensure a continuous supply of material and operation control.

2.04 REPAIR MATERIALS

- A. Masonry and mortar materials used for repair and renovation shall match the original existing historic materials as closely as possible in composition, color, texture, strength, size, finishing and porosity based on results of mortar materials testing.
- B. Mortar Patching Mix For Epoxy Injection
 - a. Use salvaged mortar ground into powder consistency and mix into manufacturer's epoxy masonry adhesive used for both epoxy injection.

2.05 EPOXY MASONRY ADHESIVE FOR EPOXY INJECTION

- A. Manufacturer: Edison Coatings; 3 Northwest Drive; Plainville, CT 06062; www.edisoncoatings.com.
 - 1. Flexi-seal 510 for cracks 1/16" in width or smaller.
 - 2. Flexi-seal 510-U for cracks larger than 1/16" in width, and a maximum width of 1/8".

PART 3 - EXECUTION

3.01 TESTING, EVALUATION, AND ANALYSIS

- A. Masonry renovation shall be undertaken only after complete evaluation and analysis of the areas to be repaired are completed including sampling and testing of the existing mortar to determine its composition and qualities.
- B. No repair work shall be undertaken until conditions that have caused masonry deterioration have been identified; such conditions shall be corrected, if possible, prior to start of the work.

3.02 MASONRY CLEANING

- A. Historic materials shall not be damaged or marred in the process of cleaning. Cleaning shall conform to ASTM C 1515.
- B. Temporarily caulk or otherwise protect open joints to prevent water and cleaner intrusion into the interior of the structure from pressure spraying.
- C. Protect non-masonry materials and severely deteriorated masonry by approved methods prior to initiation of cleaning operations.
- D. Masonry cleaning shall remove all organic and inorganic contaminants from the surface and pores of the substrate, returning the masonry to its natural color. Surfaces shall be evenly cleaned with no evidence of streaking or bleaching. The cleaning process shall not affect the density, porosity, or color of the masonry or mortar.
- E. Cleaned masonry shall have a neutral pH. Use the gentlest methods possible for cleaning historic masonry to achieve the desired results. Make test patches to determine a satisfactory cleaning result.
- F. Cleaning shall proceed in an orderly manner, working from top to bottom of each scaffold width and from one end of each elevation to the other. Perform cleaning in a manner which results in uniform coverage of all surfaces, including corners, moldings, interstices and which produces an even effect without streaking or damage to masonry.

- G. The cleaning materials, equipment, and methods shall not result in staining, erosion, marring, or other damage to the surfaces of the structure. Following an initial inspection and evaluation of the structure and surfaces, give the structure a surface cleaning which shall be completed prior to start of repair work, and sampling and testing of mortars. The work shall provide for the complete cleaning of all exterior masonry surfaces of the structures, removing all traces of moss, dirt, and other contaminants to allow determination of the masonry's color and shades, finish and texture, and other properties.
- H. Following completion of the surface cleaning of the structure (or side of structure) the masonry shall be dried prior to the start of any repair work.
- I. The following sequence of methods shall be used to determine the least aggressive, effective cleaning method:
 - 1. Water with brushes.
 - 2. Water with mild soap.
 - 3. Water with sodium hypochlorite (household bleach).
 - 4. Water with stronger soap plus vinegar (but not on calcareous masonry).
 - 5. Stronger chemical cleaners, only when above methods are determined to be ineffective by the Architect.
 - a. Acidic chemical cleaners shall not be used on limestone, marble, concrete and other calcareous (calcium containing) masonry materials.

3.03 TEST PATCHES

- A. The materials, equipment, and methods to be used in cleaning shall be demonstrated in a test section approximately 3 by 3 ft square.
- B. The location of the test section, and the completed test section shall be subject to approval. Adjust the cleaning process as required and the test section rerun until an acceptable process is obtained. Test patches shall be located in inconspicuous areas of the building.
- C. The areas tested shall exhibit soiling characteristics representative of those larger areas to be cleaned.
- D. Tested areas shall be allowed to dry before a determination is made on the effectiveness of a particular treatment.

3.04 PRESSURE SPRAYING

- A. Spray apply water to masonry surfaces to comply with requirements indicated by test patches for location, purpose, water temperature, pressure, volume, and equipment.
- B. Unless otherwise indicated, the surface washing shall be done with clean, low pressure water (pressure of less than 55 psi and 2.5 to 3 gpm discharge) and the spray nozzle shall not be held less than 12 inches from surface of masonry.
- C. Water shall be applied side to side in overlapping bands to produce uniform coverage.

3.05 HANDSCRUBBING

- A. Pre-wetted surfaces shall be scrubbed using hand-held natural bristle or nylon brushes.
- B. Wire brushes shall not be used.

3.06 RINSING

- A. Scrubbed surfaces shall be rinsed clean of all contaminants and cleaning solutions with water in a low-to-moderate pressure spray, working upwards from bottom to top of each treated area.
- B. The rinsing cycle shall remove all traces of contaminants and cleaning solutions.

3.07 MASONRY REPAIR

- A. Repaired surfaces shall match adjacent existing surfaces in all respects.
- B. Masonry repair shall proceed only after the cause of deterioration has been identified and corrected.
- C. Masonry repair shall proceed only after the area to be repaired has been cleaned.

- D. The materials, methods and equipment proposed for use in the repair work shall be demonstrated in test panels.
- E. The location, number, size and completed test panels shall be subject to approval.
- F. Use products in accordance with the manufacturer's instructions.

3.08 REPOINTING

- A. Repointing work shall be in accordance with Guidelines for Rehabilitating Historic Buildings: Masonry, Procedure Code 0109106S provided by United States General Services Administration.
- B. Deteriorated caulking, grout, or mortar shall be removed from previously repaired cracks where it is failing. Remove loose particles from cracks.
- C. Cracks shall be cleaned, rinsed with water followed by blowing with filtered, dry, compressed air.

3.09 MORTAR ANALYSIS

- A. Test and analyze existing original historic mortar before repointing in order to provide a match with the new repointing mortar.
- B. Historic mortars are usually softer than newer mortars, often using lime as a binder rather than cement. Lime for repointing mortar shall conform to ASTM C 207, Type S, unless otherwise specified.
- C. Full laboratory analysis of the existing mortar shall conform to ASTM C 1324.

3.10 TAKING AND PREPARATION OF SAMPLES

- A. Take and analyze samples of unweathered original historic mortar and different type of mortar in the structure in order to match the new mortar to be used for repointing.
- B. Four samples of each type of mortar to be matched shall be removed with a hand chisel from several locations on each building. Set aside the largest sample for comparison with the repointing mortar.
- C. The remaining samples shall be broken apart with a wooden mallet, powdering them into their constituent parts.

3.11 TOOLS AND EQUIPMENT

- A. Clean tools and equipment to be used again in the work before the epoxy-resin grout sets.

3.12 HEALTH AND SAFETY PRECAUTIONS

- A. Provide full-face shields for mixing, blending, and placing operations as required and protective coveralls and neoprene-coated gloves for workers engaged in the operations.
- B. Supply protective creams of a suitable nature for the operation. Adequate fire protection shall be maintained at mixing and placing operations.
- C. Smoking or the use of spark- or flame-producing devices shall be prohibited within 50 feet of mixing and placing operations.

3.13 MASONRY REPLACEMENT

- A. Replace masonry with salvaged stone from existing building, or approved sources.
- B. If a few isolated masonry units are to be replaced, remove each without disturbing the surrounding masonry. Deteriorated masonry units and mortar requiring replacement shall be removed by hand chiselling.
- C. Adjoining masonry units shall not be damaged during the removal of deteriorated units and mortar.
- D. Test the new element for fitting into its space without mortar. If wedges are used to support and align the new unit, they shall be covered with at least 1-1/2 inches of mortar when pointing is complete.

- E. Cover the four sides and back of the space with sufficient mortar to ensure that there will be no air spaces when the new unit is set. The new unit shall be lined up and set by tapping it into place with a wooden or rubber mallet.
- F. Align face of new unit with that of existing masonry.
- G. Joints shall be repointed to match the rest of the wall after new units have been properly installed and adjusted.
- H. Clean replacement areas with a non-metallic brush and water to remove excess mortar.

3.14 MASONRY AND MORTAR FINISHES AND COLOR

- A. The exposed surfaces of masonry and mortar repair shall match the finish, color, texture, and surface detail of the original surface.
- B. Mechanical finishing and texturing may be required to produce the required finish and appearance.
- C. The finishing and texturing shall conceal bond lines between the repaired area and adjacent surfaces. The texturing shall provide replication of all surface details, including tooling and machine marks.
- D. The equipment used in finishing and texturing shall be a low-impact energy type which will not weaken the patch or damage the patch bond and the adjacent concrete.

3.15 JOINT SEALING

- A. Provide joint sealing as specified in Section [07 0005 JOINT SEALERS](#).

3.16 FINAL CLEANING

- A. No sooner than 72 hours after completion of the repair work and after joints are sealed, faces and other exposed surfaces of masonry shall be washed down with water applied with a soft bristle brush, then rinsed with clean water.
- B. Discolorations which cannot be removed by these procedures shall be considered defective work.
- C. Perform cleaning work when temperature and humidity conditions allow the surfaces to dry rapidly.
- D. Protect adjacent surfaces from damage during cleaning operations.

3.17 FINAL INSPECTION

- A. Following completion of the work, inspect the structure for damage, staining, and other distresses. The patches shall be inspected for cracking, crazing, delamination, unsoundness, staining and other defects.
- B. The finish, texture, color and shade, and surface tolerances of the patches shall be inspected to verify that all requirements have been met.
- C. Repair surfaces exhibiting defects as directed.

