

PROJECT MANUAL

RENOVATIONS TO

SMITH THEATRE BARTER THEATRE FOUNDATION

110 W. MAIN STREET | ABINGDON VA 24416

SPECTRUM DESIGN PROJECT NO.:
25084



SPECTRUM DESIGN
architects | engineers

PROJECT PHASE:
BID DOCUMENTS

DATE:
07.21.2026

TABLE OF CONTENTS

DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS:

001050	INVITATION FOR BID
001200	INSTRUCTIONS TO BIDDERS - AIA
002010	SUPPLEMENTARY INSTRUCTIONS TO BIDDERS
003000	INFORMATION AVAILABLE TO BIDDERS
004000	STANDARD FORMS
004110	BID FORM – STIPULATED SUM
005010	AGREEMENT - AIA
007010	GENERAL CONDITIONS - AIA
008110	SUPPLEMENTARY GENERAL CONDITIONS
	ARC FEDERAL CONSTRUCTION CONTRACT
	DHCD BABA MEMO
	ARC BABA CONSTRUCTION CONTRACT
	DHCD BABA MATERIALS CERTIFICATION STATEMENT

DIVISION 1 - PROJECT REQUIREMENTS:

011000	SUMMARY
012500	CONTRACT MODIFICATION PROCEDURES
012900	PAYMENT PROCEDURES
013100	PROJECT MANAGEMENT AND COORDINATION
013200	CONSTRUCTION PROGRESS DOCUMENTATION
013300	SUBMITTAL PROCEDURES
014000	QUALITY REQUIREMENTS
015000	TEMPORARY FACILITIES AND CONTROLS
016000	PRODUCT REQUIREMENTS
017000	EXECUTION REQUIREMENTS
017310	CUTTING AND PATCHING
017700	CLOSE-OUT PROCEDURES
017810	PROJECT RECORD DOCUMENTS
017820	OPERATION AND MAINTENANCE DATA

DIVISION 5 – METALS:

055210	PIPE AND TUBE RAILINGS
--------	------------------------

DIVISION 6 – WOOD AND PLASTICS:

061050	MISCELLANEOUS CARPENTRY
064100	INTERIOR ARCHITECTURAL WOODWORK

DIVISION 7 - THERMAL AND MOISTURE PROTECTION:

079200	JOINT SEALANTS
--------	----------------

DIVISION 8 - DOORS AND WINDOWS:

081113	HOLLOW METAL DOORS AND FRAMES
082113	FLUSH WOOD DOORS
083113	ACCESS DOORS AND FRAMES
088000	GLAZING

DIVISION 9 - FINISHES:

092900 GYPSUM BOARD
095113 ACOUSTICAL PANEL CEILINGS
096513 RESILIENT BASE AND ACCESSORIES
096516 RESILIENT SHEET FLOORING
096816 SHEET CARPETING
098433 ACOUSTICAL TREATMENT
099000 PAINTING

DIVISION 12 - FURNISHINGS:

122200 CURTAINS AND DRAPES
126100 FIXED AUDIENCE SEATING

STRUCTURAL AND ELECTRICAL SPECIFICATIONS ON DRAWINGS



END OF TABLE OF CONTENTS

Invitation to Bid (IFB)

***The Barter Theatre
Abingdon, Virginia
Construction Services –
Smith Theatre Renovation***

The Barter Theatre is soliciting sealed bids from qualified Contractors to provide construction services for the renovation of the Barter Theatre's Smith Theatre. The work is generally described as the leveling of the stage and theatre floor, replacement of the existing risers and seating, replacement of the lighting and AV grid, improvements to the catwalk and acoustics, general finish upgrades, fire alarm, and electrical upgrades to support new lighting and AV equipment.

Sealed bids plainly marked ***"IFB– Barter Theatre – Smith Theatre Renovation" on the outside of the mailing envelope***, are to be delivered to the **Barter Theatre Administrative Offices** at **201 Trigg Street, Abingdon, VA 24210** or mailed to **Attn: Matt Campbell, Executive Director, Barter Theatre, P.O. Box 867, Abingdon, VA 24212-0867**. Bids will be accepted until **2:00 PM local time, August 25, 2026** at which time the Bids received will be publicly opened and read aloud in the Barter Theatre Administrative Offices Conference Room located in the same building. The Barter Theatre Administrative Offices operate Monday through Friday from 9:00 AM to 5:00 PM. Submissions may also be submitted electronically to: bids@bartertheatre.com. All electronic submissions should request a delivery receipt and a read receipt.

The Invitation to Bids for the above project, including the drawings and the specifications containing the information necessary for bidding, are available on the Barter Theatre's website. The **bid package** will be available as of **Tuesday, July 21, 2026**, by download.

Bidders and other interested parties may purchase complete sets of Bidding Documents (electronic and/or hard copy) from TRASCO www.trascoplanroom.com (540) 345-1533.

Bidding Documents (Drawings and Project Manual) may be examined at Dodge Construction Network www.construction.com and at the Barter Theatre Administrative Offices (276) 628-3991 located at 201 Trigg St, Abingdon, VA 24210 from 9:00 a.m. to 5:00 p.m.

A **Mandatory Pre-Bid Conference** will be held at the Smith Theatre at **110 West Main Street, Abingdon, Virginia 24210 on Monday, August 3, 2026, at 2:00 PM** local time to answer questions, explain any items requiring further clarification, and participate in a facility walkthrough.

This is a federally assisted project. Bidders and contractors performing work under this advertisement are bound by the requirements of President's Executive Order 11246 as amended by Executive Order 11375; Title VI of the Civil Rights Act of 1964; Section 109 of Title 1 of the Housing and Community Development Act of 1974, as amended; Section 3 of the Housing and Urban Development Act of 1968; the Immigration Reform and Control Act of 1986; the Davis-Bacon Act; the Copeland "Anti Kickback" Act; the Contract Work Hours and Safety Standards Act; and Public Law 100 202. "

Withdrawal of bids due to error shall be in accordance with Section 2.2-4330.B.1 of the Virginia Public Procurement Act. The bidder shall give notice in writing of their claim of right to withdraw their bid within two business days after the conclusion of the bid opening procedure and shall submit original work papers with such notice.

The contract shall be awarded on a lump sum basis as follows: the Total Base Bid including any properly submitted and received bid modifications. The Barter Theatre reserves the right to reject any and all bids, to waive technical or legal deficiencies, to accept any bid, and to negotiate such terms and conditions of any bid that may be in the best interest of the organization.

A bid bond is required.

Barter Theatre reserves the right to reject any and all bids, to waive technical or legal deficiencies, to accept any bid and to negotiate such terms and conditions of any bid that may be in the best interest of the organization.

Barter Theatre is an Equal Opportunity Employer and will not discriminate on the basis of race, creed, color, sex, national origin, age, handicap or familiar status. Local, minority, and female owned firms are encouraged to participate.

Requests for additional information should be directed to Lenore Weiss, Spectrum Design, Project Manager at 540-342-6001 Ext. X3402 or E-mail build@spectrumpc.com . All questions and requests for information must be received by: **August 18, 2026.**

END OF INVITATION FOR BID

DOCUMENT 001200
INSTRUCTIONS TO BIDDERS – AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. Instructions to Bidders A701.
- B. Related Documents:
 - 1. Document 007010 – General Conditions – AIA.
 - 2. Document 008110 – Supplementary General Conditions.

1.2 INSTRUCTIONS TO BIDDERS

- A. AIA Document A701-2018, Instructions to Bidders shall be used in submitting bids on this project.

1.3 SUPPLEMENTARY CONDITIONS

- A. Refer to Document 002010 for Supplementary Instructions to Bidders.

END OF INSTRUCTIONS TO BIDDERS - AIA

DOCUMENT 002010
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1.1 SUMMARY

- A. Document Includes:
 - 1. Instructions to Bidders.
 - 2. Examination.
 - 3. Prebid conference.
- B. Related Documents:
 - 1. Document 001050 – Invitation for Bid.
 - 2. Document 003000 – Information Available To Bidders.
 - 3. Document 004110 – Bid Form – Stipulated Price.
 - 4. Document 007010 – General Conditions.
 - 5. Document 008110 – Supplementary General Conditions.

1.2 INSTRUCTIONS TO BIDDERS

- A. These Instructions to Bidders amend or supplement AIA Document A701-2018 - Instructions to Bidders and other provisions of Bidding Documents and Contract Documents. Where any Article of the Instructions is modified or a Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Instructions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

ARTICLE 1 – BIDDERS REPRESENTATIONS

Add Paragraph:

- 2.1.5 Data in the bidding documents pertaining to existing conditions is for convenience only and does not supplant obtaining first hand information at the site.

ARTICLE 3 – BIDDING DOCUMENTS

Add Paragraph:

- 3.1.5 Bidders shall thoroughly examine and be familiar with the Contract Documents. The failure or omission of any bidder to receive or examine any form, instrument, bulletin, addendum, or other documents, or to visit the site and acquaint himself with conditions there existing shall in no way relieve any bidder from any obligation with respect to his Bid or to the Contract. The submission of a Bid shall be taken as prima facie evidence of compliance with this section.
- 3.2.4 The Work of this project shall be performed in accordance with the Contract Documents; however, the plans and specifications are intended to complement and supplement each other and any work required by either and not by the other shall be performed as if denoted in both. Should a bidder find discrepancies in, or omissions from the plans or the specifications, or be in doubt as to their

meaning, he shall at once notify the Architect. Failure to request such interpretations shall in no way relieve the Contractor of his responsibility for executing the project properly and completely. Unless otherwise clarified by the Architect, bidders shall base their bids on the highest quality of material or techniques required by any part of the Contract Documents.

Delete Subparagraph 3.3.2 and replace with the following:

- 3.3.2 No substitutions shall be approved prior to the time and date designated for the receipt of Bids.

ARTICLE 4 – BIDDING PROCEDURES

Add Paragraph:

- 4.1.8 Original and one copy of each shall be submitted. Both copies shall have original signatures.
- 4.1.9 Particular attention is called to Article 4.3.7 of the General Conditions (including information in Section 008110 SUPPLEMENTARY CONDITIONS – AIA) regarding requirements of the contractor to account for reasonable weather conditions.

Modify Paragraph:

- 4.2.1 Add the following text: “If the amount of bid guarantee exceeds the difference between its related bid and the next lowest bid resulting in a contract, the Owner shall retain only an amount equal to the difference between these two bids plus expenses by Owner’s Architect related to negotiating contract with other bidder.”

Add Paragraph:

- 4.2.4 Each Bid must be accompanied by a Bid Guarantee of five percent (5%) of the largest amount for which proposal is being made, and at the option of the bidder, may be cash, a certified check or bid bond made payable to the party listed in the Invitation for Bids. All bonds shall be written by sureties or insurance companies licensed to do business in the Commonwealth of Virginia. Other bid bond forms will be acceptable if they are the same in both form as well as substance as AIA Document A310, Bid Bond.

Modify Paragraph:

- 4.3.1 Add the following text: “Sealed envelope shall also be clearly marked with date and time of bid opening so as to guard against premature opening of any bid. No responsibility shall be attached to the Architect and the Owner for premature opening of bids not properly addressed or identified.

Add Paragraphs:

4.3.5 The attention of the Bidder is directed to Title 54.1, Chapter 11, Code of Virginia, as amended, which requires evidence of a Class A certificate of registration before a Bid may be received and considered (1) on a general or subcontract of \$120,000 or more; or (2) if the total value of all contracts undertaken by the bidder during any 12-month period is \$750,000 or more.

4.3.6 In compliance with the above requirements, each bidder shall place on the outside of the envelope containing his bid and over his signature one of the following notations:

"Registered Class A Virginia Contractor, No. _____."

or

"Class A Registration not required."

4.3.7 It shall be the Bidder's responsibility to check all sub-bids carefully to determine whether or not any exceptions, omissions, or alterations to the Drawings and Specifications have been noted therein; bidder is solely responsible for a complete job in strict accordance with Bidding Documents.

4.4.5 The withdrawal of Bids shall be in accordance with Section 2.2-4330, Code of Virginia, 1950, as amended.

ARTICLE 5 – CONSIDERATION OF BIDS

Modify Paragraph:

5.1 Change last sentence to read: "An abstract of the Bids may be made available to Bidders, except in the event that the public body decides not to accept any of the Bids and to rebid the Contract. If the Contract is rebid, Bid records shall be open to public inspection only after award of the Contract."

Add Paragraphs:

5.1.1. The officer or agent of the Owner, whose duty it is to open the Bids, will decide when the specified time for receipt of bids has arrived and no bids received thereafter will be considered. No responsibility will be attached to any officer, agent or representative for the premature opening of a Bid not properly addressed and identified. It is the responsibility of the bidder to assure that his Bid is delivered to the designated place for opening prior to the time set for opening Bids.