END OF SECTION 040140

**SECTION 042000
UNIT MASONRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete block.
- B. Clay facing brick.
- C. Common brick.
- D. Mortar and grout.
- E. Reinforcement and anchorage.
- F. Flashings.
- G. Lintels.
- H. Accessories.

1.02 REFERENCE STANDARDS

- A. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.
- B. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction; 2012 (Reapproved 2019).
- C. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2018.
- D. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale); 2021.
- E. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2019a, with Editorial Revision.
- F. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete; 2016.
- G. BIA Technical Notes No. 7 - Water Penetration Resistance – Design and Detailing; 2017.
- H. BIA Technical Notes No. 13 - Ceramic Glazed Brick Exterior Walls; 2017.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Samples: Submit samples of brick units to illustrate full color, texture, and extremes of color range to match existing exterior brick.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least 5 years of documented experience.

1.05 MOCK-UPS

- A. Construct a masonry wall as a mock-up panel sized 6 feet long by 4 feet high; include mortar, accessories, structural backup, and flashings (with lap joint, corner, and end dam) in mock-up. The approved sample panel shall be standard of workmanship.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depth of 8 inches.

2.02 BRICK UNITS

- A. Manufacturers:
 - 1. Belden Brick; _____: www.beldenbrick.com/#sle.
 - 2. Endicott Clay Products Co; Face Brick - FBX: www.endicott.com/#sle.
 - 3. General Shale Brick; _____: www.generalshale.com/#sle.
 - 4. Meridian Brick LLC; Athens Architectural Series: www.meridianbrick.com/#sle.
 - 5. Pacific Clay Products Inc; _____: www.pacificclay.com/#sle.
 - 6. Yankee Hill Brick Mfg. Co; _____: www.yankeehillbrick.com/#sle.
 - 7. Acme Brick Company; <https://brick.com/>.
 - 8. Substitutions: See section 016000 - Product Requirements.
- B. Facing Brick: ASTM C216, Type FBS Smooth, Grade SW.
 - 1. Color and texture: Match existing.
 - 2. Nominal size: Match existing.
 - 3. Special shapes: Molded units as required by conditions indicated, unless standard units can be sawn to produce equivalent effect.

2.03 MORTAR AND GROUT MATERIALS

- A. Hydrated Lime: ASTM C207, Type S.
- B. Pigments for Colored Mortar: Pure, concentrated mineral pigments specifically intended for mixing into mortar and complying with ASTM C979/C979M.
 - 1. Color(s): Match existing.

2.04 REINFORCEMENT AND ANCHORAGE

- A. Manufacturers:
 - 1. Hohmann & Barnard, Inc; X-Seal Anchor: www.h-b.com/#sle.
 - 2. Heckman Bldg. Products.
 - 3. Substitutions: See Section 016000 - Product Requirements.

2.05 FLASHINGS

- A. Metal Flashing Materials:
 - 1. Copper Flashing: ASTM B370, 060 soft annealed; 20 oz/sq ft thick; natural finish.
 - 2. Stainless Steel Flashing: ASTM A666, Type 304, soft temper; 26 gauge, 0.0187 inch thick; finish 2B to 2D.

2.06 ACCESSORIES

- A. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; in maximum lengths available.
- B. Cavity Mortar Control: Semi-rigid polyethylene or polyester mesh panels, sized to thickness of wall cavity, and designed to prevent mortar droppings from clogging weeps and cavity vents and allow proper cavity drainage.
 - 1. Mortar Diverter: Semi-rigid mesh designed for installation at flashing locations.
- C. Weeps: Open head joints every third brick at lintels and other locations.
 - 1. Type: Molded PVC grilles, insect resistant.
 - 2. Color(s): Match existing grout joint color.
- D. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

2.07 LINTELS

- A. Prefabricated Steel Lintels:
 - 1. Manufacturers:
 - a. FEROCORP Corporation; FEROCORP Engineered Concealed Lintel Systems: www.ferocorp.com/#sle.
 - b. Hohmann & Barnard, Inc; Engineered Concealed Lintel Systems: www.h-b.com/#sle.
 - c. Substitutions: See Section 016000 - Product Requirements.

2.08 MORTAR AND GROUT MIXING

- A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that related items provided under other sections are properly sized and located.
- C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

- A. Direct and coordinate placement of metal anchors supplied for installation under other sections.
- B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.03 COURSING

- A. Establish lines, levels, and coursing to match existing. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
- D. Brick Units:

3.04 WEEPS/CAVITY VENTS

- A. Install weeps in veneer and cavity walls at 24 inches on center horizontally on top of through-wall flashing above shelf angles and lintels and at bottom of walls.

3.05 CAVITY MORTAR CONTROL

- A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.
- B. Install cavity mortar diverter at base of cavity and at other flashing locations as recommended by manufacturer to prevent mortar droppings from blocking weep/cavity vents.

3.06 MASONRY FLASHINGS

- A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
- B. Terminate flashing up 8 inches minimum on vertical surface of backing:
- C. Install flashing in accordance with manufacturer's instructions and BIA Technical Notes No. 7.
- D. Extend metal flashings through exterior face of masonry and terminate in an angled drip with hemmed edge. Install joint sealer below drip edge to prevent moisture migration under flashing.

3.07 LINTELS

- A. Install loose steel lintels over openings.
- B. Maintain minimum 6 inch bearing on each side of opening.

3.08 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. Clean soiled surfaces with cleaning solution.

3.09 PROTECTION

- A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

END OF SECTION 042000

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**SECTION 061000
ROUGH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Rough opening framing for doors, windows, and roof openings.
- B. Preservative treated wood materials.
- C. Miscellaneous framing and sheathing.
- D. Concealed wood blocking, nailers, and supports.
- E. Miscellaneous wood nailers, furring, and grounds.

1.02 RELATED REQUIREMENTS

- A. Section 092116 - Gypsum Board Assemblies: Gypsum-based sheathing.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- B. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.
- C. AWPA U1 - Use Category System: User Specification for Treated Wood; 2023.
- D. PS 20 - American Softwood Lumber Standard; 2021.
- E. WWPA G-5 - Western Lumber Grading Rules; 2021.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide technical data on insulated sheathing, wood preservative materials, and application instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

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

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species: Douglas Fir-Larch, unless otherwise indicated.
 - 2. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
 - 3. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
 - 4. Lumber of other species or grades is acceptable provided structural and appearance characteristics are equivalent to or better than products specified.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Western Wood Products Association; WWPA G-5.
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 - 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.

2.04 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
 - 2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
- B. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber in contact with masonry or concrete.
 - c. Treat lumber in other locations as indicated.

PART 3 EXECUTION

3.01 PREPARATION

- A. Coordinate installation of rough carpentry members specified in other sections.

3.02 INSTALLATION - GENERAL

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

3.03 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to authorities having jurisdiction may be used in lieu of solid wood blocking.
- C. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.
- D. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- E. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
- F. Provide the following specific nonstructural framing and blocking:
 - 1. Cabinets and shelf supports.
 - 2. Wall brackets.
 - 3. Handrails.
 - 4. Grab bars.

5. Towel and bath accessories.
6. Wall-mounted door stops.
7. Chalkboards and marker boards.
8. Wall paneling and trim.
9. Joints of rigid wall coverings that occur between studs.

3.04 TOLERANCES

- A. Framing Members: 1/4 inch from true position, maximum.
- B. Variation from Plane, Other than Floors: 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

3.05 CLEANING

- A. Waste Disposal: See Section 017419 - Construction Waste Management and Disposal.
 1. Comply with applicable regulations.
 2. Do not burn scrap on project site.
 3. Do not burn scraps that have been pressure treated.
 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION 061000

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**SECTION 062000
FINISH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Support framing, grounds, and concealed blocking.
- B. Section 064100 - Architectural Wood Casework: Shop fabricated custom cabinet work.
- C. Section 081433 - Stile and Rail Wood Doors.
- D. Section 085200 - Wood Windows.
- E. Section 099113 - Exterior Painting: Painting of finish carpentry items.
- F. Section 099123 - Interior Painting: Painting of finish carpentry items.
- G. Section 099300 - Staining and Transparent Finishing: Staining and transparent finishing of finish carpentry items.

1.03 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
- C. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- D. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- E. BHMA A156.9 - Cabinet Hardware; 2020.
- F. PS 20 - American Softwood Lumber Standard; 2021.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with plumbing rough-in, electrical rough-in, and installation of associated and adjacent components.
- B. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data:
 - 1. Provide manufacturer's product data, storage and handling instructions for factory-fabricated units.
- C. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
 - 1. Scale of Drawings: 1-1/2 inch to 1 foot, minimum.
- D. Samples: Submit two samples of wood trim 12 inch long.

1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
 - 1. Company with at least five projects within the past 5 years with value of woodwork within 20 percent of cost of woodwork for this project.
 - 2. Single Source Responsibility: Provide and install this work from single fabricator.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Protect from moisture damage.

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

- A. Surface Burning Characteristics: Provide materials having fire and smoke properties as required by applicable code.
- B. Exterior Woodwork Items:
 - 1. Window Casings and Moldings: Hardwood; prepare for paint finish.
- C. Interior Woodwork Items:
 - 1. Moldings, Bases, Casings, and Miscellaneous Trim: Match existing species; prepare for stain finish.
 - 2. Door, Glazed Light, and Pocket Door Frames: Match existing species; prepare for stain finish.
 - 3. Window Sills: Match existing species; prepare for stain finish.

2.02 FASTENINGS

- A. Fasteners: Of size and type to suit application; zinc finish in concealed locations and zinc finish in exposed locations.

2.03 ACCESSORIES

- A. Lumber for Shimming and Blocking: Softwood lumber of suitable species.
- B. Safety Glass: Laminated glass complying with 16 CFR 1201 and ANSI Z97.1; clear; nominally 6 mm thick.
- C. Primer: Alkyd primer sealer.
- D. Wood Filler: Solvent base, tinted to match surface finish color.

2.04 FABRICATION

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

2.05 SHOP FINISHING

- A. Sand work smooth and set exposed nails and screws.
- B. Apply wood filler in exposed nail and screw indentations.
- C. On items to receive transparent finishes, use wood filler that matches surrounding surfaces and is of type recommended for the applicable finish.
- D. Stain, seal, and varnish exposed to view surfaces. Brush apply only.
- E. Prime paint surfaces in contact with cementitious materials.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 INSTALLATION

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

3.03 PREPARATION FOR SITE FINISHING

- A. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.

- B. Site Finishing: See Section 099113 and 099123.
- C. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

3.04 TOLERANCES

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

END OF SECTION 062000

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**SECTION 064100
ARCHITECTURAL WOOD CASEWORK**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Specially fabricated cabinet units.
- B. Countertops.
- C. Hardware.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Support framing, grounds, and concealed blocking.
- B. Section 099300 - Staining and Transparent Finishing: Field finishing of cabinet exterior.
- C. Section 123600 - Countertops.

1.03 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- C. BHMA A156.9 - Cabinet Hardware; 2020.
- D. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
 - 1. Scale of Drawings: 1-1/2 inch to 1 foot, minimum.
 - 2. Provide information as required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).
- C. Product Data: Provide data for hardware accessories.
- D. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches square, illustrating proposed cabinet, countertop, and shelf unit substrate and finish.

1.05 QUALITY ASSURANCE

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

1.06 MOCK-UPS

- A. See Section 014000 - Quality Requirements for additional requirements.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.08 FIELD CONDITIONS

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.01 CABINETS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Cabinets at Break Room:
 - 1. Finish - Exposed Surfaces: Wood, stained, rotary cut, book-matched.
 - 2. Finish - Semi-Exposed Surfaces: Wood, stained, rotary cut, random-matched.
 - 3. Cabinet Design Series: As indicated on drawings.
 - 4. Adjustable Shelf Loading: 40 psf.

5. Cabinet Style: Reveal overlay.
6. Cabinet Doors and Drawer Fronts: Stile and rail, raised panel style.
7. Drawer Side Construction: Multiple-dovetailed.
8. Drawer Construction Technique: Dovetail joints.

2.02 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

2.03 COUNTERTOPS

- A. Countertops: See Section 123600.

2.04 HARDWARE

- A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.
- B. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards or multiple holes for pin supports and coordinated self rests, polished chrome finish, for nominal 1 inch spacing adjustments.
- C. Drawer and Door Pulls: "U" shaped wire pull, bronze with satin finish, 4 inch centers.
- D. Keyed Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, bronze with satin finish.
- E. Cabinet Catches and Latches:
- F. Drawer Slides:
 1. Type: Extension types as indicated.
 2. Static Load Capacity: Commercial grade.
 3. Mounting: Side mounted.
 4. Stops: Integral type.
 5. Features: Provide self closing/stay closed type.
- G. Soft-Close, Door and Drawer Adjustable Dampers:
- H. Hinges: European style concealed self-closing type, bronze with satin finish.

2.05 SHOP TREATMENT OF WOOD MATERIALS

- A. Provide UL (DIR) listed and approved identification on fire retardant treated material.
- B. Deliver fire retardant treated materials cut to required sizes. Minimize field cutting.

2.06 SITE FINISHING MATERIALS

- A. Stain, Shellac, Varnish, and Finishing Materials: In compliance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Finishing: Field finished, see Section 099300.

2.07 FABRICATION

- A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
- B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
- D. Provide cutouts for plumbing fixtures. Verify locations of cutouts from on-site dimensions. Prime paint cut edges.

2.08 SHOP FINISHING

- A. Sand work smooth and set exposed nails and screws.
- B. For opaque finishes, apply wood filler in exposed nail and screw indentations and sand smooth.
- C. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows:

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

3.02 INSTALLATION

- A. Install work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.
- B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- C. Use concealed joint fasteners to align and secure adjoining cabinet units.
- D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- E. Secure cabinets to floor using appropriate angles and anchorages.
- F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.03 ADJUSTING

- A. Adjust installed work.
- B. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION 064100

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**SECTION 081433
STILE AND RAIL WOOD DOORS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wood doors, stile and rail design; fire rated and non-fire rated.
- B. Panels of wood and glass.

1.02 RELATED REQUIREMENTS

- A. Section 062000 - Finish Carpentry: Wood door frames.
- B. Section 099300 - Staining and Transparent Finishing: Field finishing.

1.03 REFERENCE STANDARDS

- A. AWI (QCP) - Quality Certification Program; Current Edition.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- D. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Indicate stile and rail core materials and construction; veneer species, type and characteristics.
- C. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, special blocking for hardware, factory machining criteria, factory finishing criteria, cutouts for glazing, and cutouts for louvers.
- D. Samples: Submit two samples of door construction, 12 by 12 inches in size cut from top corner of door.
- E. Manufacturer's qualification statement.
- F. Warranty, executed in Owner's name.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience.
 - 1. Company with at least one project within past five years with value of woodwork within at least 20 percent of cost of woodwork for this project.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Package, deliver, and store doors in accordance with quality standard specified.
- B. Accept doors on site in manufacturer's packaging, and inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

1.07 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Interior Doors: Provide manufacturer's warranty for the life of the installation.
- C. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

PART 2 PRODUCTS

2.01 DOORS

- A. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless otherwise indicated.
- B. Interior Doors: 1-3/8 inches thick unless otherwise indicated; solid lumber construction; mortise and tenon joints. stained finish as indicated on drawings.

2.02 DOOR AND PANEL FACINGS

- A. Adhesive: Type I - Waterproof.

2.03 DOOR CONSTRUCTION

- A. Bond edge banding to cores.
- B. Panels: Flat.
- C. Glazed Openings: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings.
- D. Factory install glazing in doors in compliance with quality standards specified, using manufacturer's standard elastomeric glazing sealant.

2.04 ACCESSORIES

- A. Glazed Openings:
- B. Panel or Glass Retention Molding: Wood of same species as door facing, flat bead stop, with butted corners; prepared for countersink style tamper proof screws.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out of tolerance for size or alignment.

3.02 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and specified quality standards.
- B. Field-Finished Doors: Trimming to fit is acceptable.
 - 1. Adjust width of non-rated doors by cutting equally on both jamb edges.
 - 2. Trim door height by cutting bottom edges to a maximum of 3/4 inch.
 - 3. Trim fire-rated doors in strict compliance with fire rating limitations.
- C. Machine cut for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.

3.03 TOLERANCES

- A. Comply with specified quality standard for fit, clearance, and joinery tolerances.
- B. Maximum Width Distortion (Cup): 1/8 inch measured with straight edge or taut string, edge to edge, over an imaginary 36 by 84 inch surface area.

3.04 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

3.05 SCHEDULE

- A. See Door and Frame Schedule appended to this section.

END OF SECTION 081433

**SECTION 086100
WINDOW RESTORATION AND REPLICATION**

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Window work is defined as three general types, 1) Replicate, 2) Repair, and 3) Prepare and Paint:
1. Replicate: Reconstruction of windows in their entirety.
 - a. Replace existing windows with newly constructed wood windows as detailed on Drawings.
 2. Repair: Including all Scope of Work in Prepare and Paint and also, Replace damaged or deteriorated window elements with new components, including but not limited to:
 - a. Replace deteriorated elements as indicated on Window Schedules on the Drawings.
 - b. Reinforce, straighten and align, sagging or warping upper sash meeting rail/lower sash bottom rails.
 - c. Replace sash members meeting rail requiring replacement with a new as noted on schedules.
 - d. Realign and reglue loose sash joints.
 - e. Set nails in sash, frame, or trim members not fully set and fill resulting holes with epoxy patch.
 - f. Replacement of structurally damaged sash sections as well as various elements of the window frame and trim.
 - g. Small areas of decayed wood shall be removed and the area epoxy patched/consolidated. If 10% or more of the element is rotted, replace entire element.
 - h. Elements missing in their entirety (e.g. a window sill, parting stop, etc.) shall be replaced.
 - i. Broken glass shall be replaced.
 - j. Renovation of structurally damaged sash sections not to be replaced as well as designated elements of the window frame and trim:
 - 1) Repair as necessary, damaged elements, including chips, gouges, and splits, which hold water, allow water to penetrate, or which would tend to accelerate deterioration, to promote rapid runoff of water and eliminate pounding water within 1 hour of precipitation.
 - 2) Remove non-original elements and resultant holes patched (e.g. surface applied weather-stripping, eyehooks reinforcing angles at sash joints, sheet metal patches at rotten wood jamb/sill, wood blocks holding up upper sash, etc.)
 - 3) Reinforce, straighten and realign sagging or warped upper sash meeting rail/lower sash bottom rail.
 - 4) Replace upper sash meeting rails requiring replacement.
 - 5) Realign and reglue loose sash joints.
 - 6) Repair damaged existing weather-stripping to remain.
 - k. Coordination of replacement of missing, cracked, and/or damaged glass:
 - 1) Reglaze, using existing glass, at sash indicated to receive structural repairs or joint realignment. Seal sash glazing groove continuously inside and out with specified sealant and glazing compound.
 - l. With the completion of the work specified in this section, it is required that the condition of indicated windows be as follows:
 - 1) Selected sash units shall be restored as indicated ready for glazing and painting, all lower sash fully operational, with original or replicated hardware installed. Upper sash shall be fixed as indicated and sealed to preclude air and water penetration.
 - 2) Selected frame and trim shall be restored as indicated with damaged areas replaced or renovated, missing elements replaced, surface damage repaired and ready for painting or finishing and installation of sealant.