1. Only one Bid package may be submitted by any one Bidder. If more than one Bid is offered by one Bidder, all such Bids will be rejected. A Sub-bidder who has quoted prices to a Bidder is not thereby disqualified from quoting prices to other Bidders or from submitting a Bid on his own behalf.
2. The Owner will evaluate the quality, timeliness, and reliability of any contract work performed by the Bidder for the Owner within the previous five (5) years. This evaluation shall be a prime determinant in judging the ability of the Bidder to perform the prescribed work.

- 5.1.2 At the opening of Bids, should questions arise regarding the validity of any Bid because of errors, omissions, waiver of informalities or other points or provisions in submitted proposals, no comment or decision will be made until a ruling has been obtained from the Owner's legal representative.

Delete Paragraph 5.3.1 and replace with the following:

- 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. In determining the lowest responsive Bidder, the Owner may consider, among other factors, the Bidder's performance on other contracts and information provided by the Bidder on AIA Document A305, Contractor's Qualification Statement, in the event such Statement is required. The Owner shall have the right to waive informalities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

Add Paragraphs:

- 5.3.3 If all Bids received exceed the available funding for the Work, the Owner may meet with the lowest responsive and responsible Bidder to discuss a reduction in the scope of Work and negotiate a Contract price within the available funding for the Work. If an agreement is reached between the parties on the reduction in the scope of Work for the project Bid, an Addendum will be issued to the Bid listing the agreed upon reduction in the scope of Work, the lowest responsive and responsible Bidder will amend its Bid based upon the proposed reduction in the scope of the Work and the Owner will award a Contract within the funds available for the Work based upon the amended Bid. If the Owner and the lowest responsive and responsible bidder cannot negotiate a Contract within available funds, all Bids shall be rejected.

ARTICLE 6 - POST-BID INFORMATION

Modify Paragraphs:

- 6.2 Owner's Financial Capability: Delete paragraph 6.2 in its entirety.
- 6.3.3 Delete this paragraph in its entirety.

ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

Delete subparagraphs 7.2.1, 7.2.2 and 7.2.3 and replace with the following:

- 7.2.1 The successful Bidder shall deliver the required bonds to the Owner in accordance with Subparagraph 11.4.1 of the Supplementary General Conditions.

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

DOCUMENT 004000
STANDARD FORMS

GENERAL - COPIES

- a. Sample copies of the A.I.A. forms are available at the Architect's office. Required number of copies may be obtained from the American Institute of Architects, The Octagon, 1735 New York Avenue, N.W., Washington, DC 20006.

01 - BID FORM

- a. Document 004110 BID FORM as contained herein will be the form used.

02 - AGREEMENT

- a. AIA Document A101-2017 Agreement Between Owner and Contractor.

03 - PERFORMANCE AND PAYMENT BOND

- a. AIA Document A312-2010 Performance Bond and AIA Document A312-2010 Payment Bond.

04 - CERTIFICATE OF INSURANCE

- a. ACORD Certificate of Insurance will be the form used as a part of the contract for this work.

05 - CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS

- a. AIA Document G706A-1994 Contractor's Affidavit of Release of Liens.

06 - LIST OF SUBCONTRACTORS

- a. AIA Document G705-2001 List of Subcontractors.

07 - TRANSMITTAL LETTER FOR SUBMITTAL OF SHOP DRAWING/PRODUCT
DATA/SAMPLE

With Contractor's Approval Statement
of submittal of same item
AIA Document G810-2001 or equivalent

08 - APPLICATION AND CERTIFICATE OF PAYMENT

- a. AIA Document G702-1992 Application and Certificate for Payment and AIA Document G703-1992 Continuation Sheet.
- b. Independent Testing Laboratory Certificates of Testing, Inspection, or Approval

09 - PROPOSAL REQUEST

- a. AIA Document G709-2018 Request for Proposal.

10 - ORDER FOR MINOR CHANGE

- a. AIA Document G710-2017 Architect's Supplemental Instructions.

11 - CHANGE ORDER

- a. AIA Document G701-2017 Change Order.

12 – SUPPLEMENTAL DRAWING

- a. Supplemental Drawing, number X####, Spectrum Design standard form is to be used for clarification and/or attachments to field orders or change orders on this project.

13 - OWNER'S RECEIPT OF EQUIPMENT AND MATERIALS SPECIFIED to be furnished directly to Owner (attached after section 017000)

14 - OWNER'S STATEMENT OF RECEIPT OF ADEQUATE INSTRUCTION OF SYSTEM AND EQUIPMENT OPERATION (attached after section 017000)

15 - CERTIFICATE OF SUBSTANTIAL COMPLETION

- a. AIA Document G704-2017 Certificate of Substantial Completion.

16 - CONTRACTOR'S WRITTEN NOTICE THAT WORK IS READY FOR FINAL INSPECTION

- a. To be furnished by A/E.

17 - CONSENT OF SURETY

- a. AIA Document G707 -1994 Consent of Surety to Final Payment and AIA Document G707A-1994 Consent of Surety to Reduction in or Partial Release of Retainage.

END OF SECTION

DOCUMENT 004110
BID FORM – STIPULATED SUM

Job Title (Hereinafter Project):
Barter Theatre - Smith Theatre Renovation

Location:
110 W Main Street, Abingdon, VA 24210

To: **Barter Theatre** (Hereinafter "Owner")
Mr. Matt Campbell, Managing Director

Date: _____

Submitted by: _____
(full name)

(full address) _____

1. BASE BID:

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as Principal or Principals is/are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company, or parties making a bid or proposal; and that it is, in all respects, fair and in good faith without collusion or fraud.

The bidder further declares that he has examined the Place of the Work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined all matters referred to in the Instructions to Bidders and the Contract Documents relative thereto prepared by Spectrum Design, P.C. for the above mentioned project; and that he has satisfied himself relative to the work to be performed within the established time.

He proposes and agrees, if this proposal is accepted, to contract with the Owner in the form of contract specified to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor, and pay all State and local sales taxes necessary to complete the Project in full and complete accordance with the shown, noted, described and reasonably intended requirements of the Contract Documents with a definite understanding that no money will be allowed for extra work except as set forth in the Contract Documents, for the following amount:

BASE BID:

We, the undersigned, hereby offer to enter into a Contract to perform the Work for the following Sum:

\$ _____

(_____ Dollars)

in lawful money of the United States of America.

2. TIME OF COMPLETION / LIQUIDATED DAMAGES:

The undersigned agrees that all work under this contract shall be substantially completed and accepted by the Owner in accordance with Section 011000 SUMMARY, and further agrees that from the compensation of otherwise to be paid, the Owner will retain a sum of **seven hundred fifty dollars (\$750)** per day, each day after date of scheduled completion, Saturdays, Sundays and holidays included, that the work as stipulated remains incomplete, which sum shall represent the actual measure of liquidated damages which the Owner will sustain per diem by the failure of the Contractor to complete the work at the time stipulated and this sum is not to be considered in any case a penalty.

3. CONTRACT SECURITY:

The undersigned agrees, if awarded the contract, to furnish and deliver to the Owner an executed performance and payment bond in accordance with the requirements of the Contract Documents.

4. PROPOSAL ACCEPTANCE:

If undersigned is notified of proposal acceptance within **fourteen (14)** days following opening of bids, he agrees to be prepared to execute a contract for work for compensation stated in the bid form and in the form of agreement referenced in the Project Manual within **ten (10)** days after date of Notice of Award, including required Contract Security.

5. BID SECURITY:

The undersigned agrees to requirements of the Contract Documents relative to "Bid Security." This bid may be rejected if not accompanied by a guarantee in the specified amount. Any certified checks may be uncollected at the risk of bidders submitting them.

In the event the bid is not accepted within the time stated above, the required Bid Security will be returned to the undersigned, in accordance with the provisions of the Instruction to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

6. ADDENDUM/BULLETIN RECEIPT:

The undersigned acknowledges receipt of the following addenda numbered:

Addendum # _____, dated _____. Addendum # _____, dated _____.
Addendum # _____, dated _____. Addendum # _____, dated _____.

7. BID FORM SIGNATURES:

Signed: _____
(Signature of authorized signing officer and title)

Name: _____
(Printed full name of authorized signing officer and title)

For: _____
(Printed full name of firm, company or corporation)

State of Incorporation: _____

Date: _____

(business mailing address – 3 lines provided)

If a bidder is a joint venture or partnership, add additional forms of execution for each member in the appropriate form or forms as above.

(SEAL)

____ Class A contractor, registered under Title 54.1, Chapter 11, Code of Virginia, as amended, Certificate No. _____, 20____

____ Registration not required under Chapter 11, Title 54.1, Code of Virginia.

END OF BID FORM - STIPULATED SUM

DOCUMENT 005010
AGREEMENT - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. Agreement.
- B. Related Documents:
 - 1. Document 007010 – General Conditions – AIA.
 - 2. Document 008110 – Supplementary General Conditions.

1.2 AGREEMENT

- A. AIA Document A101-2017, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment is a Stipulated Sum, forms the basis of Agreement between the Owner and Contractor.

END OF AGREEMENT - AIA

DOCUMENT 007010
GENERAL CONDITIONS - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. General Conditions – AIA.
- B. Related Documents:
 - 1. Document 005010 – Agreement – AIA.
 - 2. Document 008110 – Supplementary General Conditions.

1.2 GENERAL CONDITIONS

- A. AIA Document A201-2017, General Conditions of the Contract for Construction is the General Conditions of the Contract. Refer to Document 005010 for the Agreement.

1.3 SUPPLEMENTARY CONDITIONS

- A. Refer to Document 008110 for modifications to these General Conditions.

END OF GENERAL CONDITIONS - AIA

SECTION 008110
SUPPLEMENTARY GENERAL CONDITIONS

1.1 SUMMARY

- A. Section Includes:
 - 1. Supplementary Conditions.
- B. Related Documents:
 - 1. Document 005010 – Agreement – AIA.
 - 2. Document 007010 – General Conditions – AIA.

1.2 SUPPLEMENTARY CONDITIONS

- A. These Supplementary Conditions modify the General Conditions of the Contract for Construction, AIA Document A201-2017, and other provisions of the Contract Documents as indicated below. All provisions which are not so modified remain in full force and effect.
- B. The terms used in these Supplementary Conditions which are defined in the General Conditions of the Contract for Construction, AIA Document A201-2017, have the meanings assigned to them in the General Conditions.

ARTICLE 1 - CONTRACT DOCUMENTS

1.1 BASIC DEFINITIONS

Supplement subparagraph 1.1.3 - The Work as follows:

1.1.3 Related to the term "Work", where "as shown", "as indicated", "as detailed", or similar words are used, reference is made to the drawings accompanying this Project Manual. Where "as directed", "as required", "as permitted", "approved", or similar words are used, it shall be understood that the direction, permission, approval, or acceptance of the Architect-Engineer is intended unless stated otherwise.

Supplement subparagraph 1.1.5 - The Drawings as follows:

1.1.5 The term "Drawings" means the drawings enumerated in the Index to Drawings.

Add subparagraphs 1.1.9 through 1.1.17 as follows:

1.1.9 Addendum
The term "addendum" or "addenda" means any revision to the Contract which has been duly issued to prospective bidders prior to the time stipulated for the opening of Bids.

1.1.10 Clarification
The term "clarification" means answers to questions or additional comments provided to clarify the intent of the Drawings or Specifications raised during the bidding period prior to the opening of bids. This may or may not be made part of an Addendum.

1.1.11 Prime Bidders

The term "prime bidders" shall mean Contractors bidding separately on the Work or on separate phases of the Work. The term prime subcontractors shall mean the Mechanical, Plumbing, and Electrical subcontractors bidding to the general Contractors on their respective phases of the Work.

1.1.12 G.C.

The term "in G.C." shall mean that the portion of the Work referred to is to be included in the General Contract and does not mean literally that the actual work is to be performed by the General Contractor. The Contract is between the General Contractor and the Owner and the General Contractor is totally responsible for the performance of all phases of the Work included in the Contract, whether it be performed by him or by his subcontractors.

1.1.13 N.I.C.

The term "N.I.C." means that the portion of the work referred to is not included in the General Contract.

1.1.14 Products

The term "Products" as used in these Contract Documents refers to new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for re-use.

1.1.15 Furnish

Except as otherwise defined in greater detail, where required of the Contractor, the term "furnish" is used to mean "supplying and delivering to the project site, unloading, and inspecting for damage.

1.1.16 Install

Except as otherwise defined in greater detail, the term "install" is used to describe operations at project site including the actual "unpacking, assembly, erection, applying, placing, anchoring, working to dimension, finishing, curing, protecting, cleaning and similar operations making ready for use", as applicable in each instance.

1.1.17 Provide

Provide shall mean to furnish and install.