- 3) Indicated meeting rail sections shall be reinforced with metal and bow removed from wood section.
- 4) Weather-stripping of operable sash shall be restored, reworked, or replaced as indicated to produce no crack widths at sash junctures to frame in excess of 1/64".
- m. Exposed Replacement Hardware:
 - 1) Provide each restored window with full complement of hardware and fasteners matching that on original windows. Use salvaged, restored existing hardware insofar as possible and new hardware to match existing hardware where hardware is missing or existing hardware is damaged or deteriorated so as to be unrestorable.
3. Prepare and Paint: Replacing weatherstripping, sash cords, and sash weights with new components to make windows fully operable prior to application of paint.
 - a. Replace all weatherstripping on all windows.
 - b. Replacement of all sash cords and damaged weights on all windows.
 - c. Paint removal and general repair to selected historic wood window assemblies, including removal of wood window elements as required to effect restoration and alterations.
 - d. Finish painting: Applying paint system on all wood windows. On existing windows, minor chips and gouges, need not be repaired, except as accomplished by general preparation for painting.
 - e. Refer Window Schedules on the Drawings for windows requiring painting.
 - f. Fill screw and nail holes with epoxy patch.

1.02 QUALITY ASSURANCE

- A. General:
 1. Comply with repair guidelines contained in Preservation Briefs number 9, The Repair of Historic Wooden Windows, published by the U.S. Dept. of Interior and available from the Preservation Assistance Division. (202-343-9573)
 2. Comply with the general requirements for epoxy consolidation and repair of wood contained in Epoxies for Wood Repairs in Historic Buildings, published by the U.S. Dept. of the Interior and available from the Preservation Assistance Division. (202-343-9573)
 3. Qualified Manufacturer: To function as Contractor's Specialist for documentation of unit price work and to perform, modifications and repairs on historic window sash indicated to be removed and on window units indicated to be restored to operational condition, employ a specialized firm with not less than five years of previous experience replicating or remanufacturing historic wood windows.
 4. Installer Qualifications: Restoration work done shall be performed by a firm with successful experience in similar work on not less than five complete previous projects comparable to this project in historic reconstruction/ repair scope, nature, and complexity. Workmen shall be skilled finish carpenters (where applicable), and experienced in the type of historical repair work required. Submit references with name of contact person and telephone number for the two (2) submitted similar projects.
 - a. Only skilled workers who are familiar and experienced with the methods specified for consolidation, fill, and replication of new elements are to be used for wood door and frame restoration.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's data sheets for every item of specified weather-stripping and window accessories.

1.04 PROJECT/SITE CONDITIONS

- A. Remove and replace existing window sash element, frames, mullions, muntins, casings, sills, stools, aprons, and trim, or portions thereof, where:
 1. Indicated.
 2. Identified as damaged beyond repair during examination by Contractor's repair specialist and approved by Owner's representation.

3. Damaged beyond repair during the Work under this Contract.
- B. Remove and replace entire sash unit, reglazed with original glass, and finished as indicated, where:
 1. Indicated.
 2. Required restoration procedures are so extensive that replacement is considered more practical by specialist and Owner's representative concurs.
- C. Contractor shall establish, during initial inspection of each work area with Owner's representative and Architect which sash units shall be completely replaced.
- D. Sash removal may be required to perform the following repair procedures:
 1. Reinforce or replace warped sash rails.
 2. Repair, realign sash joints separated in excess of 1/8" cumulative across the width of window on operable window sash.
 3. Replace missing weather-stripping on operable windows.
 4. Adjust, repair, or replace weather-stripping on operable windows.
 5. Repair or replace sash weights and chain on operable windows.
 6. Where it is necessary to remove original sash to perform repair procedures, mark sash and frame in a concealed location with waterproof, non-staining to exposed surfaces marker with unique number for frame and corresponding sash element. Install restored sash at the same location from which it was removed.
- E. Removal of existing glass and reinstallation (reglazing with existing glass) is required where interior wood stops are altered or replaced.
- F. Coordinate glass and glazing work as follows:
 1. Where window sashes are to be removed and window sashes reinstalled, ensure that decorative glass (if any) and original polished plate glass have been removed from the sash and properly stored or sent to shop for repair as specified in Section "Glass and Glazing". Cooperate with glazier in removal of existing glass for protection or repair of existing glass.
 2. Note: Not all existing glass is believed to be original polished plate glass. Architect has not surveyed the locations of original polished plate glass. There is no known contemporary source for polished plate glass in the sizes required for replacement.
 3. Protecting existing glass to remain in place during indicated repair procedures and which do not otherwise require sash removal. Replace glass which is broken during repair procedures with products complying with the requirements indicated in the applicable "Glass and Glazing" Sections.
 4. Should it become necessary to remove existing interior window coverings, such as shutters, blinds, draperies, etc., in order to perform the restoration of the windows, the Contractor shall record, remove store, and reinstall window coverings in their original locations.

PART 2 PRODUCTS

2.01 FABRICATION OF REPLICATED UNITS

- A. Replicated Units: Replacement sash, sill, other frame and trim sections shall match the existing in configuration, sash pattern and construction.

2.02 MATERIALS FOR REPLICATING AND REPAIRING WINDOWS

- A. Epoxy Consolidant: Penetrating two part epoxy compound. A product complying with the requirement is Arcon Seep-N-Seal, as manufactured by Allied Resin Corporation, East Weymouth, Massachusetts.
- B. Three-part, semi-rigid compound consisting of one part epoxy resin, polysulfide polymer and curing agent, and fillers. Compound shall be equal to Compound No. 1 as set forth in the referenced standard Epoxies for Wood Repairs in Historic Buildings, or at Contractor's option, provide proprietary patching compound as follows:
- C. Epoxy patching compounds: Marine-Tex as manufactured by Travaco Laboratories, 345 Eastern Avenue, Chelsea MA. Abatron, Inc., 33 Center Drive, Gilberts, IL 60136.

- D. Replacement wood for sash repair/replacement: Clear, Long Leaf Pine lumber which has been treated with water repellent preservative in conformance with NWMA IS-4 standard after machining and kiln-dried to be moisture content of 6 to 12 percent at time of fabrication.
- E. Replacement wood for sills repair/replacement: Clear Cypress lumber which has been treated with water repellent preservative in conformance with NWMA IS-4 standard after machining and kiln-dried to be moisture content of 6 to 12 percent at time of fabrication.
- F. Replacement wood for exterior trim, frame: Clear, longleaf, heart pine which has been salvaged from historical buildings by suppliers experienced in providing such lumber. Subject to compliance with requirements, suppliers or acceptable product include but are not limited to:

Mountain Lumber	Albany Woodwork Co.
Route 2, Box 43-1	PO Box 729
Ruckersville, VA 22968	Albany, LA 70711
(804) 295-1922	(504) 567-1155
- G. Replacement wood for interior trim: Clear White Oak kiln-dried to be moisture content of 6 to 12 percent at time of fabrication.
- H. Adhesive: Resorcinal formaldehyde resin waterproof adhesive per CS 35 Type 1.
- I. Wood primer/sealer: Product compatible with finish specified in Division 9 Sections and which is compatible with mildewcide additives as follows:
- J. Paint additive for Primer: An acceptable product is ADD-X Mildewcide Paint Additive manufactured by Zehrunge Corporation, Portland, Oregon.
- K. Fasteners: Comply with NWMA requirements for fabrication and with manufacturer's recommendations and standard industry practices for type and size of installation fasteners.
 - 1. For fabrication and installation of wood elements, use only countersunk stainless steel or brass structural reinforcements, screws, dowels, and resorcinol adhesives, or combinations of listed fasteners and adhesive.
 - 2. For hardware and accessory installation use brass screws.
 - 3. Pulls, latches, and other hardware items: Match existing fastener hardware on visible elements.
- L. Compression Weather-stripping for Operable Windows: Bronze spring metal, designed for permanently resilient sealing under bumper or wiper action, completely concealed when window sash is closed.
- M. Sash weights: Where sash weights are missing provide cast iron weights of the same weight of the existing units.
- N. Sash weight cords: Provide new copper coated steel chains, sized for the sash hardware, for repair of existing windows.
- O. Provide replicated replacement hardware on visible window elements or reinstall repaired, cleaned, salvaged hardware. Replacement hardware shall replicate the appearance of existing hardware elements visible when windows are closed.

PART 3 EXECUTION

3.01 GENERAL PREPARATION REQUIRED FOR WINDOW ELEMENTS:

- A. Remove heavy paint build-up from all exterior window elements. Protect interior finishes from staining or damage associated with paint removal techniques employed on exterior. Comply with Division 9 Section "Finish Removal" for general finish removal criteria for wood substrates. Accessible window elements will be considered free of heavy paint build-up if all loose paint is removed, paint is removed to bare wood at areas to receive patching, re-gluing, or chemical consolidation, and areas not required to be patched or consolidated have firmly adhered smooth paint film remaining.
- B. Where refinishing, replacement, or repair of interior sash elements or interior trim and parting stops is required, finish removal and refinishing of element may be performed at a remote location and reinstalled completely finished.