1.2 - CORRELATION, AND INTENT OF THE CONTRACT DOCUMENTS

1.2.1 Add subparagraphs 1.2.1.1 and 1.2.1.2 as follows:

1.2.1.1 Plumbing, Mechanical and Electrical drawings are diagrammatic, showing general locations and arrangements of piping, wiring, equipment and specialties; not necessarily showing all required offsets, conditions and appurtenances required for maximum practical accessibility for operation, maintenance and clearances. Coordinate this Work in order to achieve the required Work and notify the Architect immediately of conditions which do not comply or will not allow for this condition."

1.2.1.2 Should the Drawings and the Specifications disagree in themselves or with each other, provide the better quality or greater quantity of Work unless otherwise directed by written Addendum or Change Order to the Contract.

Add subparagraphs 1.2.4 through 1.2.8 as follows:

1.2.4 In the Contract Documents where detailed information is lacking or interpretation is not clear, secure required information from the Architect before proceeding with the work. Failure to request clarification prior to bid shall oblige Contractor to furnish the highest quality of material or construction method reasonably inferable by the Contract Documents. Discrepancies pertaining to the work shall be called to the attention of the Architect before proceeding with the work. For items that are detailed and/or specified but not distinctly located on the plans, the Architect shall determine the location of such items.

1.2.5 Figured dimensions are to be followed in preference to measurements by scale. Large scale or full size drawings will take precedence over smaller scale drawings.

1.2.6 In the event that a discrepancy is found between the Drawings and the Specifications, the more stringent or costly requirement shall supercede. In cases where there is no significant difference in requirements, the Specifications shall supercede.

1.2.7 Where requirements specifically set forth in the Agreement are in conflict with other Contract Documents, the Agreement shall govern.

1.2.8 Where there is a conflict between the requirements of the General Conditions of the Contract and the Supplemental Conditions, the requirements of the Supplemental Conditions shall govern, except where the requirements set forth in the Supplemental Conditions are contrary to law, in which case the legal requirements shall govern. The General Conditions of the Contract shall take precedence over other Contract Documents except for the Agreement or Supplemental Conditions.

ARTICLE 2 - OWNER

2.1 DEFINITION

Delete paragraph 2.1.2 in its entirety.

2.4 OWNER'S RIGHT TO STOP THE WORK

2.4.1 Add the following to the end of Subparagraph 2.3.1:

"Failure of the Owner to notify the Contractor of necessary corrections or to stop the Work shall not relieve the Contractor of any responsibilities or obligations of the Contract Documents."

Add new paragraph 2.5 and Subparagraph 2.5.1:

2.5 ADDITIONAL RIGHTS

2.5.1 The rights stated in Article 2 shall be in addition to and not in limitation of any other rights of the Owner granted in the Contract Documents or at law or in equity.

ARTICLE 3 - CONTRACTOR

3.2 – REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

Add to paragraph 3.2.1 as follows:

The scope of work requirements for various disciplines is found throughout the drawings and various divisions of these specifications. It is the Contractor's obligation to review the drawings and specifications as a whole and comply with the requirements for the Work wherever those requirements may be located in the Contract Documents.

3.3 – SUPERVISION & CONSTRUCTION PROCEDURES

Add clause 3.3.1.1 as follows:

3.3.1.1 Contractor shall be solely responsible for layout and scheduling of the Work resulting in its accurate and timely completion.

3.4 – LABOR AND MATERIALS

Add clause 3.4.1.1 as follows:

3.4.1.1 Labor shall include all fringe benefits, pension benefits and unemployment taxes provided for those performing the Work, whether or not such benefits and taxes are in effect at the time the construction contract is executed.

Add paragraph 3.4.4 as follows:

3.4.4 No later than ninety (90) days after execution of the Contract, the Owner and Architect will consider written request(s) for the substitution of products in place of those specified – NO EXCEPTIONS, except in the case of discontinued / unavailable products. By making such request(s) for substitution, the Contractor:

.1 represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;

.2 represents that the Contractor will provide the same warranty for the substitution that he would for that specified;

.3 certifies that the cost data presented is complete and includes all related costs under this Contract including the Architect's redesign costs, if required and

identified by Architect as part of the review, and waives all claims for additional costs related to the substitution which subsequently become apparent; and

.4 will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

3.5 – WARRANTY

Add subparagraph 3.5.1 through 3.5.6 as follows:

3.5.1 Except as otherwise specified, all Work shall be warranted and guaranteed by the Contractor against defects or non-conformities in materials, equipment, or workmanship for a period of one full calendar year commencing on the date of Substantial Completion for the last phase of work, in cases where the project is turned over to the Owner in phases.

3.5.2 If, within any warranty or guarantee period, repairs or changes are required in connection with guaranteed Work which, in the opinion of the Architect/Engineer is rendered necessary as the result of the use of materials, equipment or workmanship which are defective or do not conform to the terms of the Contract Documents, the Contractor shall promptly, upon receipt of notice from the Owner and without expense to the Owner:

1. Place in satisfactory condition in every particular all of such guaranteed Work, correcting all defects therein; and
2. Make good all damage to the building or site, or equipment or contents thereof, which, in the opinion of the Architect/Engineer, is the result of the use of materials, equipment or workmanship which are defective or do not conform to the terms of the Contract Documents; and
3. Make good any Work or material, or the equipment and contents of said building or site disturbed in fulfilling any such guarantee.

3.5.3 In any case wherein fulfilling the requirements of the Contract or any guarantee embraced in or required thereby, the Contractor disturbs any Work guaranteed under another Contract, he shall restore such disturbed Work to a condition satisfactory to the Architect/Engineer and guarantee such restored Work to the same extent as it was originally guaranteed.

3.5.4 If the Contractor, after notice, fails to proceed within three (3) days to comply with the terms of the guarantee, the Owner may have the defects corrected and the Contractor and his surety shall be liable for all expense incurred in connection with such corrections.

3.5.5 All special guarantees applicable to specific parts of the Work that may be stipulated in the Specifications or other Contract Documents shall be subject to the terms of this paragraph.

3.5.6 There will be one final inspection of the project by the Architect/Engineer and the Owner along with the Contractor between the eleventh and twelfth months of the warranty period. Any Work that is found to be defective or not in conformity with the Contract Documents shall be corrected by the Contractor within thirty (30) days of the issuance of notice of such Work that is found to be defective or not in conformity with the Contract Documents.

3.7 – PERMITS, FEES, AND NOTICES

Add clauses 3.7.1.1 thru 3.7.1.4 as follows:

3.7.1.1 Plan Review and Permit Fees

The Owner will pay for plan review and permit fees. Plan review and permit fees should not be included in the Contractor's bid. The Contractor is responsible for obtaining the building permit and abiding by the inspection schedule.

3.7.1.4 Unless otherwise provided in the Contract Documents, the Contractor is responsible for obtaining utilities for the Project and providing the constructed work relating to Project utilities as shown on the Drawings. Responsibility for *payment of fees* associated with providing utilities to the Project shall be as follows:

- a. Any fees assessed by entities for providing *permanent* utilities to the Project shall *be paid directly to the utilities by Owner*. These include "tap fees" and "electrical connection and service fees." Contractor shall coordinate the permanent utilities and the entity's related work to comply with the construction schedule.
- b. Any fees assessed by entities for providing *temporary* utilities to the Project for use by Contractor during construction of the Project shall be paid by the Contractor. The Contractor's payment of fees for *temporary* utilities shall be included in the Base Bid and Contract Sum and will not be reimbursed by the Owner.

Change subparagraph 3.7.3:

Replace "knowing it" with "that the Contractor knows or reasonably should know."

Add subparagraph 3.7.6 as follows:

3.7.6 Where method of construction or installation of materials or equipment is not indicated in the Contract Documents and such construction or installation is covered by codes, ordinances, or regulations in force in the locality of the Work, the Work shall be performed in accordance therewith as part of the Contract. In the absence of applicable local codes, State Codes shall apply.

3.8 - ALLOWANCES

Add clause 3.8.1.1 thru 3.8.1.3 as follows:

3.8.1.1 If applicable to this project, certain requirements of the Work related to each allowance are shown and specified in the Contract Documents. The allowance has been established in lieu of additional requirements for that work, and further requirements thereof (if any) will be issued by Change Order.

Supplement Clause 3.8.2.2 as follows:

3.8.2.2“(include also uncrating and storage, protection from elements and damage, and finishing)”

Delete clause 3.8.2.3 in its entirety if a dedicated section for Allowances is included in the project manual. Otherwise, this clause applies.

Add clause 3.8.2.4 as follows:

3.8.2.4 The Owner reserves the right to establish the actual quantity of work-in-place by an independent quantity survey, measure, or count. Whenever the actual cost is more than the allowance value, additional mark-up for Contractor's overhead and profit shall not exceed 10% of the difference between the cost and the allowance.

Add clause 3.8.4 as follows:

3.8.4 Change Order Data (Allowances):

.1 Where applicable, include in each change order proposal both the quantities of products being purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish data to substantiate quantities. Indicate applicable taxes, delivery charges, and amounts of applicable trade discounts.

3.9 - SUPERINTENDENT

Add clause 3.9.1.1 as follows:

3.9.1.1 The Contractor's superintendent shall be experienced in the construction of projects of this type and scope. The Contractor's superintendent shall give special attention to Work nearing completion and shall remain on site and in active control until all phases of the work have been completed, the final punch list is completed, and the project in its entirety is acceptable to the Owner. The practice of substituting another superintendent for the purpose of “closing out” this project shall be strictly prohibited, unless the superintendent is no longer employed by the Contractor.

Add the following new Subparagraphs 3.9.4 and 3.9.5

3.9.4 The Superintendent employed by the Contractor shall have a minimum of five (5) years commercial experience as the primary Superintendent on projects of similar size, type and complexity as the Work. The Contractor shall submit to the Architect a resume and other supporting documentation showing that the proposed Superintendent is competent and has the minimum work experience required to execute the Work. The Owner reserves the right to request additional supporting documentation regarding the proposed Superintendent's qualifications and to require the Contractor to propose an alternate Superintendent who better meets the requirements contained in this Article, as may reasonably be determined by the Owner. The Contractor shall notify the Architect and Owner in writing of any proposed replacement of the Superintendent. The Contractor shall not replace a competent Superintendent without prior written approval

from the Owner. The requirements contained in this Article shall apply to any proposed replacement Superintendent, regardless if the proposed tenure is to be temporary or permanent.

3.9.5 The Contractor shall employ a Project Manager to be assigned to the Work. The Project Manager employed by the Contractor shall have a minimum of five (5) years commercial experience as Project Manager on projects of similar size, type and complexity as the Work. The Contractor shall submit to the Architect a resume and other supporting documentation showing that the proposed Project Manager is competent and has the minimum work experience required to execute the Work. The Owner reserves the right to request additional supporting documentation regarding the proposed Project Manager's qualifications and to require the Contractor to propose an alternate Project Manager who better meets the requirements contained in this Article, as may reasonably be determined by the Owner. The Contractor shall notify the Architect and Owner in writing of any proposed replacement of the Project Manager. The Contractor shall not replace a competent Project Manager without prior written approval from the Owner. The requirements contained in this Article shall apply to any proposed replacement Project Manager, regardless if the proposed tenure is to be temporary or permanent. The Project Manager shall not act as the Superintendent or replacement for the Superintendent without written approval from the Owner.

3.10 – CONTRACTOR'S CONSTRUCTION SCHEDULES

Add to subparagraph 3.10.4 through 3.10.7 as follows:

3.10.4 An updated construction schedule, acceptable to the Architect and Owner shall be submitted by the Contractor prior to certification of each Application for Payment.

3.10.5 The work shall be executed at such a rate as will assure meeting the specified Substantial Completion dates within the time/dates provided in the specifications. By execution of the Contract, the Contractor represents it has analyzed the work, the materials and methods involved, the systems of the building, availability of qualified labor, restrictions of the site, constraints imposed, workload and capacity to perform the work, and agrees that the specified times are reasonable considering the known existing conditions prevailing in the locality of the work, including weather conditions, and other factors, with reasonable allowance for variations from average or ideal conditions.

3.10.6 The Substantial Completion dates provided are considered essential to the satisfactory performance of this Contract and to the coordination of all work on the project. The Owner reserves the right to require the Contractor to prosecute the work in accordance with the Contractor's Construction Schedule and to satisfactorily complete the work by the Substantial Completion date. The Contractor is responsible to provide the operations, manpower, resources, materials, and all items and work necessary to complete the work and meet the Substantial Completion and Final Completion dates provided. The Contractor understands and agrees that: the Substantial Completion, Final Completion, actual start and completion dates, rate of progress, and coordination are essential conditions of this project. It is understood and agreed that TIME IS OF THE ESSENCE and the Contractor agrees to diligently follow and adhere to the schedule with due diligence so as to execute the work within the Substantial Completion and Final Completion dates and time frames stipulated in the Contract Documents. The Contractor shall take all necessary steps, which may include overtime, double shifts,

weekends, and holiday work to complete this work and meet the Substantial Completion and Final Completion dates stipulated in the Contract Documents.