- C. Paint Removal: Remove paint which is peeling, crazing, alligatoring, or showing other similar defects by chemical stripping, or wet sanding. In extreme cases, a hot air gun may be required to loosen paint. It is not desirable to remove all paint. Remove to the degree necessary to perform repair operations, as herein specified, and to permit application of uniform finish.
- D. Remove wood elements indicated to be replaced or removed. Coordinate removal of glass which is broken or indicated to be replaced. Sand to feather junctions between paint to remain and bare wood.
- E. Remove applied sealant materials and unsound previous repair materials.
- F. Bare sound wood areas shall be treated with a paintable mildewcide preservative solution.
- G. Except where epoxy consolidation "in situ" is indicated or as recommended by Contractor's specialist and approved by Architect, decayed or unsound wood areas shall be removed with a plane or specialized tool which minimizes damage to adjacent sound wood prior to treatment and patching.
- H. Remove penetrating elements and foreign materials from window.
- I. Paint Disposal: Process debris shall remain segregated from all other waste material and disposed of in containers provided by Owner.
- J. Contractor's window specialist shall inspect window unit and mark repair areas with a non-staining marker which will not bleed through specified finishes. Specialist shall particularly note condition of areas which were concealed or not accessible for Architect's initial observations. Contractor shall mark and log location and extent of serious damage in these areas. Serious damage shall be defined to include warpage or deformation so extreme as to preclude proper operation (on windows to be made operable), impending structural failure due to rot or termite damage, and joint separation of intersecting sash parts in excess of 1/16" on operable sash units.
- K. Identify, mark and log locations of original polished plate glass. Indicate where original glass is intact. Indicate extent and nature of cracks or other damage to original glass in place.
- L. At intervals convenient to the Owner, assist Architect and Owner's representative in performing survey of prepared exterior window areas on the ground, first, second, third and fourth floors.
- M. Perform logs and inspections prior to work by separate asbestos abatement contractor. Photograph conditions at vulnerable areas.

3.02 GENERAL REPAIR PROCEDURES

- A. Remove indicated sash units. Remove loose paint, glazing, glazing compound and hardware. Fill screw and nail holes with epoxy patch.
 - 1. While sash is out of frame openings, the openings are to be provided with temporary covers to exclude wind driven rain.
- B. Resecure loose frame sections so that frame members fit tightly and the entire frame fits securely in the wall.
- C. Fill minor holes, gouges, weather worn areas, etc with epoxy patching compound applied in conformance with recommendations referenced. Sand surfaces so that new paint will smoothly blend in over areas which have been patched.
- D. Repair intact decayed wood with Epoxy Consolidant: Where required to consolidate, drill 1/8" to 1/4" diameter holes along the length of piece perpendicular to the grain. Fill holes with epoxy consolidant, repeating as wood absorbs the fluid. Cure according to referenced standards. Where approved by the Architect, consolidate existing wood in place, in lieu of complete replacement of piece. This option will only be considered by the Architect for repair of localized rot at frame and sill components.
- E. Repair of Wood Sections with Epoxy Patching Compound: Preparation and application shall be in accordance with the requirements as set forth in the publication referenced in Part 1, General, and as follows:
 - 1. Brush apply area to be patched with epoxy consolidant immediately prior to patching.

- F. Replace sill, frame, sash or trim members indicated to be replaced with the members of same configuration as original of material specified.

3.03 REPAIR PROCEDURES FOR OPAQUE FINISHED WOOD

- A. Epoxy Patch: Strengthen and stabilize wood using consolidant epoxies which saturate the bare wood. Confine application of epoxy consolidant to the immediate area to be patched. Apply epoxy patch while consolidant is still tacky. Then fill with epoxy patching compound and sand. Use epoxy compounds to building up missing damaged parts of members; duplicate existing profiles.
- B. Wood Replacement: Remove and discard damaged portion and cut and fit in a matching portion. Where window parts are damaged beyond practical repair by the indicated method, Contractor may elect with approval of Owner's representative to remove the entire part (such as an operating sash or an entire frame) and provide a new matching part. Where portions are indicated to be removed and new portions provided, the new portion shall be the entire portion (entire bottom sash rail, for example). Do not splice members. Where entire members have been removed and new members provided, provide joint reinforcements where new and existing or two members join. Retain and match existing woodwork joinery configurations adapting only as required to incorporate joint reinforcements and adhesive.
- C. Holes larger than 3/8" diameter (except for holes through sash): Install wood plug or "Dutchmen" with resorcinol adhesive.
- D. Seal bare areas immediately after repair work is complete with a clear primer sealer.

3.04 INSTALLATION OF WINDOWS

- A. Install replacement sash units, frame elements and trim elements with units of specified material to visually match the original missing elements.
- B. Re-install existing and install new sash weights on chain as specified. Replace sash weight access panels in jamb members so joints are flush and smooth.
- C. Replace missing or inoperative sash locks, weights and chains.

3.05 WINDOW OPERATIONS AND HARDWARE:

- A. Repair or remove and provide new parts for existing window operator parts at operable windows, such as counterbalances and sash-weight chains (or cords). New parts shall match existing, except substitute chains for cords.
- B. Rework existing bronze weather-stripping where salvageable, or where not feasible to reuse or where missing, provide new weather-stripping for each operable window within the Contract limit line. Weather-strip each side of each operator, including meeting rails.
- C. Remove existing window hardware which is deteriorated or damaged, salvaging items suitable for reuse. Where existing hardware has been removed or is missing, provide replacement hardware, including reinforcement, fasteners, and other hardware and devices required for proper window operation.
- D. Fix and seal operating panels at fixed sash locations, but provide, or retain, acceptable existing exposed to view hardware.
- E. Adjust hardware at operable windows for easy operation.

3.06 ADJUST AND CLEAN

- A. Adjust operating sash and hardware to provide smooth operation with tight, weatherproof closure. Lubricate hardware and moving parts.
- B. Refer to Division 9 Sections for required finish to be applied on wood window units at project site. Glaze each unit before application of final finish coat where coat extends over removable glazing bead or over exposed face glazing.
- C. Clean glass of window units promptly after installation; comply with requirements of "Glass and Glazing" Section for cleaning and maintenance.

- D. Institute protection required through remainder of construction period, to ensure that wood window units will be without damage or deterioration (other than normal weathering) at time of acceptance.

END OF SECTION 086100

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**SECTION 087100
DOOR HARDWARE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for wood doors.
- B. Thresholds.
- C. Weatherstripping and gasketing.

1.02 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.

PART 2 PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

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

2.02 FINISHES

END OF SECTION 087100

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**SECTION 090561
COMMON WORK RESULTS FOR FLOORING PREPARATION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
- B. Removal of existing floor coverings.
- C. Preparation of new and existing concrete floor slabs for installation of floor coverings.
- D. Testing of concrete floor slabs for moisture and alkalinity (pH).
- E. Remediation of concrete floor slabs due to unsatisfactory moisture or alkalinity (pH) conditions.
 - 1. Contractor shall perform all specified remediation of concrete floor slabs. If such remediation is indicated by testing agency's report and is due to a condition not under Contractor's control or could not have been predicted by examination prior to entering into the contract, a contract modification will be issued.
- F. Patching compound.
- G. Remedial floor coatings.

1.02 REFERENCE STANDARDS

- A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50 mm] Cube Specimens); 2021.
- B. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete; 2020.
- C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2021.
- D. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2016a.
- E. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Visual Observation Report: For existing floor coverings to be removed.
- C. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
 - 1. Moisture and alkalinity (pH) limits and test methods.
 - 2. Manufacturer's required bond/compatibility test procedure.
- D. Testing Agency's Report:
 - 1. Description of areas tested; include floor plans and photographs if helpful.
 - 2. Summary of conditions encountered.
 - 3. Moisture and alkalinity (pH) test reports.
 - 4. Copies of specified test methods.
 - 5. Recommendations for remediation of unsatisfactory surfaces.
 - 6. Product data for recommended remedial coating.
 - 7. Certificate: Include certification of accuracy by authorized official of testing agency.
 - 8. Submit report to Architect.
 - 9. Submit report not more than two business days after conclusion of testing.
- E. Adhesive Bond and Compatibility Test Report.

F. Copy of RFCI (RWP).

1.05 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Independent testing agency experienced in the types of testing specified.
 - 1. Submit evidence of experience consisting of at least 3 test reports of the type required, with project Owner's project contact information.
- B. Contractor's Responsibility Relating to Independent Agency Testing:
 - 1. Provide access for and cooperate with testing agency.
 - 2. Confirm date of start of testing at least 10 days prior to actual start.
 - 3. Allow at least 4 business days on site for testing agency activities.
 - 4. Achieve and maintain specified ambient conditions.
 - 5. Notify Owner when specified ambient conditions have been achieved and when testing will start.
- C. Remedial Coating Installer Qualifications: Company specializing in performing work of the type specified in this section, trained by or employed by coating manufacturer, and able to provide at least 3 project references showing at least 3 years' experience installing moisture emission coatings.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations.
- B. Deliver materials in manufacturer's packaging; include installation instructions.
- C. Keep materials from freezing.

1.07 FIELD CONDITIONS

- A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 65 degrees F or more than 85 degrees F.
- B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics:
 - 1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
 - 2. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.
 - 3. Products:
 - a. ARDEX Engineered Cements; ARDEX Feather Finish:
www.ardexamericas.com/#sle.
 - b. Substitutions: See Section 016000 - Product Requirements.
- B. Alternate Flooring Adhesive: Floor covering manufacturer's recommended product, suitable for the moisture and pH conditions present; low-VOC. In the absence of any recommendation from flooring manufacturer, provide a product recommended by adhesive manufacturer as suitable for substrate and floor covering and for conditions present.
- C. Remedial Floor Coating: Single- or multi-layer coating or coating/overlay combination intended by its manufacturer to resist water vapor transmission to degree sufficient to meet flooring manufacturer's emission limits, resistant to the level of alkalinity (pH) found, and suitable for adhesion of flooring without further treatment.

1. Thickness: As required for application and in accordance with manufacturer's installation instructions.
2. Use product recommended by testing agency.