3.10.7 Refer to Section 013200 - CONSTRUCTION PROGRESS DOCUMENTATION for specific requirements on this subject.

3.11 – DOCUMENTS AND SAMPLES AT THE SITE

Add subparagraph 3.11.1 and 3.11.2 as follows:

3.11.1 The Contractor shall keep an accurate record and location of all work, both interior and exterior. On completion of the Work, one print of each of the Drawings that is applicable shall be neatly and clearly marked in color to show all variations between the work actually provided and that indicated on the Drawings. The representation of such variations shall conform to standard drafting practice and shall include such supplementary notes, legends, and details as may be necessary for legibility and clear portrayal of the as-built construction. Location of as-built utilities shall be accurate and located by dimensions. These drawings shall be approved by the Architect before acceptance. Retainage will not be released, in whole or in part, until the requirements of this section are completed.

3.11.2 In addition to the above, all subcontractors shall have up to date drawings and specifications on site and in use by the foreman in charge of the work.

3.12 – SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

Add subparagraph 3.12.11 thru 3.12.5 as follows:

3.12.11 Refer to Section 01330 – SUBMITTAL PROCEDURES for specific requirements on this subject.

3.12.12 Shop drawings shall be submitted in such number of copies as specified, and if not specified, such that three (3) copies may be retained by the Architect. Submissions shall be accompanied by a letter of transmittal in duplicate, which shall list and properly identify the contents of such submission. Shop drawings shall be consecutively numbered and clearly labeled with name of the project and date. Shop drawings shall be submitted in such sequence or groups that all related items may be checked together. Shop drawings not so submitted will be returned without action.

3.12.13 The Contractor shall submit to the Architect for approval a listing of all submittals required by the Contract Documents, fixing the dates for the submission of shop drawings, samples and product data.

3.12.14 In checking and approving shop drawings, the Architect will not be responsible for checking dimensions or quantities; however it shall be understood that if the Architect so chooses, this checking is done as a convenience to the Contractor and it shall not relieve the Contractor of the responsibility for furnishing any or all the items and

quantities shown in the Contract Documents. The act of approving shop drawings shall not be construed as authorization for any increase in the cost of the Work.

3.12.15 Samples shall be delivered with all shipping charges prepaid. Each sample shall bear a label indicating the material represented, the name of the producer and the title of the project. Approval of a sample shall not be construed to change or modify any contract requirement or price. Approved samples shall be retained by the Architect until completion of the project.

3.13 – USE OF SITE

Add subparagraph 3.13.1 and 3.13.2 as follows:

3.13.1 The Contractor shall position field offices, equipment, and supply trailers, temporary toilet facilities, and other large construction related items so as to not interfere with, hinder, or endanger the public when the project is occupied by the Owner. Refer to Division 1 sections regarding temporary provisions for additional requirements on this subject.

3.13.2 Should the Contractor require additional land for temporary construction facilities or for storage of materials and equipment other than the areas available on the site, or as otherwise furnished by the Owner, he shall provide such other lands and access thereto entirely at his own expense and without liability to the Owner.

3.14 - CUTTING & PATCHING

Add subparagraphs 3.14.3 and 3.14.4 as follows:

3.14.3 Each subcontractor shall leave all such chases, holes, or openings straight, true and of the proper size in his own work, as may be necessary for the proper installation of another subcontractor's work, consulting with the subcontractor concerned regarding proper location and size of same. No excessive cutting will be permitted nor shall any piers or other structural members be cut without the consent of the Architect. After such work has been installed, subcontractor shall carefully fit around, close up, repair, patch, and point up his material as directed, to the entire satisfaction of the Architect. All this work shall be done with proper tools and by careful workmen of the particular trade to which such work belongs. Each specification section shall include cutting and patching, plumbing, or earthwork for that trade section unless otherwise specified.

3.14.4 See Section 01 73 10 – CUTTING AND PATCHING for further requirements.

3.15 – CLEANING UP

3.15.2 Add the following sentence:

“Reimbursement amount may be deducted from funds to be paid to the Contractor, or as an option, the Contractor shall pay invoices from Owner’s cleaning personnel directly, within ten (10) days of the date of any statement of amounts due.”

Add subparagraph 3.15.3 as follows:

3.15.3 The Contractor shall thoroughly clean and leave reasonably dust free, to the satisfaction of the Architect, all finished surfaces on the interior of the buildings, including the removal of all paint spatters, concrete spatters, and other defacements of the work. See Section 017700 – CLOSEOUT PROCEDURES for further requirements.

3.18 - INDEMNIFICATION

Supplement subparagraph 3.18.1 as follows:

3.18.1 This indemnification shall also include loss or damage as a result of injury, and loss or damage to adjoining or adjacent structures and their premises as a result of the performance of the work.

3.19 – FEDERAL CONTRACT REQUIREMENTS

ADD the Federal Contract Requirement Documents, as follows:

- 3.19.1 ARC Federal Const Contract Inserts
- 3.19.2 DHCD PAAO BABA Memo
- 3.19.3 ARC BABA Construction Contract Insert
- 3.19.4 DHCD BABA Materials Certification Statement

ARTICLE 4 - ARCHITECT

4.1 - GENERAL

Add clause 4.1.1.1 as follows:

4.1.1.1 The terms "Architect" or "Engineer" means SPECTRUM DESIGN, P.C., the firm engaged by the Owner for architectural and/or engineering services related to the work. These terms as used throughout the Contract Documents include authorized representatives of the firm, including consultants.

ARTICLE 5 - SUBCONTRACTORS

5.2 – AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Add clause 5.2.1.1 as follows:

5.2.1.1. The list of subcontractors and material suppliers furnished under 5.2.1 shall be submitted within twenty-one (21) calendar days of the date of the Contract for Construction and shall contain the address, telephone number, and

principal contact person for each such entity. The Contractor shall include the Virginia Contractor's license number and class for each subcontractor.

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

Add the following new Subparagraph 6.1.5:

6.1.5 The Owner shall have the right to deliver and move furniture and equipment in the building prior to completion of the Work by the Contractor if furniture and equipment does not seriously interfere with the Contractor's operations. Questions of what constitutes interference shall be referred to the Architect and his decision shall be final.

ARTICLE 7 - CHANGES IN THE WORK

7.2 – CHANGE ORDERS

Add subparagraph 7.2.2 as follows:

7.2.2 Refer to Section 01 25 00 – CONTRACT MODIFICATION PROCEDURES, for additional requirements on this subject.

Change subparagraph 7.3.7 as follows:

7.3.4 Delete the words, "an amount for overhead and profit as set forth a reasonable amount" and substitute, "an amount for overhead and profit in accordance with the schedule set forth in subparagraph 7.3.11 below."

Add the following subparagraph 7.3.11:

7.3.11 The amount for overhead and profit combined, included in the total cost to the Owner, shall not exceed the following schedule:

- .1 For the Contractor, for any Work performed by his own forces, fifteen percent (15%) of the costs of the changed Work.
- .2 For the Contractor, for Work performed by his subcontractor or any other lower tier subcontractor, seven percent (7%) of the amount due the subcontractor.
- .3 For each subcontractor included, for any Work performed by the subcontractor's own forces, fifteen percent (15%) of the costs of the changed Work.
- .4 Cost to which overhead and profit is to be applied shall be determined in accordance with subparagraph 7.3.3 and 7.3.7.

ARTICLE 8 - TIME

8.1 - DEFINITIONS

Add subparagraph 8.1.5 as follows:

8.1.5 Time of Completion (Substantial Completion & Acceptance by Owner) is identified in Article 9.11 – LIQUIDATED DAMAGES of these Supplementary General Conditions, and in Document 005010 - AGREEMENT.

8.2 - PROGRESS AND COMPLETION

Add the following to the end of Subparagraph 8.2.1:

“ . . . and the Contractor is capable of properly completing the Work within the Contract Time.”

ARTICLE 9 - PAYMENTS AND COMPLETION

9.2 – SCHEDULE OF VALUES

Add subparagraph 9.2.1 as follows:

9.2.1 Refer to Section 012900 – PAYMENT PROCEDURES, for additional requirements on this subject.

9.3 - APPLICATIONS FOR PAYMENT

9.3.2 ADD the following new Subparagraph 9.3.2.1:

9.3.2.1 The Contractor shall provide invoices, package slips, or other forms of supporting data for materials stored on-site claimed on the progress payment, unless it can otherwise be verified through on-site observation.

9.4 – CERTIFICATES FOR PAYMENT

Add subparagraph 9.4.3 as follows:

9.4.3 The issuance of a Certificate for Payment to the Owner shall not relieve the Contractor of responsibility for faulty materials or workmanship or operate to release the Contractor or his surety from any obligations under the contract or the performance bond.

9.6.2 Add the following new Subparagraphs 9.6.2.1, 9.6.2.2 and 9.6.2.3:

9.6.2.1 The Contractor shall take one of the two following actions within seven (7) days after receipt of amounts paid to the Contractor by the Owner for work performed by a Subcontractor under this Contract:

- a. Pay the Subcontractor for the proportionate share of the total payment received from the Owner attributable to the work performed by the Subcontractor under this Contract; or

b. Notify the Owner and the Subcontractor, in writing, of its intention to withhold all or part of the Subcontractor's payment with the reason for nonpayment.

9.6.2.2 The Contractor shall pay interest to the Subcontractor on all amounts owed by the Contractor that remain unpaid after seven (7) days following receipt by the Contractor of payment from the Owner for work performed by the Subcontractor under this Contract, except for amounts withheld as allowed in Subparagraph 9.6.2.1(b), above. Unless otherwise provided under the terms of this Contract, such interest shall accrue at the rate of one percent (1%) per month. The Contractor's obligation to pay an interest charge to a Subcontractor may not be construed to be an obligation of the Owner.

9.6.2.3 The Contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier Subcontractor.

9.7 - FAILURE OF PAYMENT

9.7 Delete Subparagraph 9.7 in its entirety.

9.8 – SUBSTANTIAL COMPLETION

Supplement subparagraph 9.8.1 as follows:

9.8.1 ...Work will not be considered "Substantially Complete" until all systems and equipment for the entire project have been tested and found to be functioning properly.

Supplement subparagraph 9.8.2 as follows:

9.8.2 ...The Architect will not certify Substantial Completion of the Work or any designated portion thereof unless or until a Certificate of Occupancy, or partial Certificate of occupancy has been granted by the governing authority.

Add paragraph 9.11 and subparagraphs 9.11.1 and 9.11.2 as follows:

9.11 – LIQUIDATED DAMAGES

9.11.1 The Contractor acknowledges that 'Time is of the Essence' and agrees that the Work must be Substantially Complete with all building systems fully operational and an Occupancy Permit obtained no later than the Substantial Completion date and the Work must be Finally Complete no later than thirty calendar (30) days after the Substantial Completion date (the 'Final Completion date').

If the Contractor fails to substantially complete the work by the substantial completion date as stated herein, the Contractor shall be liable to the Owner for liquidated damages for each calendar day of delay until the work is substantially

complete as follows:

In addition to the above, if the Contractor fails to have all work under the project finally complete within 30 days after the initial Substantial Completion date as set forth in the Contract or as changed by Contract Modifications, the Contractor shall be liable to the Owner for liquidated damages in the amount of \$750/day for each calendar day of delay until Final Completion.

An executed Certificate of Substantial Completion does not constitute a modification to the Substantial Completion date as set forth in the Contract.

9.11.2 The Contractor acknowledges and agrees that the Owner has established the liquidated damages system and selected the liquidated damages amounts as the proper measure of damages which the Owner will suffer and incur per day by the failure of the Contractor to complete the Work by the contractually established Substantial Completion Date and Final Completion Date. The Contractor and the Contractor's surety agree that these liquidated damages provisions are reasonable, valid, and enforceable and waive any right to claim that such liquidated damages are unenforceable as being penalties; are not reasonably related to potential actual damages; or otherwise challenge the validity of these liquidated damages. The Contractor acknowledges that these liquidated damages are an attempt to fairly estimate and compensate Owner for the damages which the Owner will suffer if the Contractor fails to perform by the dates established in this Contract which damages are difficult to determine using standard Contract damages methods.

The Contractor acknowledges that Owner would not enter into a Contract with the Contractor for the Work without the inclusion of these liquidated damages requirements.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

10.1 – SAFETY PRECAUTIONS AND PROGRAMS

Add the following to paragraph 10.1.1:

10.1.1.1 The Contractor shall have an approved written Accident Prevention Program and shall produce it when required by the Owner. The Contractor shall hold weekly meetings with all subcontractors to monitor compliance with all safety regulations. These regulations shall consist of applicable provisions of current State and Federal laws, statutes, codes and regulations including but not limited to the latest amendments of the following: Williams-Steigler Occupational Safety and Health Act of 1970, Public Law 91-956; Part 1910, Occupational Safety & Health Standards, Chapter 17 of Title 29, Code of Federal Regulations; Part 1926, Safety & Health regulations for Construction Chapter 17 of Title 29, Code of Federal Regulations. Each Contractor is solely responsible for the safety of his employees and others in the Work area.