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

- A. Perform following operations in the order indicated:
 1. Preliminary cleaning.
 2. Moisture vapor emission tests; 3 tests in the first 1000 square feet and one test in each additional 1000 square feet, unless otherwise indicated or required by flooring manufacturer.
 3. Internal relative humidity tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 4. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 5. Specified remediation, if required.
 6. Patching, smoothing, and leveling, as required.
 7. Other preparation specified.
 8. Adhesive bond and compatibility test.
 9. Protection.
- B. Remediations:
 1. Active Water Leaks or Continuing Moisture Migration to Surface of Slab: Correct this condition before doing any other remediation; re-test after correction.
 2. Excessive Moisture Emission or Relative Humidity: If an adhesive that is resistant to the level of moisture present is available and acceptable to flooring manufacturer, use that adhesive for installation of the flooring; if not, apply remedial floor coating or remedial sheet membrane over entire suspect floor area.
 3. Excessive Alkalinity (pH): If remedial floor coating is necessary to address excessive moisture, no additional remediation is required; if not, if an adhesive that is resistant to the level present is available and acceptable to the flooring manufacturer, use that adhesive for installation of the flooring; otherwise, apply a skim coat of specified patching compound over entire suspect floor area.

3.02 REMOVAL OF EXISTING FLOOR COVERINGS

- A. Comply with local, State, and federal regulations and recommendations of RFCI (RWP), as applicable to floor covering being removed.
- B. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.03 PRELIMINARY CLEANING

- A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.
- B. Do not use solvents or other chemicals for cleaning.

3.04 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F1869 and as follows.
- D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.

- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet per 24 hours.
- F. Report: Report the information required by the test method.

3.05 ALKALINITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. The following procedure is the equivalent of that described in ASTM F710, repeated here for the Contractor's convenience.
 - 1. Use a wide range alkalinity (pH) test paper, its associated chart, and distilled or deionized water.
 - 2. Place several drops of water on a clean surface of concrete, forming a puddle approximately 1 inch in diameter. Allow the puddle to set for approximately 60 seconds, then dip the alkalinity (pH) test paper into the water, remove it, and compare immediately to chart to determine alkalinity (pH) reading.
 - 3. Use of a digital pH meter with probe is acceptable; follow meter manufacturer's instructions.
- C. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

3.06 PREPARATION

- A. See individual floor covering section(s) for additional requirements.
- B. Comply with requirements and recommendations of floor covering manufacturer.
- C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.
- D. Do not fill expansion joints, isolation joints, or other moving joints.

3.07 ADHESIVE BOND AND COMPATIBILITY TESTING

- A. Comply with requirements and recommendations of floor covering manufacturer.

3.08 APPLICATION OF REMEDIAL FLOOR COATING

- A. Comply with requirements and recommendations of coating manufacturer.

3.09 PROTECTION

- A. Cover prepared floors with building paper or other durable covering.

END OF SECTION 090561

**SECTION 092116
GYPSUM BOARD ASSEMBLIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Metal channel ceiling framing.
- D. Acoustic insulation.
- E. Gypsum sheathing.
- F. Gypsum wallboard.
- G. Joint treatment and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Wood blocking product and execution requirements.
- B. Section 078400 - Firestopping: Top-of-wall assemblies at fire-resistance-rated walls.
- C. Section 079200 - Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.

1.03 REFERENCE STANDARDS

- A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2020).
- B. AISI S201 - North American Standard for Cold-Formed Steel Framing - Product Data; 2017.
- C. AISI S220 - North American Standard for Cold-Formed Steel Nonstructural Framing; 2020.
- D. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing; 2015, with Errata (2020).
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2020.
- F. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2015.
- G. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2020.
- H. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).
- I. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2023.
- J. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.
- K. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2020.
- L. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2022.
- M. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.
- N. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.
- O. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.
- P. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).

- Q. ASTM E413 - Classification for Rating Sound Insulation; 2016.
- R. GA-216 - Application and Finishing of Gypsum Panel Products; 2021.
- S. GA-224 - Installation of Predecorated Gypsum Board; Gypsum Association; 2008.
- T. UL (FRD) - Fire Resistance Directory; Current Edition.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data:
 - 1. Provide data on metal framing, gypsum board, accessories, and joint finishing system.
 - 2. Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
- B. Interior Partitions: Provide completed assemblies with the following characteristics:
 - 1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

2.02 METAL FRAMING MATERIALS

- A. Material and Product Requirements Criteria: AISI S201.
- B. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.
- C. Manufacturers - Metal Framing, Connectors, and Accessories:
 - 1. ClarkDietrich; ____: www.clarkdietrich.com/#sle.
 - 2. MarinoWARE; ____: www.marinoware.com/#sle.
 - 3. Phillips Manufacturing Co; ____: www.phillipsmfg.com/#sle.
 - 4. Substitutions: See Section 016000 - Product Requirements.
- D. Nonstructural Framing System Components: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.
 - 1. Studs: C-shaped with knurled or embossed faces.
 - 2. Runners: U shaped, sized to match studs.
 - 3. Ceiling Channels: C-shaped.
 - 4. Furring Members: Hat-shaped sections, minimum depth of 7/8 inch.
- E. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection and prevent rotation of studs while maintaining structural performance of partition.
 - 1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100.
 - 2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot-dipped galvanized coating.
 - 3. Provide top track preassembled with connection devices spaced to fit stud spacing indicated on drawings; minimum track length of 12 feet.

2.03 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
 - 1. American Gypsum Company; ____: www.americangypsum.com/#sle.
 - 2. CertainTeed Corporation; ____: www.certainteed.com/#sle.
 - 3. Georgia-Pacific Gypsum; ____: www.gpgypsum.com/#sle.
 - 4. Substitutions: See Section 016000 - Product Requirements.
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.

1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
2. Thickness:
 - a. Vertical Surfaces: 5/8 inch.
 - b. Ceilings: 5/8 inch.
 - c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.

2.04 GYPSUM BOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed mineral-fiber, friction fit type, unfaced; thickness as required for STC.
- B. Finishing Accessories: ASTM C1047, extruded aluminum alloy (6063 T5) or galvanized steel sheet ASTM A924/A924M G90, unless noted otherwise.
 1. Types: As detailed or required for finished appearance.
 2. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.
 3. Products:
 - a. Same manufacturer as framing materials.
- C. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.
 1. Architectural Reveal Beads:
 - a. Reveal Depth: 1/4 inch.
 - b. Reveal Width: 1/4 inch.
 2. Wall Mounted Deflection Beads: Flexible gasket and bead with 1-1/8 inch flange.
- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
- E. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
- F. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion-resistant.
- G. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C1007/AISI S220 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
 1. Level ceiling system to a tolerance of 1/1200.
 2. Laterally brace entire suspension system.
- C. Studs: Space studs at 16 inches on center.
 1. Extend partition framing to structure where indicated and to ceiling in other locations.
 2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
 3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
- D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

- E. Standard Wall Furring: Install at concrete walls scheduled to receive gypsum board, not more than 4 inches from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches on center.
 - 1. Orientation: Horizontal.
 - 2. Spacing: At 16 inches on center.
- F. Blocking: Install wood blocking for support of:
 - 1. Framed openings.
 - 2. Wall-mounted cabinets.
 - 3. Plumbing fixtures.
 - 4. Wall-mounted door hardware.

3.03 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

3.04 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
 - 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Double-Layer, Nonrated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Use glass mat faced gypsum board at exterior walls and at other locations as indicated. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.
- D. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- E. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.
- F. Installation on Metal Framing: Use screws for attachment of gypsum board except face layer of nonrated double-layer assemblies, which may be installed by means of adhesive lamination.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

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

3.06 JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 - 1. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch.
- C. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

3.07 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

3.08 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

B. Clean _____.

3.09 PROTECTION

A. Protect installed gypsum board assemblies from subsequent construction operations.

END OF SECTION 092116

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**SECTION 095100
ACOUSTICAL CEILINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.
- C. Supplementary insulation above ceiling.

1.02 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2020.
- B. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.
- C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.
- D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2022.
- E. CHPS (HPPD) - High Performance Products Database; Current Edition.
- F. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2024.
- G. UL (FRD) - Fire Resistance Directory; Current Edition.
- H. UL (GGG) - GREENGUARD Gold Certified Products; Current Edition.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on suspension system components and acoustical units.
- C. Samples: Submit two samples 8x8 inch in size illustrating material and finish of acoustical units.
- D. Samples: Submit two samples each, 12 inches long, of suspension system main runner, cross runner, and perimeter molding.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.
 - 2. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

1.05 QUALITY ASSURANCE

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

1.06 FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acoustic Tiles/Panels:
 - 1. Armstrong World Industries, Inc; ____: www.armstrongceilings.com/#sle.

2. Certaineed Architectural; ____: www.certainteed.com/ceilings-and-walls/#sle.
3. USG Corporation; ____: www.usg.com/ceilings/#sle.
4. Substitutions: See Section 016000 - Product Requirements.

B. Suspension Systems:

1. Same as for acoustical units.
2. Substitutions: See Section 016000 - Product Requirements.

2.02 ACOUSTICAL UNITS

A. Acoustical Units - General: ASTM E1264, Class A.

1. VOC Content: Certified as Low Emission by one of the following:
 - a. Product listing in UL (GGG).
 - b. Product listing in CHPS (HPPD).

B. Acoustical Tiles: Painted mineral fiber, with the following characteristics:

1. Classification: ASTM E1264 Type III.
2. Size: 24 by 24 inches.
3. Thickness: 5/8 inch.
4. Tile Edge: Tegular.
 - a. Joint: Kerfed and rabbeted.
5. Color: White.
6. Suspension System: Exposed grid.
7. Suspension System: Concealed.

2.03 SUSPENSION SYSTEM(S)

A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.

1. Materials:
 - a. Steel Grid: ASTM A653/A653M, G30 coating, unless otherwise indicated.

2.04 ACCESSORIES

A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

B. Hanger Wire: 12 gauge, 0.08 inch galvanized steel wire.

C. Perimeter Moldings: Same metal and finish as grid.

1. Angle Molding: L-shaped, for mounting at same elevation as face of grid.

D. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.02 INSTALLATION - SUSPENSION SYSTEM

- A. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- B. Locate system on room axis according to reflected plan.
- C. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 1. Use longest practical lengths.
- D. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

- E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- H. Do not eccentrically load system or induce rotation of runners.