10.1.1.2 All protection and safety barricades, devices, covers, etc., including at all roof areas shall be provided by each Contractor as it relates to the safe conduct of his Work in accordance with OSHA requirements.

10.1.1.3 Each Contractor will be responsible for all damage to personal or real property as a result of the Contractor's failure to provide protective measures in compliance with applicable statutes, laws, codes, or regulations.

Add subparagraph 10.1.2 as follows:

10.1.2 The safety of the employees of the Contractor and its subcontractors is the sole and exclusive responsibility of the Contractor. In performing this Contract, the Contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies and equipment; and avoiding work interruptions and is required to comply with all applicable safety and health laws and regulations.

The Contractor and each subcontractor performing work on the site shall prepare and submit a copy of their safety program to the Owner and a copy to the Architect. Contractor shall hold weekly on-site safety meetings with a copy of the topic covered and those workers attending to be submitted to the Owner. Owner, Architect and any other Owner's representatives will be provided access to on-site safety meetings.

Any review of the Contractor's safety program by the Owner or any of the Owner's representatives is for the sole benefit of the Owner; shall not establish a duty upon any of them; shall not extend to direct control over or charge of the acts or omissions of the Contractor, its subcontractors, agents or employees, or any other persons performing work on the Project; and shall not relieve the Contractor of its primary responsibility for job site safety.

The Contractor shall indemnify hold and save the Owner, and its other representatives, their agents and employees harmless from liability of any nature occasioned by its failure to adequately fulfill its obligations under Article 10.

Add new Subparagraph 10.1.3

10.1.3 All machinery, appliances and equipment furnished under the Contract shall be protected by adequate safety devices as required by the rules and regulations governing safety, as adopted by the Safety Codes Commission of the Commonwealth of Virginia.

10.2 – SAFETY OF PERSONS AND PROPERTY

Add subparagraph 10.2.8 as follows:

10.2.8 The Contractor shall brace, shore up, underpin, secure and protect as may be necessary, all parts of existing or new structures adjoining and in the vicinity of the site that may be affected in any way by excavating or other operations in connection with the execution of the Work in this Contract.

ARTICLE 11 - INSURANCE AND BONDS

11.1 – CONTRACTOR'S LIABILITY INSURANCE

Add subclause 11.1.1.4.1 as follows:

11.1.1.4.1 Certificate of Insurance must therefore evidence the elimination of "employee exclusion" clauses normally included.

Add clause 11.1.2.1 as follows:

11.1.2.1 The insurance required by Subparagraph 11.1.1 shall be written for not less than the following limits:

1. The Contractor's Commercial General Liability (CGL) shall be in an amount acceptable to the Owner but not less than \$1,000,000.00 per occurrence and \$2,000,000.00 general aggregate per project. The Owner must be named as an additional named insured. The coverage must include:
 - Commercial Form
 - Premises/Operations
 - Underground, Explosions, and Collapse Hazard (if excavation, blasting, tunneling, demolition or rebuilding of any structural support of a building is involved or explosion hazard exists).
 - Products/Completed Operations
 - Contractual Liability Insurance
 - Independent Contractors (if any part of the Work is to be subcontracted)
 - Broad Form Property Damage
 - Personal Injury
 - Cross-Liability Coverage
2. Contractor shall maintain products/completed operations coverage with a combined single limit no less than \$2,000,000.00 per occurrence of bodily injury/property damage for a period of at least twelve (12) months following final acceptance of Contractor's work by Owner.
3. The insurance required herein and approval of Contractor's insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder.

ADD the following to the end of subparagraph 11.1.3:

11.1.3 "... Furnish one copy each of Certificates of Insurance herein required for each copy of the Agreement; specifically set forth evidence of all coverage required by Subparagraph 11.1.2.1. The form of the Certificate shall be AIA Document G705. If the insurance is written on a Commercial General Liability policy form, ACORD form 25S will be acceptable. Furnish to the Owner copies of any endorsements that are subsequently issued amending coverage and limits."

11.3 – PROPERTY INSURANCE

Change subparagraph 11.3.1:

"Unless otherwise provided, the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in

which the Project is located, property insurance written on a builder's risk "all risk" or equivalent policy . . ."

Add subclause 11.3.1.2.1 as follows:

11.3.1.2.1 The Contractor shall provide, or assure that subcontractors and suppliers provide, insurance coverage for portions of the work stored off the site. If the Contractor requests payment for portions of the work stored off-site, then an insurance certificate indicating the materials insured, insured value, storage location, and identifying the Owner as the beneficiary (or insured), must accompany the payment request.

11.1.2 – PERFORMANCE BOND AND PAYMENT BOND

Delete Subparagraph 11.1.2 and substitute the following:

11.4.1 The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. Bonds may be obtained through the Contractor's usual source and the cost thereof shall be included in the Contract Sum. The amount of each bond shall be equal to 100 percent of the Contract Sum.

Add clauses 11.4.1.1 thru 11.4.1.3 as follows:

11.4.1.1 The Contractor shall deliver the required bonds to the Owner not later than ten (10) days following the date the Contract is awarded, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

11.4.1.2 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

11.4.1.3 Add the following: Performance bond shall remain in force for a period of one year from the date of acceptance of the work covered by this contract.

Add the following subparagraph:

11.4.3 The bond value requirements are as follows:

1. Provide a 100 percent Performance Bond on AIA A312 or a standard surety bond form.
2. Provide a 100 percent Payment Bond on AIA A311 or a standard surety bond form.
3. Deliver bonds within 3 days after execution of the Contract.
4. This section shall not preclude the Contractor (at his option and at no additional cost to the Owner) from requiring Subcontractors to furnish like performance and payment bonds for the work provided in their Subcontracts.

ARTICLE 13 - MISCELLANEOUS PROVISIONS

13.4 – TESTS & INSPECTIONS

Add subparagraphs 13.4.7, 13.4.8 and 13.4.9 as follows:

13.4.7 Any specified laboratory tests of materials and articles to be incorporated in the work shall be made by laboratories, bureaus or agencies approved by the Architect and the certified reports of such tests shall be submitted to the Architect. The Contractor shall furnish all samples of materials or articles required for those tests delivered to the testing laboratory or other designated agency properly identified and labeled. Failure of any material to pass the specified tests will be sufficient cause for refusal to consider, under this Contract, any further samples of the same brand or make of that material.

13.4.8 Samples of various materials delivered on the site or in place may be taken by the Architect for testing. Samples failing to meet the contract requirements will automatically void previous approvals of the items tested. The Contractor shall replace such materials or equipment to meet contract requirements except as provided in ARTICLE 12.3 - ACCEPTANCE NON-CONFORMING WORK.

13.4.9 The use of permanent equipment for temporary heat or other construction activities shall in no way affect warranty period for equipment. Warranty period shall commence when above-mentioned tests have been successfully performed.

Add the following Paragraph:

13.6 – EQUAL OPPORTUNITY

13.6.1 The Contractor shall maintain policies of employment as follows and in accordance with the Code of Virginia.

- .1 The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other bias prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause;
- .2 The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer;
- .3 Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The Contractor will include the provisions of the foregoing paragraphs .1, .2 and .3 in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

13.7 Drug-free Workplace. During the performance of this Agreement, the Contractor agrees to (i) provide a drug-free workplace for the Contractor's employees; (ii) post in conspicuous places available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor. "Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor in accordance with the Virginia Public Procurement Act, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

13.8 Payment Clauses. The Contractor shall take one of the two following actions within seven (7) days after receipt of amounts paid to the Contractor by the Owner for work performed by the subcontractor under that contract:

.1 Pay the subcontractor for the proportionate share of the total payment received from the Owner attributable to the work performed by the subcontractor under that contract; or;

.2 Notify the Owner and subcontractor, in writing, of his intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.

The Contractor shall include a payment clause in all subcontracts that requires (i) individual Contractors to provide their social security numbers, and (ii) proprietorships, partnerships, and corporations to provide their federal employer identification numbers.

The Contractor shall pay interest to the subcontractor on all amounts owed by the Contractor that remain unpaid after seven (7) days following receipt by the Contractor of payment from the Owner for work performed by the subcontractor under that contract, except for amounts withheld as set forth above.

The Contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

13.9 In accordance with the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, P.L. 104-193, it is the policy of the Owner not to discriminate against faith-based organizations.

13.10 Firearms, drugs, alcohol, tobacco products, smoking, and/or any type of

concealed weapons are not permitted on the project site. Anyone violating this requirement will be removed from the project and subject to dismissal. All Prime Contractors are required to include this provision in all subcontracts and other contract agreements relative to this project. The Prime Contractors are required to enforce this provision in regards to their own staff and employees.

13.11 The Contractor shall be responsible for ensuring a safe and secure environment for the students and staff at the facility from any of it's employees or sub-Contractors/suppliers employees. To that end the Contractor shall endeavor to exclude any known felons from entering the site.

ARTICLE 14 – TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 - TERMINATION BY THE CONTRACTOR

Delete Subparagraph 14.1.1.3 in its entirety.

14.3 – SUSPENSION BY THE OWNER FOR CONVENIENCE:

Add subparagraph 14.3.3 as follows:

14.3.3 In no event shall termination of the Contract for convenience of the Owner terminate the obligations of the Contractor's surety on its payment and performance bonds.

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

Add a new Subparagraph 14.4.4 as follows:

14.4.4 Upon seven (7) days' written notice to the Contractor and the Architect, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Contract. In such case, the Contractor shall be paid for all Work satisfactorily executed and any expense sustained, plus reasonable termination expenses.

ARTICLE 15 - CLAIMS AND DISPUTES

15.1.2 – NOTICE OF CLAIMS

Replace subparagraph 15.1.2 as follows:

15.1.2 The Contractor shall give written notice to the Architect of its intent to file a claim within ten (10) calendar days of the occurrence of the event giving rise to the claim.

Such written notice (i) shall clearly contain the express words "written notice of claim," and (ii) shall describe in reasonable detail the basis of the claim.

Within thirty (30) calendar days of the occurrence of the event giving rise to the claim the Contractor shall submit in writing to the Architect its actual claim and a certification that: the claim is made in good faith; supporting data are accurate and complete to the best of the Contractor's knowledge and belief; and the

amount requested accurately reflects the contract adjustment for which it believes the Owner is liable. Such certification shall be executed by an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

The claim submitted shall set forth the amount of the adjustment to the Contract Price or Time that is being sought by the Contractor and provide all supporting information reasonably necessary to evaluate the claim.

Failure to adhere strictly to each and every requirement of this paragraph shall constitute a waiver by the Contractor of any claim for additional compensation or extended period of performance.

Add subparagraph 15.1.5.3 as follows:

15.1.5.3 Time Extension for Unusually Severe Weather - The time for completion as stated in the Contract Documents includes due allowance for normal bad weather days. This provision specifies the procedure for the determination of time extensions for unusually severe weather. In order for the Contractor to be awarded a time extension under this clause, the following conditions must be satisfied:

- .1 The weather experienced at the project site during the Contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.
- .2 The unusually severe weather must actually cause a delay to the critical path and to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor. Actual adverse weather delay days must prevent work on critical path activities for fifty percent (50%) or more of the Contractor's scheduled workday.

The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location listed below, and will constitute the baseline for monthly weather time evaluations. The Contractor's Construction Schedule must reflect these anticipated adverse weather delays in all weather dependent activities. The following table is in terms of work days lost due to weather, not calendar days.

Abingdon, Virginia

January - 8 days	May - 7 days	September - 6 days
February - 10 days	June - 5 days	October - 8 days
March - 9 days	July - 6 days	November - 7 days
April - 7 days	August - 5 days	December - 7 days

Upon Notice to Proceed and continuing through-out the Contract, the Contractor will record daily the occurrence of adverse weather and resultant impact to normally scheduled work. Within five (5) work days after the first of each month, the Contractor must submit to the Architect and Owner a summary of weather day impacts.

If the actual total number of accumulated work days lost due to adverse weather from the start of Work until the building is enclosed exceeds the expected total number of lost work days for the same period (based on the table above), the time for Substantial Completion will be equitably extended by the appropriate number of calendar days.

No extension will be made for days of bad weather occurring after the building is enclosed or for weekends, holidays or other planned non-work days not clearly identified by the Contractor in the Construction Schedule. Extensions of time due to unusually severe weather will not entitle the Contractor to any adjustment in the contract price.

Add subparagraph 15.1.5.4 as follows:

15.1.5.4 Determination of Additional Time: All requests for extensions to the contract time under any provision of this contract must be substantiated by a CPM schedule analysis based on the schedule in use on the project at the time of the impact.

Add subparagraph 15.1.5.5 as follows:

15.1.5.5 If there is an extension in the Time for Completion or the Contract Completion Date and if the Contractor is entitled to compensation under Article 15.1.5, and where there is no change in the Work, an itemized accounting of the following direct Site overhead expenses will be considered as allowable costs to be used in determining the compensation due the Contractor:

Site superintendent prorata salary, temporary Site office expense, temporary Site utilities including basic telephone service, electricity, heat, water, and sanitary/toilets. A ten percent (10%) markup of these expenses will be allowed to compensate the Contractor for home office and other direct or indirect overhead expenses.

Add subparagraph 15.1.7 as follows:

15.1.7 The Contractor and its Surety agree to make no claim for damages for delay in the performance of this contract occasioned by any act or omission of the Owner or the Architect or either of them or their representatives, and the Contractor agrees that any such claim may be fully compensated by an extension of time to complete performance of the work as provided herein.

15.2 INITIAL DECISION

15.2.2 Add the following to the end of Subparagraph 15.2.2:

“Contractor’s claim for extension of time shall be evaluated as follows:

.1 Contractor's claim for delay which occurs prior to completion of footings shall be evaluated at the completion of footings.

.2 Contractor's claim for delay which occurs after completion of footings and prior to the building being enclosed shall be evaluated after the building is enclosed. The term "enclosed" is defined to mean when the Work is sufficiently closed in (exterior walls up and roof system in place) so as to permit any structure, or major portion thereof which is part of the Work, to be adequately conditioned to allow the various trades to perform their work.

.3 Contractor's claim for delay which occurs after the building is enclosed and prior to Substantial Completion shall be evaluated at Substantial Completion.

15.3.2 Delete the last sentence, "If an arbitration is stayed"

15.4 - ARBITRATION

Delete this section in its entirety and replace with the following:

15.4 ARBITRATION AND LITIGATION

15.4.1 Binding arbitration shall not be an acceptable means of resolving claims, disputes and other matters and questions related to the Project. Any suit or legal action between Owner and Contractor related in any way to the Project shall be instituted and maintained in the Circuit Court of the jurisdiction of the project site. Enforcement of the forum selection provision may be by any legal means necessary to secure compliance, including but not limited to injunctive relief. Should any suit or action be instituted and maintained other than in such Circuit Court, the breaching party shall pay all costs, expenses and damages, including attorneys' fees and professional fees, related to such breach.

Add ARTICLE 16 as follows:

ARTICLE 16 - ENGINEERING AND LAYOUT

16.1 - VERIFICATION:

16.1.1: Except as otherwise provided, the Contractor shall furnish competent engineering services to execute the work in accordance with the contract requirements. He shall verify the figures or existing improvements shown on the drawings before undertaking any construction work and shall be responsible for the accuracy of the finished work.

16.1.2: The Owner has established, or will establish, such general reference points as will, in his judgment, enable the Contractor to proceed with the work. If the Contractor finds that any previously established reference points have been inaccurately indicated, he shall promptly notify the Architect.

16.1.3: The Contractor shall protect and preserve the established bench marks and monuments and shall make no changes in locations without the written approval of the Architect. Any such

bench marks and documents that may be lost or destroyed or which require shifting because of necessary changes in grades or locations shall be replaced and accurately located by the Contractor subject to prior approval by the Architect.

Add ARTICLE 17 as follows:

ARTICLE 17 - DOCUMENT EXPLANATION AND INSTRUCTIONS

17.1 - DETAIL DRAWINGS AND INSTRUCTIONS:

17.1.1: The drawings are intended to give the general character and scope of the work.

17.1.2: In case of conflict between small and large scale drawings, the large scale drawings shall govern. Where a portion of the work is detailed or drawn out and the remainder is indicated in outline, the parts detailed or drawn out shall apply also to all other like portions of the work. Unless noted otherwise where the word "similar" occurs on the drawings, it shall be interpreted in its general sense and not as meaning "identical" and all details shall be worked out in relation to their location and connection with other parts of the work.

17.2 - MEASUREMENTS AND DIMENSIONS

17.2.1: Before ordering any materials or doing any work, each subcontractor shall verify all measurements at the building and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of difference between actual dimensions and the measurements indicated on the drawings. Where figures are given on the drawings, said figures shall be followed in preference to measurements obtained by scale.

17.3 - SPECIFICATIONS EXPLANATION

17.3.1: The Specifications have been partially "stream-lined" and some words and phrases have been intentionally omitted. Missing portions shall be supplied by inference as with notes on drawings.

17.3.2: The words "approved", "inspected", "directed", "selected", and similar words and phrases shall be presumed to be followed by "by the Architect". The words "satisfactory", "submitted", "reported", and similar words or phrases shall be presumed to be followed by "to Architect". Words like "install", "provide", "furnish", and "supply" shall be construed to include complete furnishing and installing or constructing unless modified by additional information. Instructions, directions, and requirements as specified shall be considered to be followed by the phrase "unless otherwise specified or indicated".

17.3.3: The following shall apply to and be made a part of each division of the Specifications:

- .1 General - Separation of the specifications into Division and Sections is for convenience only and is not intended to establish limits of work. It shall be the Contractor's responsibility to consult the Index to be certain that the set of Documents is complete.

17.4 - STANDARDS

17.4.1: Reference to standards, codes, specifications, recommendations and regulations refer to the latest edition or printing prior to the date and issuance of the Specifications.

17.4.2: Applicable portions of standards listed that are not in conflict with Contract Documents are hereby made a part of the Specifications. Modifications or exceptions to standards shall be considered as amendments, and unmodified portions shall remain in full effect. In cases of discrepancies between the specifications and standards listed, the requirements of the specifications shall govern. In cases of discrepancies between standards, the most stringent requirements will govern.

17.6 - MANUFACTURER'S DIRECTIONS

17.6.1: Apply, install, connect, erect, clean, and condition manufactured items or materials according to the recommendations of the manufacturer when such recommendations are not in conflict with the Contract Documents. Furnish copies of manufacturer's recommendations to Architect, on request, before proceeding with the work.

17.7 - MATERIALS AND EQUIPMENT LIST

17.7.1: Within thirty (30) days after date of award of the Contract, the Contractor shall submit for approval two (2) copies of a complete list of materials and equipment proposed for use in connection with the project. Partial lists from time to time will not be considered. In the event these requirements are not complied with, the Architect reserves the right to assume that there will be no change in materials and equipment from those specified.

17.7.2: After any material or piece of equipment has been approved, no change in brand or make will be considered unless satisfactory evidence is presented by the manufacturer stating that the material or equipment no longer is available or delivered material has been rejected, and the substitution of a suitable material is urgent or that other conditions have become apparent which indicate that approval of such other materials is in the best interest of the Owner.

17.8 - GENERAL SCOPE OF THE WORK

17.8.1: See A.I.A. General Conditions Article 1.2.

17.8.2: See A.I.A. General Conditions Article 3.4.

17.8.3: Scope: The work of each division includes the work required by each Specification division and Section heading unless specifically noted otherwise under "Related Work Specified Elsewhere".

17.8.4: Related Work Specified Elsewhere: General Conditions, Supplements to General Conditions, Special Conditions, and Temporary Work are specified elsewhere; however, these provisions of the Contract Documents are a part of and applicable to each Division and Section of the Specifications.

17.9 - DELIVERY AND STORAGE

17.9.1: Deliveries and unloading shall be timed to prevent traffic congestion and blocking of access and scheduled to avoid interferences and delays in work. Provide for continuity of supply to avoid change of supplier of materials during any phase of the work. Sufficient quantities for completion of a phase shall be on site before that phase is started.

17.9.2: Materials shall be packaged and handled to prevent damage during delivery, and stored at designated locations to avoid interference with work. Arrange materials in order of intended use. Prevent damage to stored materials with suitable sheds or coverings.

17.9.3: Storage of equipment and materials shall be limited to those exterior spaces indicated as being within the construction limits.

Add ARTICLE 18 as follows:

18.1 - CONTRACTS AND WORK LET SEPARATELY

18.1.1: Equipment Contractors shall furnish to the General Contractor all parts, supports, assemblies, etc., that are to be built into the structure as the work progresses for installation by the General Contractor and the General Contractor shall include the installation of these built-in items as part of his work. Equipment Contractors shall also furnish complete rough-in drawings.

18.1.2: The General Contractor in conjunction with the Equipment Contractor shall set up a delivery schedule of all items of equipment, allowing ample time to properly coordinate and expedite the delivery of all equipment items so as not to delay any portion of the work.

Add ARTICLE 19 as follows:

ARTICLE 19 - MAINTENANCE

19.1: The Contractor shall maintain the work from beginning of construction operations until final acceptance of the project. Maintenance shall constitute continuous and effective work prosecuted day by day with adequate equipment and forces to the end that the work is kept in satisfactory conditions at all times.

Add ARTICLE 20 as follows:

ARTICLE 20 – ARCHITECT'S ADDITIONAL SERVICES

20.1 The following provisions shall be enforced by the Architect on this project in order to be adequately compensated for additional services required due to performance issues by the Contractor and Subcontractors. In each case listed below, the Architect shall charge the Owner for all costs and time spent (at prevailing hourly rates). Such costs shall include, but not be limited to, expenses for labor, transportation and associated per diem costs. Charges shall then be deducted from subsequent payments to the Contractor. For services provided after final payment has been made to the Contractor, the Contractor hereby agrees to be invoiced directly by the Architect for all charges, and to pay such invoices within 30 days:

20.2 Review of any submittal beyond two reviews by the Architect or his consultants. (The third review of any submittal item constitutes additional services.)

20.3 Review of any submittal for work or materials that have already been ordered, delivered, installed or otherwise committed for use on the Project.

20.4 Additional site visits required during construction made necessary by the fault or neglect of the Contractor.

20.5 Re-inspection by Architect or his consultants due to failure of the Work to comply with claims of status of completion made by the Contractor.

20.6 Re-inspection and/or re-testing by Geotechnical Engineer or other consultant of the Owner due to failure of the Work to comply with claims of status of completion made by the Contractor.

20.7 Inspection by the Architect or his consultants during the warranty period as a result of defective work that did not comply with the contract documents.

Add ARTICLE 21 as follows:

ARTICLE 21 - PROHIBITION OF EMPLOYMENT DISCRIMINATION

21.1 NON-DISCRIMINATION AGREEMENT

21.1.1 During the performance of this Contract, the Contractor agrees as follows:

.1 The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bonafide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

.2 The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor is an equal opportunity employer.

.3 Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

21.1.2 The Contractor will include the provisions of the foregoing paragraphs 1, 2 and 3 in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontract or vendor.

Add ARTICLE 22 as follows:

ARTICLE 22 - EMPLOYMENT OF UNAUTHORIZED ALIENS

22.1 In accordance with Section 2.2-4311.1 of the Code of Virginia (effective July 1, 2008), the Contractor does not and shall not during the performance of the contract knowingly employ an unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

END OF SUPPLEMENTARY GENERAL CONDITIONS

Federal Contract Inserts - ARC

CD - 8.1

General Conditions - Part I

1. Definitions
2. Engineer's Authority
3. Materials, Services, Workmanship and Facilities
4. Equals
5. Additional Instructions and Detail Drawings
6. Requests for Supplemental Information
7. Shop Drawings
8. Drawings and Specifications
9. Warranty of Title
10. Samples, Certificates and Tests
11. Surveys, Permits, and Codes
12. Patents
13. Superintendence by Contractor
14. Protection of Work, Property and Persons
15. Accident Prevention
16. Sanitary Facilities
17. Use of Premises/Storage
18. Schedules, Reports and Records
19. Inspection
20. Payments to Contractor
21. Payments by Contractor
22. Public Body's Use of Premises
23. Changes in the Work
24. Claims for Extra Cost/Subsurface Conditions
25. Time for Completion and Liquidated Damages
26. Suspension of Work, Termination and Delay
27. Correction of Work
28. Cleanup Requirements
29. Fitting and Coordination of the Work
30. Subcontracting
31. Separate Contracts
32. Lands and Rights-of-Way
33. As Constructed Drawings
34. Final Inspection and Closeout
35. Insurance
36. Assignment of Contract
37. Indemnification
38. Guarantee
39. Notices
40. Access to Records
41. Withholding of Funds
42. Federal Funding Termination
43. Interest of Contractor
44. Political Activity
45. Interest of Officials
46. Provisions Required by Law Deem Inserted
47. Contract Security
48. Contractual Disputes
49. Administrative Appeals Procedure and Arbitration
50. Other Contractual Requirements
51. Build America Buy America Requirements

General Conditions Part I must be included in CDBG contracts unless another substantially equivalent contract is provided by another state or federal agency which provides funding for the same activity and **equivalency is certified by the Project Engineer**. In such case, Section 40 Access to Records and all reference to Virginia Code provisions must be included.