3.03 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- E. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.
- F. Where round obstructions occur, provide preformed closures to match perimeter molding.
- G. Install hold-down clips on panels within 20 ft of an exterior door.

3.04 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

3.05 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.
- B. Clean surfaces.
- C. Replace damaged or abraded components.

END OF SECTION 095100

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**SECTION 096623
RESINOUS MATRIX TERRAZZO FLOORING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Epoxy matrix terrazzo with ground and polished finish.
- B. Divider strips.

1.02 RELATED REQUIREMENTS

- A. Section 090561 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.

1.03 REFERENCE STANDARDS

- A. NTMA (GRAD) - Aggregate Gradation Standards; Current Edition.
- B. NTMA (EPOXY) - Epoxy Terrazzo Specifications; Current Edition.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for divider strips, control joint strips, expansion joints, and sealer; include printed copy of current NTMA recommendations for type of terrazzo specified.
- C. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.
- D. Cleaning and Maintenance Data: Include procedures for stain removal, stripping, and sealing.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with NTMA recommendations as posted at their web site at www.ntma.com.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section.
 - 1. Minimum five years of documented experience.
- C. Installer Qualifications: Company specializing in performing the type of work specified in this section.
 - 1. Minimum five years of documented experience.
 - 2. Approved by matrix manufacturer.

1.06 MOCK-UP

- A. Construct mock-up of terrazzo illustrating appearance of finished work in each configuration required. Size mock-up to be not less than 3 by 3 feet.
- B. Mock-up may remain as part of the work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Store terrazzo materials in a dry, secure area.
- B. Maintain minimum temperature of 60 degrees F.
- C. Keep products away from fire or open flame.

1.08 FIELD CONDITIONS

- A. Do not install terrazzo when temperature is below 50 degrees F or above 90 degrees F.
- B. Maintain temperature within specified range 24 hours before, during, and 72 hours after installation of flooring.
- C. Provide ambient lighting level of 50 ft candles, measured at floor surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design - Resinous Matrix Terrazzo Flooring: Key Resin; Key Epoxy Terrazzo System: www.keyresin.com/#sle.

- B. Other Acceptable Manufacturers - Resinous Matrix Terrazzo Flooring:
 - 1. Key Resin Company; Key Epoxy Terrazzo System: www.keyresin.com/#sle.
 - 2. Sika Corporation; Sikafloor Terrazzo: www.sikafloorusa.com/#sle.
 - 3. Substitutions: See Section 016000 - Product Requirements.

2.02 EPOXY MATRIX TERRAZZO APPLICATIONS

- A. Floors:
 - 1. Thickness: 1/4 inch, nominal.
 - 2. Color(s): To be selected by Architect.
 - 3. Aggregate Type: Granite chips.
 - 4. Aggregate Size: No. 0-1.

2.03 MATERIALS

- A. Epoxy Matrix Terrazzo: Aggregate and matrix mix applied to substrate, troweled flat, and ground smooth.
- B. Matrix: Two component resin and epoxy hardener with mineral filler and color pigment, non-volatile, thermo-setting.
- C. Aggregate: Type as indicated; sized in accordance with NTMA aggregate gradation standards; color(s) as indicated, uniform in color.
- D. Finishing Grout: Epoxy, color to match terrazzo matrix.

2.04 ACCESSORIES

- A. Divider Strips: 1/8 inch thick zinc exposed top strip, zinc coated steel concealed bottom strip, with anchoring features.
- B. Divider and Control Joint Strip Height: To suit thickness of terrazzo topping, with allowance for grinding.
- C. Sealer: Colorless, non-yellowing, penetrating liquid type to completely seal matrix surface; not detrimental to terrazzo components.
- D. Primer: _____.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive terrazzo.
- B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of materials to subfloor surfaces.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for terrazzo flooring installation by testing for moisture and alkalinity (pH).
 - 1. Obtain instructions if test results are not within limits recommended by terrazzo flooring manufacturer.
 - 2. Follow moisture and alkalinity remediation procedures in Section 090561.
- D. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Clean substrate of foreign matter.
- B. Prepare concrete subfloor by mechanically abrading surface in accordance with manufacturer's instructions.
- C. Apply primer in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Saw cut substrate to install divider and control joint strips.
- B. Install divider strips according to pattern approved on shop drawings.

- C. Place terrazzo mix over substrate to thickness indicated.

3.04 FINISHING

- A. Finish terrazzo to NTMA requirements.
- B. Grind terrazzo surfaces with power disc machine; sequence with coarse to fine grit abrasive, using a wet method or using a dry grinder with vacuum to control dust.
- C. Apply grout to fill voids exposed from grinding.
- D. Remove grout coat by grinding, using a fine grit abrasive.

3.05 TOLERANCES

- A. Maximum Variation from Flat Surface: 1/4 inch in 10 feet.

3.06 CLEANING

- A. Scrub and clean terrazzo surfaces with neutral pH cleaner in accordance with manufacturer's instructions. Let dry.
- B. Immediately after terrazzo has dried, apply sealer in accordance with manufacturer's instructions.
- C. Polish surfaces in accordance with manufacturer's instructions.

3.07 PROTECTION

- A. Protect finished terrazzo from damage due to subsequent construction until Date of Substantial Completion.

END OF SECTION 096623

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**SECTION 099010
SILICATE PAINTS AND COATINGS**

PART 1 – GENERAL

1.01 SUMMARY OF WORK

- A. For coating stucco and plaster surfaces.

1.02 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide a complete list of all products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category
- C. Maintenance Materials: Furnish the following for the Texas Historical Commission's use in the maintenance of the project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Paint and Coatings: 1 gallon (4 L) of each color; store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.
- D. Samples shall be submitted for color matching to the same address.
- E. Material Safety Data Sheets (MSDS) as appropriate.
 - 1. Apply coating samples on masonry—preferably on the building. Do not apply samples to plywood or other non-masonry surfaces.
 - 2. Written verification from the Contractor that all specified items will be used. Provide purchase orders, shipping tickets, receipts, etc. to prove that the specified materials were ordered and received.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in commercial painting and finishing with three years documented experience and approved by the coating manufacturer.
- B. Coating Samples: Prepare a sample of each type of repair listed below. Prepare, install, and finish each sample according to the specifications.

1.04 MOCK-UP

- A. See Section 01 4000 - Quality Requirements, for general requirements for mock-up.
- B. Provide panel, 6 feet (1.83 m) long by 6 feet (1.83 m) wide, illustrating special coating color, texture, and finish.
- C. Prepare samples in an area where they will be exposed to the same conditions as will be present on the building during curing. Allow samples to cure for at least three days (or longer, if possible) before obtaining Owner's approval for color match. Samples should be viewed from a minimum distance of 12 feet.
- D. Locate where directed.
- E. Mock-up may remain as part of the work.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Materials are to be delivered, stored, and handled to protect them from damage, extreme temperature, and moisture in accordance with Manufacturer's written instructions.
- B. Deliver and store material in Manufacturer's original, unopened containers with the production date shown on the container or packaging.
- C. Comply with the Manufacturer's written specifications and recommendations for mixing, application, and curing coatings.

1.06 PROTECTION/ SITE CONDITIONS

- A. Cold Weather Requirements: Do not work in temperatures below 45° F, when the substrate is colder than 45° F, or when the temperature is expected to fall below 45° F for 48 hours after

installation of the coating.

- B. Hot Weather Requirements: Protect coating from direct sunlight and wind during application. Do not use or prepare coating when ambient air temperature is above 95° F.
- C. Foul weather requirements: Do not work when precipitation is expected within 48 hours of installation. The coating needs adequate time to bond to the substrate. Moisture disrupts the curing process.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Paint System: Keim Mineral Coatings of America: www.kiem.com.
 - 1. Products:
 - a. 2 coat system: Soldalit Paint.
 - b. Color: Custom to match existing paint colors.
- C. Substitutions: See 01 6000 Product Requirements.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Do not start work until surfaces to be coated are in proper condition to produce finished surfaces of uniform, satisfactory appearance.
- B. Mildew, algae and fungus should be removed by methods recommended by the coating manufacturer.
- C. Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.
- D. Protect all non-masonry surfaces such as: glass, wood, metal, etc.
- E. Cracks and spalls must be repaired and cured prior to coating application.
- F. To ensure even penetration of the coating, make sure any masonry repairs have been made with repair materials that are compatible to the substrate.
- G. Remove any previous or existing coatings before application of new mineral coating.
- H. Substrate must be completely dry before coating. Do not work when precipitation is expected within 48 hours of installation. The coating needs adequate time to bond to the substrate. Moisture disrupts the curing process.

3.02 MIXING COATING SYSTEM

- A. It is recommended that proper eye protection be worn during mixing in case of accidental splashing.
- B. Both the base and finish coats require diluting prior to application.
- C. Mix the paint coatings using silicate paint thinner in the desired proportions, before applying to surface.
- D. Allow for drying time as recommended by manufacturer before adding successive coats.
- E. Approximate mixing ratio is 2 quarts of silicate paint thinner for every 5 1/2 gallons for both the base coat and finish coat. Depending on the desired coating consistency and the substrate surface, may slightly vary.

3.03 APPLICATION OF SILICATE COATING

- A. Apply each coat by brush or 1 1/4" lambs-wool roller, making sure to work the material into the pores of the plaster surface. The coating is designed to be absorbed into the surface so it should not be applied in thick layers. Brush application increases the absorption of the coating into the masonry. This feature results in a longer lasting, more durable coating.