1. Definitions

- A. Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated and shall be applicable to both the singular and plural thereof:
- B. ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications, or corrections.
- C. BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.
- D. BIDDER - Any person, firm, or corporation submitting a BID for the WORK.
- E. BONDS - Bid, Performance, and Payment Bonds and other instruments of surety, furnished by the CONTRACTOR and the CONTRACTOR'S surety in accordance with the CONTRACT DOCUMENTS.
- F. CHANGE ORDER – A written amendment to the construction contract between the CONTRACTOR and OWNER that changes either the CONTRACT PRICE and/or the CONTRACT TIME. All change orders must be approved by DHCD prior to their execution and must be signed by the ENGINEER/ARCHITECT, OWNER, CONTRACTOR and DHCD.
- G. CONTRACT DOCUMENTS - The contract, including Invitation to BID, Instructions for BIDDERS, BID, BID BOND, Agreement, Payment BOND, Performance BOND, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.
- H. CONTRACT PRICE - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.
- I. CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.
- J. CONTRACTOR - The person, firm, or corporation with whom the OWNER has executed the Agreement.
- K. DRAWINGS - The parts of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.
- L. ENGINEER - The engineer or architect responsible for the design and quality control of the WORK and so designated by the CONTRACT DOCUMENTS; or any other person or firm so designated by the PUBLIC BODY.

- M. FIELD ORDER - A written order effecting a change in the WORK but not altering the scope of the project or involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.
- N. NOTICE OF AWARD - The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.
- O. NOTICE TO PROCEED - Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date for commencement of the WORK.
- P. PROJECT - The undertaking to be performed in the manner as provided in the CONTRACT DOCUMENTS.
- Q. PROJECT MANAGER - The authorized representative of the PUBLIC BODY for the PROJECT so named in the CONTRACT DOCUMENTS or any other person so designated by the PUBLIC BODY.
- R. PUBLIC BODY - The legislative, executive or judicial body, agency, office, department, authority, post, commission, committee, institution, board or political subdivision created to perform some governmental duty, and which is empowered by law to undertake the activities described in the CONTRACT DOCUMENTS; and which is designated as such in the Agreement of the CONTRACT DOCUMENTS.
- S. SCOPE OF THE PROJECT - The defined geographic area as set forth in the CDBG contract between the GRANTEE and DHCD within which construction improvements are being made that will benefit LMI persons who reside within that area.
- T. SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.
- U. SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.
- V. SUBCONTRACTOR - An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.
- W. SUBSTANTIAL COMPLETION - That date certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in

accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.

- X. SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.
- Y. WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.
- Z. WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at their last given address, or delivered in person to said party or their authorized representative on the WORK.

2. Engineer's Authority

- A. The ENGINEER shall act as the PUBLIC BODY's representative during the construction period in the capacity as detailed in the CONTRACT DOCUMENTS. The ENGINEER shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed, and shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER shall make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.
- B. Inspections may be at the factory or fabrication plant of the source of material supply.
- C. The ENGINEER shall not be responsible for the construction means, controls, techniques, sequences, procedures or construction safety.
- D. The ENGINEER shall promptly make decisions relative to the interpretation of the CONTRACT DOCUMENTS, insofar as he has the authority to do so by provisions of the CONTRACT DOCUMENTS in his capacity as representative of the PUBLIC BODY.

3. Materials, Services, Workmanship and Facilities

- A. It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary

construction of any nature, all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

- B. Materials shall be stored so as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.
- C. Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
- D. Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.
- E. The CONTRACTOR shall submit to the ENGINEER for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which is to be installed in the WORK. The CONTRACTOR shall further submit full information as to type, performance characteristics, and all other pertinent information as required concerning such equipment. The CONTRACTOR shall submit to the ENGINEER for approval full information, as required, concerning all other materials or articles which he proposes to incorporate in the WORK.
- F. Machinery, mechanical and other equipment, materials and articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- G. Materials specified by reference to the number or symbol of a specific standard, such as on A.S.T.M. Standards, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation To Bids, except as limited to type, class, or grade, or modified in such reference. The standards referred to, except as modified in the SPECIFICATIONS, shall have full force and effect as though printed therein.
- H. Unless otherwise specifically provided for in the SPECIFICATIONS, all workmanship, equipment, materials and articles incorporated into the WORK shall be new and the best grade of respective kinds for the purpose.

4. Equals

Whenever a material, article or piece of equipment is identified in the SPECIFICATIONS by reference to manufacturer's or vendor's names, trade names, catalog numbers, etc. it is intended merely to establish a standard; and unless otherwise provided in the Invitation to Bid any material, article, or equipment of other manufacturers and vendors which the ENGINEER determines to be equal of that specified, considering quality, workmanship, economy of operation, and suitability of purpose intended, shall be accepted. The purchase

or installation of such substituted material or equipment will not be allowed without the ENGINEER'S prior written approval.

5. Additional Instructions and Detail Drawings

- A. The CONTRACTOR may be furnished, with additional instructions and detail drawings by the ENGINEER, as necessary to carry out the CONTRACT DOCUMENTS.
- B. The additional drawings and instructions thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawing and instructions.

6. Requests for Supplemental Information

- A. The CONTRACTOR shall request that the ENGINEER provide any additional information not already in his possession in order to execute the WORK. Such requests shall be made in a timely manner as the need appears, and shall be submitted in sufficient advance to allow preparation and appropriate action to be taken so as to avoid delay.
- B. Requests which shall be in writing must list the necessary items and the date by which each will be required by the CONTRACTOR. The first such list shall be submitted within two weeks after AWARD of CONTRACT and shall be as complete as possible at that time.
- C. The CONTRACTOR shall furnish any assistance and information the ENGINEER may require in responding to these requests.
- D. The CONTRACTOR shall be fully responsible for any delays in his work or to others due to his failure to comply with the provisions of this section.

7. Shop Drawings

- A. The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S approval of any SHOP DRAWING shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS.

- B. The approval of a SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.
- C. The approval of a SHOP DRAWING which the ENGINEER deems to be a minor adjustment of the CONTRACT DOCUMENTS not involving scope change a change in the contract price or extension of time shall be evidenced by written documentation in substance, as follows:

"The modification shown on the attached drawing is approved in the interest of the PUBLIC BODY to effect an improvement for the project and is ordered with the understanding that it does not involve any change in scope, contract price or time; that it is subject generally to all CONTRACT DOCUMENTS and that it is without prejudice to any and all rights of the PUBLIC BODY under the CONTRACT and bond or bonds."
- D. When submitted for the ENGINEER'S review, SHOP DRAWINGS shall be the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.
- E. Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission have been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR on the site and shall be available to the ENGINEER.

8. Drawings and Specifications

- A. The intent of the DRAWINGS AND SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and for all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy, or operation by the PUBLIC BODY.
- B. In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over general DRAWINGS.
- C. Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done

by the CONTRACTOR after discovery of such discrepancies, inconsistencies, or ambiguities shall be done at the CONTRACTOR'S risk.

9. Warranty of Title

- A. No material, supplies, or equipment to be installed or furnished under this contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The CONTRACTOR shall warrant good title to all materials, supplies, and equipment installed or incorporated in the WORK, and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the PUBLIC BODY free from any claims, liens or charges.
- B. Neither the CONTRACTOR nor any person, firm, or corporation furnishing any material or labor for any work covered by this contract shall have any right to lien upon any improvement or appurtenance thereon.
- C. Nothing in this section, however, shall impair the right of persons furnishing materials or labor to recover under any bond given by the CONTRACTOR or any rights under the law permitting such persons to look to the funds due the CONTRACTOR in the hands of the PUBLIC BODY.
- D. The provisions of this section shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the WORK when no formal contract is entered into for such materials.

10. Samples, Certificates and Tests

- A. The CONTRACTOR shall submit all materials or equipment samples, certificates, affidavits, etc. as required by the ENGINEER or called for in the CONTRACT DOCUMENTS. No such material or equipment shall be manufactured or delivered at the site except at the CONTRACTOR'S BOND, and except at the CONTRACTOR'S risk until required samples have been approved in writing by the ENGINEER. Any delay in the WORK caused by late or improper submission of samples or certificates for approval shall not be considered just cause for extension of contract time.
- B. Each sample submitted by the CONTRACTOR shall carry a label giving the name of the CONTRACTOR, the PROJECT, and the name of the producer. The accompanying certificate or letter from the CONTRACTOR shall state that the sample complies with contract requirements, shall state the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information. It should also include a statement that all

materials or equipment furnished for use in the PROJECT shall comply with the samples and/or certified statements.

- C. Approval of materials shall be general only and shall not constitute a waiver of the PUBLIC BODY'S right to demand full compliance with the CONTRACT DOCUMENTS. After actual deliveries, the ENGINEER shall have such tests made as he deems necessary and may reject materials, equipment and accessories for cause, even though such materials and equipment have been given general approval. If materials, equipment or accessories which fail check tests have been incorporated into the WORK, the ENGINEER shall have the right to cause their removal, and replacement by proper materials or to secure such preparation by the CONTRACTOR as is equitable.
- D. Except as otherwise specifically stated in the CONTRACT DOCUMENTS the costs of sampling and testing will be divided as follows:
 - (1) The CONTRACTOR shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes.
 - (2) The CONTRACTOR shall assume all costs of re-testing materials which fail to meet contract requirements.
 - (3) The CONTRACTOR shall assume all costs of testing materials offered in substitution for those found deficient.
 - (4) The PUBLIC BODY will pay all other expenses.
- E. If the CONTRACT DOCUMENTS, laws, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested or approved by someone other than the CONTRACTOR or ENGINEER, the CONTRACTOR will give the ENGINEER notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

11. Surveys, Permits, and Codes

- A. The PUBLIC BODY shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of benchmarks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the PUBLIC BODY, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slopes, stakes, batter boards, stakes for pipe locations and other working points, lines, elevations and cutsheets.

- B. The CONTRACTOR shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.
- C. Permits and licenses of a temporary nature necessary for prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the CONTRACT DOCUMENTS.

Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the PUBLIC BODY unless otherwise specified.

- D. The CONTRACTOR shall give all notices and comply with all applicable laws, ordinances and codes of the appropriate jurisdictions for the WORK as drawn and specified. Before installing any work, the CONTRACTOR shall examine the CONTRACT DOCUMENTS for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the ENGINEER in writing and any necessary changes shall be adjusted as provided for in Section 23, CHANGES IN THE WORK.

Should the CONTRACTOR fail to observe the foregoing provisions and proceed with the WORK or variance with any applicable ordinance or code (Notwithstanding compliance with the CONTRACT DOCUMENTS), the CONTRACTOR shall remove such work without cost to the PUBLIC BODY, and proceed in the manner specified in this section.

- E. The CONTRACTOR shall at his own expense secure and pay the appropriate department of the appropriate public authority fees or charges for all permits for street pavement, sidewalks, sheds, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, gas and sewer permits required within the jurisdiction.
- F. The CONTRACTOR shall comply with applicable laws, and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the PROJECT and commit no trespass on any public or private property in any operation due to or connected with the WORK.

12. Patents

The CONTRACTOR shall pay all applicable royalties and license fees, and shall defend all suits or claims for infringement of any patent rights, and save the PUBLIC BODY harmless from loss on account thereof, except that the PUBLIC BODY shall be responsible for any such loss when a particular manufacturer is specified, however

if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent the CONTRACTOR shall be responsible for such loss unless the CONTRACTOR promptly gives such information to the ENGINEER.

13. Superintendence by Contractor

- A. Except where the CONTRACTOR is an individual and provides personal superintendence to the WORK, the CONTRACTOR shall provide a competent superintendent, satisfactory to the ENGINEER and PUBLIC BODY, on the WORK at all times during working hours with full authority to act. The CONTRACTOR shall also provide adequate personnel for the proper coordination and expediting of his work.
- B. The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK.
- C. The CONTRACTOR shall lay out his own work and he shall be responsible for all work executed by him under the CONTRACT. He shall verify all figures and elevations before proceeding with the WORK and will be held responsible for any error resulting from his failure to do so.

14. Protection of Work, Property and Persons

- A. The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR will take all necessary precautions for the safety of, and will provide the necessary protection: (1) to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby; and, (2) all material and equipment to be incorporated therein, whether in storage on or off the site or adjacent thereof, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities not designated for removal, relocation or replacement during the course of construction.
- B. The CONTRACTOR will comply with applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. The CONTRACTOR will notify owners of adjacent utilities when prosecution of the WORK may affect them.