- B. Allow manufacturer's specified drying time, and ensure correct coating adhesion, for each coat before applying the next coat.
- C. Apply succeeding coat until it matches the approved mock-up.
- D. Where coating application abuts other materials or other coating color, terminate coating, making clean sharp termination line without coating overlap.
- E. Where color changes occur between adjoining spaces, through framed openings that are of same color as adjoining surfaces, change color at outside stop corner nearest to face of closed door.

3.04 CLEAN UP

- A. Place tools immediately in clean water when pausing work (15-30 minutes or more). Clean tools with clean water immediately after finishing work. Mineral Life Silicate Paint can be removed from non-porous surfaces with clean water while still wet.

END OF SECTION 099010

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**SECTION 099113
EXTERIOR PAINTING**

PART 2 PRODUCTS

1.01 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless required to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is described explicitly in manufacturer's product instructions.

PART 3 EXECUTION

2.01 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

2.02 APPLICATION

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance.
- D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- E. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

END OF SECTION 099113

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**SECTION 099123
INTERIOR PAINTING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Materials for backpriming woodwork.
- D. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
- E. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Glass.
 - 7. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; Current Edition.
- B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.
- C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.
- D. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2020.
- E. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- F. SCAQMD 1113 - Architectural Coatings; 1977, with Amendment (2016).
- G. SSPC V1 (PM1) - Good Painting Practice: Painting Manual Volume 1; 2016.
- H. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- I. SSPC-SP 2 - Hand Tool Cleaning; 2018.
- J. SSPC-SP 3 - Power Tool Cleaning; 2018.
- K. SSPC-SP 6 - Commercial Blast Cleaning; 2007.
- L. SSPC-SP 13 - Surface Preparation of Concrete; 2018.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
 - 2. MPI product number (e.g., MPI #47).
 - 3. Cross-reference to specified paint system products to be used in project; include description of each system.
 - 4. Manufacturer's installation instructions.

5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
 1. Where sheen is specified, submit samples in only that sheen.
 2. Allow 30 days for approval process, after receipt of complete samples by Architect.
 3. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.
- D. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- E. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 1. See Section 016000 - Product Requirements, for additional provisions.
 2. Extra Paint and Finish Materials: 1 gal of each color; from the same product run, store where directed.
 3. Label each container with color in addition to the manufacturer's label.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 5 years experience and approved by manufacturer.

1.05 MOCK-UP

- A. See Section 014000 - Quality Requirements, for general requirements for mock-up.
- B. Mock-up may remain as part of the work.

1.06 DELIVERY, STORAGE, AND HANDLING

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

1.07 FIELD CONDITIONS

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

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes from the same manufacturer to the greatest extent possible.
 1. If a single manufacturer cannot provide specified products; minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for

substitutions.

- B. Paints:
 - 1. Behr Paint Company: www.behr.com/#sle.
 - 2. PPG Paints: www.ppgpaints.com/#sle.
 - 3. Sherwin-Williams Company: www.sherwin-williams.com/#sle.
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 016000 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
 - 1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. SCAQMD 1113 Rule.
 - c. CARB (SCM).
 - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

2.03 PAINT SYSTEMS - INTERIOR

- A. Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, brick, wood, plaster, uncoated steel, shop primed steel, galvanized steel, aluminum, and acoustical ceilings.
 - 1. Two top coats and one coat primer.
 - 2. Top Coat(s): High Performance Architectural Interior Latex; MPI #138, 139, 140, 141, or 142.
 - a. Products:
 - 1) Behr Marquee Interior Satin Enamel [No.7450]. (MPI #140)
 - 2) PPG Paints Prominence Interior Latex, 84-3410 Series, Satin. (MPI #139)
 - 3) Sherwin-Williams Scuff Tuff Interior Waterbased Enamel, Eg-Shel, S24-50 Series.
 - 4) Substitutions: See Section 016000 - Product Requirements

2.04 ACCESSORY MATERIALS

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

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.

- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
 - 1. Gypsum Wallboard: 12 percent.
 - 2. Plaster and Stucco: 12 percent.
 - 3. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
 - 4. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Concrete:
- F. Masonry:
- G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- H. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high-alkali surfaces.
- I. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
- J. Galvanized Surfaces:
- K. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
 - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 Commercial Blast Cleaning. Protect from corrosion until coated.
- L. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- D. Sand wood and metal surfaces lightly between coats to achieve required finish.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements, for general requirements for field inspection.
- B. Owner will provide field inspection.

3.05 CLEANING

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

3.06 PROTECTION

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

END OF SECTION 099123

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**SECTION 099300
STAINING AND TRANSPARENT FINISHING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Field application of stains.

1.02 REFERENCE STANDARDS

- A. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and catalog number, and general product category.
 - 2. MPI product number (e.g. MPI #33).
- C. Samples: Two samples on actual wood substrate to be finished, 8 by 8 inch in size, indicating selected colors and sheens for each system, with specified coats cascaded.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.
- E. Maintenance Data: Submit data including finish schedule showing where each product, color, and finish was used, product technical data sheets, safety data sheets (SDS), care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements for additional provisions.
 - 2. Extra Stock Materials: Stain and transparent finish materials, 1 gal of each color and type; store where directed.
 - a. Label each container with color and type in addition to the manufacturer's label.

1.04 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

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

1.06 FIELD CONDITIONS

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

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide finishes from the same manufacturer to the greatest extent possible.
 - 1. In the event that a single manufacturer cannot provide specified products, minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for substitutions.
- B. Stains:
 - 1. Behr Process Corporation; ____: www.behr.com/#sle.
 - 2. PPG Paints; ____: www.ppgpaints.com/#sle.
 - 3. Sherwin-Williams Company; ____: www.sherwin-williams.com/#sle.
 - 4. Substitutions: See Section 016000 - Product Requirements.

2.02 STAINS AND TRANSPARENT FINISHES - GENERAL

- A. Finishes:
 - 1. Provide finishes capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Provide materials compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 3. Supply each finish material in quantity required to complete entire project's work from a single production run.
 - 4. Do not reduce, thin, or dilute finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Flammability: Comply with applicable code for surface burning characteristics.
- C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- D. Colors: To be selected from manufacturer's full range of available colors.
 - 1. Selection to be made by Architect after award of contract.

2.03 INTERIOR STAIN AND TRANSPARENT FINISH SYSTEMS

- A. Finish on Wood - Vertical Surfaces:
 - 1. Stain: Semi-transparent stain for wood, solvent based.
 - a. Products:
 - 1) Behr Advanced Formula Oil-Based Wood Stain [B3500].
 - 2) Behr Premium Semi-Transparent Waterproofing Penetrating Oil Stain and Sealer [4600].
 - 3) Substitutions: Section 016000 - Product Requirements.
 - 2. Sealer: Water based, sanding sealer, clear.
 - a. Products:
 - 1) Behr Water-Based Pre-Stain Wood Conditioner [No.B2080].
 - 2) Substitutions: Section 016000 - Product Requirements.
 - 3. Top Coat: Clear water-based varnish; MPI #128, 129, or 130.
 - a. Products:
 - 1) Behr Fast Drying Water-Based Polyurethane [B8100].
 - 2) Substitutions: Section 016000 - Product Requirements.
 - 4. Top Coat Sheen:
 - a. Semi-Gloss: MPI gloss level 5; use this sheen at all locations.

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of finished surfaces.
- B. Patching Material: Latex filler.

- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of stains and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- D. Reinstall items removed prior to finishing.

3.04 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements for general requirements for field inspection.
- B. Owner will provide field inspection.

3.05 CLEANING

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

3.06 PROTECTION

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

END OF SECTION 099300

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**SECTION 122113
HORIZONTAL LOUVER BLINDS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Horizontal slat louver blinds.
- B. Operating hardware.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Concealed wood blocking for attachment of headrail brackets.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the placement of concealed blocking to support blinds. See Section 061000.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating physical and dimensional characteristics.
- C. Shop Drawings: Indicate opening sizes, tolerances required, method of attachment, clearances, and operation.
- D. Samples: Submit two samples, 12 inch long illustrating slat materials and finish, cord type and color.
- E. Manufacturer's Installation Instructions: Indicate special procedures.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.

1.05 QUALITY ASSURANCE

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

PART 2 PRODUCTS

2.01 MANUFACTURERS

2.02 BLINDS WITHOUT SIDE GUIDES

- A. Description: Horizontal slat louvers hung from full-width headrail with full-width bottom rail.
- B. Wood Slats: Walnut species, square slat corners.
 - 1. Width: 2 inch.
 - 2. Pre-finished, color as selected by Architect.
- C. Slat Support: Woven polypropylene cord, ladder configuration.
- D. Head Rail: Pre-finished, formed aluminum box, with end caps; internally fitted with hardware, pulleys, and bearings for operation; same depth as width of slats.
 - 1. Color: Same as slats.
- E. Control Wand: Extruded solid plastic; hexagonal shape.
 - 1. Length of window opening height less 3 inch.
 - 2. Color: Match color of slats.
- F. Headrail Attachment: Wall brackets.
- G. Accessory Hardware: Type recommended by blind manufacturer.

2.03 FABRICATION

- A. Determine sizes by field measurement.
- B. Fabricate blinds to fit within openings with uniform edge clearance of 1 inch.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings are ready to receive the work.
- B. Ensure structural blocking and supports are correctly placed. See Section 061000.

3.02 INSTALLATION

- A. Install blinds in accordance with manufacturer's instructions.
- B. Secure in place with flush countersunk fasteners.

3.03 TOLERANCES

- A. Maximum Variation of Gap at Window Opening Perimeter: 1/4 inch.
- B. Maximum Offset From Level: 1/8 inch.

3.04 ADJUSTING

- A. Adjust blinds for smooth operation.

3.05 CLEANING

- A. Clean blind surfaces just prior to occupancy.
- B. See Section 017419 - Construction Waste Management and Disposal, for additional requirements.

END OF SECTION 122113