The CONTRACTOR will erect and maintain, as required by the conditions and progress of the WORK all necessary safeguards for safety and protection. The CONTRACTOR shall remedy all damage or loss to any property caused directly or indirectly, in whole or part, by the CONTRACTOR, any SUBCONTRACTOR or

anyone directly or indirectly employed by any of them or anyone of whose acts any of them may be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the PUBLIC BODY, of the ENGINEER or anyone employed by either of them or anyone whose acts either of them may be liable, and not attributable, directly or indirectly in whole or in part, to the fault or negligence of the CONTRACTOR.

- C. The CONTRACTOR shall shore up, brace, underpin, secure and protect as may be necessary all foundations and other parts of existing structures adjacent to, or in the vicinity of the WORK, which may be affected in any manner by the WORK. The CONTRACTOR shall be responsible for giving any and all required notices to any potentially affected property owner or other affected party prior to commencement of any work.
- D. In an emergency affecting the safety of life, limb or property, including adjoining property, the CONTRACTOR, without special instructions or authorization from the PUBLIC BODY, is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act. He shall likewise act if instructed by the PUBLIC BODY or the ENGINEER. Any compensation claimed will be determined by the procedure in Section 23, CHANGES IN THE WORK.

15. Accident Prevention

- A. No person employed in the performance of this CONTRACT shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to his health or safety as determined under construction and health standards promulgated by the Secretary of Labor.
- B. Machinery, equipment and all site hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc. , to the extent that such provisions do not conflict with applicable law.
- C. The CONTRACTOR shall maintain an accurate record of all cases of death, occupational disease or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on this PROJECT.

16. Sanitary Facilities

The CONTRACTOR shall furnish, install and maintain ample sanitary facilities for workers. These facilities shall be sufficient to meet the needs of the PROJECT and be located to the satisfaction of the PUBLIC BODY. All such facilities and services shall be furnished in strict accordance with applicable health regulations.

17. Use of Premises/Storage

- A. The CONTRACTOR shall confine his equipment, storage of materials, and construction operations to PROJECT area as shown in the CONTRACT DOCUMENTS and prescribed by ordinances or permits, or as may be desired by the PUBLIC BODY, and shall not unreasonably encumber the PROJECT area or public rights-of-way with his materials and construction equipment.
- B. The CONTRACTOR shall consult with the PUBLIC BODY and the ENGINEER for suitable storage space for bulk materials on each project. If sufficient storage is not available on the PROJECT site the CONTRACTOR shall arrange for storage elsewhere.
- C. The CONTRACTOR shall comply with all reasonable instructions of the PUBLIC BODY, the ENGINEER, and all applicable regulations regarding signs, advertising, traffic, fires, explosives, danger signals and barricades.

18. Schedules, Reports and Records

- A. The CONTRACTOR shall submit to the PUBLIC BODY such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required for the WORK to be performed.
- B. Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which the CONTRACTOR proposes to carry out the WORK, including dates at which various parts of the WORK will be started, estimated dates of completion of each part, and as applicable:
 - (1) The dates at which special detail drawings will be required.
 - (2) Respective dates for submission of SHOP DRAWINGS, the beginning of manufacturer, testing and the installation of materials, supplies and equipment.
- C. The CONTRACTOR shall submit a schedule of payments that the CONTRACTOR anticipates will be earned during the course of the WORK.
- D. The PUBLIC BODY, the ENGINEER, their authorized representatives, and authorized representatives of participating state and federal agencies shall have at all times access to the WORK, materials, payrolls, records, personnel, invoices of materials or other relevant data and records. The CONTRACTOR shall provide proper facilities for such access and observation of the WORK and also for any inspection or testing thereof.

19. Inspection

- A. All materials and workmanship shall be subject to inspection, examination, or test by the PUBLIC BODY and the ENGINEER of any and all items during manufacture or construction, and at any and all places where such manufacture or construction is carried on. The PUBLIC BODY and ENGINEER shall have the right to reject defective materials and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected.
- B. The ENGINEER shall act as the PUBLIC BODY'S representative in carrying out inspection and in assessing the acceptability of all aspects of the WORK in accordance with the CONTRACT DOCUMENTS. The opinions and directives of the ENGINEER concerning the WORK shall be adhered to at all times unless they conflict with the CONTRACT DOCUMENTS or are superseded by the PUBLIC BODY.
- C. The CONTRACTOR shall promptly furnish all materials reasonably necessary for any tests which may be required. All tests performed by the ENGINEER will be performed in such a manner as not to delay the WORK unnecessarily and will be made in accordance with the provisions of the CONTRACT DOCUMENTS.
- D. The CONTRACTOR shall notify the ENGINEER sufficiently in advance of backfilling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval of the ENGINEER, the CONTRACTOR shall uncover for inspection and re-cover such facilities all at his Ohm expense.
- E. Should the PUBLIC BODY consider it necessary at any time prior to final acceptance of the WORK to examine any work already approved and completed, the CONTRACTOR shall on request promptly furnish all necessary facilities, labor and material. If such work is found to be defective due to the fault of the CONTRACTOR or his SUBCONTRACTORS, the CONTRACTOR shall defray the cost of such re-examination and of satisfactory reconstruction.

If such work is found to be acceptable according to the CONTRACT DOCUMENTS, the actual cost of such re-examination in labor and materials, plus 15% of such costs to cover general expenses shall be allowed the CONTRACTOR, and if such re-examination has delayed the WORK to a significant degree he shall be allowed a commensurate time extension.

20. Payments to Contractor

- A. Partial Payments

- (1) The CONTRACTOR shall prepare his requisition for partial payment as of the last day of the month (unless the payment schedule is tied to milestone, in such case requisition is prepared at appropriate stage of completion) and submit it with the required number of copies to the ENGINEER for his approval. The amount of the payment due the CONTRACTOR shall be determined by adding the total value of the work completed to date to the value of the materials properly stored at the site, and deducting (a) five percent (5%) of the total amount to be retained until final payment, (b) the amount of all previous payments, and, (c) such claims as may be specifically excepted by the CONTRACTOR as provided for in Section 48 hereof. The total value of work completed to date shall be based upon the estimated quantities of work completed and on the unit prices contained in the agreement; mobilization costs shall not be included. The value of the materials properly stored on site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection by the ENGINEER.
- (2) The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing approval of payment and submit the partial payment estimate to the PUBLIC BODY, or return the partial payment estimate to the CONTRACTOR indicating in writing the reason for refusing to approve payment. In such case the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The PUBLIC BODY will within thirty (30) days of presentation of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment.
- (3) Monthly or partial payments made by the PUBLIC BODY to the CONTRACTOR are moneys advanced for the purpose of assisting the CONTRACTOR to expedite the WORK. The CONTRACTOR shall be responsible for the care and protection of all materials and work upon which such payments have been made until final acceptance of the PROJECT by the PUBLIC BODY. Such payments shall not constitute a waiver of the right of the PUBLIC BODY to require the fulfillment of all terms of the CONTRACT DOCUMENTS and all improvement embraced therein to the satisfaction of the PUBLIC BODY.

B. Final Payment

- (1) After final inspection and acceptance by the PUBLIC BODY of all WORK according to the CONTRACT DOCUMENTS, the CONTRACTOR shall prepare his requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work and the applicable unit prices stipulated in the CONTRACT DOCUMENTS. The total amount of the final payment due the CONTRACTOR under this CONTRACT shall be the amount computed as described above less all previous payments. Final

payment shall be made subject to the CONTRACTOR furnishing the PUBLIC BODY with a release in satisfactory form of all claims against the PUBLIC BODY arising under and by virtue of the CONTRACT DOCUMENTS, other than such claims as may be specifically excepted by the CONTRACTOR from the operation of the release as provided for under Section 48, CONTRACTUAL DISPUTES.

- (2) If a lump sum CONTRACT price is in effect the following wording is operative "The amount of the final payment due the CONTRACTOR shall be the lump sum shown in the CONTRACT DOCUMENTS or this sum as adjusted by approved CHANGE ORDERS.
- (3) The PUBLIC BODY, before paying the final payment, may require the CONTRACTOR to furnish releases or receipts from all SUBCONTRACTORS having performed any work and all persons having supplied materials, equipment and services to the CONTRACTOR, if the PUBLIC BODY deems the same necessary in order to protect its interests. The PUBLIC BODY may if it deems it advisable make payment to the CONTRACTOR in part or in full without requiring the furnishing of such releases or receipts, and any payments so made shall in no way impair the obligations of any surety furnished under the terms of the CONTRACT DOCUMENTS.
- (4) Any amount withheld by the PUBLIC BODY as "Liquidated Damages" under the terms of the CONTRACT DOCUMENTS shall be deducted from the final payment due the CONTRACTOR.
- (5) Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate to be attached to the final payment request that the WORK has been accepted under the conditions of the CONTRACT DOCUMENTS. The entire amount due the CONTRACTOR as described in provisions of this section shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK. If the PUBLIC BODY fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment, interest of the maximum legal rate commencing on the first day after said payment is due and continuing until payment is received by the CONTRACTOR.

C. Acceptance of Final Payment

The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the PUBLIC BODY of all claims and all liability to the CONTRACTOR other than claims in stated amounts which may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the PUBLIC BODY and others relating to or arising out

of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or its sureties from any obligations under the CONTRACT DOCUMENTS or the Performance or Payment BONDS.

21. Payments by Contractor

Except in cases of bona fide disputes, or where the CONTRACTOR has some other justifiable reason for delay, the CONTRACTOR shall pay:

- A. For all transportation and utility services not later than the end of the calendar month following that in which the services are rendered.
- B. For all materials, tools and other expendable equipment to the extent of ninety percent (90%) of the cost thereof not later than the end of the calendar month following that in which such materials, tools and equipment are delivered at the site of the PROJECT.
- C. To each of his SUBCONTRACTORS, not later than the end of the calendar month in which each payment is made to the CONTRACTOR, the representative amount allowed the CONTRACTOR on account of the work performed by his SUBCONTRACTORS, to the extent of each SUBCONTRACTOR'S interest therein.

22. Public Body's Use of Premises

- A. Prior to SUBSTANTIAL COMPLETION, the PUBLIC BODY with the concurrence of the ENGINEER and the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.
- B. The PUBLIC BODY shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the PUBLIC BODY.

23. Changes in The Work

- A. The PUBLIC BODY may make changes in the WORK required to be performed by the CONTRACTOR under the CONTRACT DOCUMENTS without releasing the CONTRACTOR from any of his obligations under the CONTRACT DOCUMENTS or any guarantee given by him pursuant to the CONTRACT provisions, and without affecting the validity of the guaranty BONDS, and without relieving or releasing the

surety or sureties of said BONDS. All WORK shall be executed under the terms of the original CONTRACT DOCUMENTS unless it is expressly provided otherwise. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER. All change Orders must be approved by the Virginia Department of Housing and Community Development (DHCD) and may not alter the scope of the project. DHCD must receive justification for Change Orders from the grantee.

- B. Except for the purpose of affording protection against any emergency endangering health, life, limb or property as specified in Section 14, the CONTRACTOR shall make no change in the WORK as specified in the CONTRACT DOCUMENTS unless in pursuance of a written approved CHANGE ORDER from the PUBLIC BODY authorizing the CONTRACTOR to proceed with the change. No claim for an adjustment of the CONTRACT PRICE or time will be valid unless so ordered.
- C. If applicable unit prices are contained in the CONTRACT DOCUMENTS, the PUBLIC BODY may order the CONTRACTOR to proceed with the applicable unit prices specified in the CONTRACT DOCUMENTS; provided that in the case of a unit price contract the net value of all changes does not increase or decrease the original total amount shown in the CONTRACT DOCUMENTS by more than twenty five percent (25%).
- D. If the applicable unit prices are not contained in the CONTRACT DOCUMENTS or if the total net change increases or decreases the total CONTRACT PRICE more than twenty five percent (25%), or \$10,000 (whichever is greater) the PUBLIC BODY shall, before ordering the CONTRACTOR to proceed with the desired changes, request from him an itemized proposal covering the WORK involved in the change after which the procedure shall be as follows:
 - (1) If the proposal is acceptable the PUBLIC BODY will prepare the CHANGE ORDER in accordance therewith for acceptance by the CONTRACTOR.
 - (2) If the proposal is not acceptable, the PUBLIC BODY shall order the WORK change to be commenced and the CONTRACTOR and PUBLIC BODY shall follow the procedure detailed in Section 48, Contractual Disputes.
- E. Each CHANGE ORDER shall include in its final form:
 - (1) A detailed description of the change in the WORK
 - (2) The CONTRACTOR'S proposal (if any) or a confirmed copy thereof

- (3) A definite statement as to the resulting change in the CONTRACT PRICE or TIME
 - (4) The statement that all WORK involved in the change shall be performed in accordance with the CONTRACT DOCUMENTS except as modified by the CHANGE ORDER.
- F. The procedures as outlined in this section for a unit price CONTRACT also apply in the case of a lump sum CONTRACT.
- G. The ENGINEER also, may at any time, by issuing a FIELD ORDER make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles the CONTRACTOR to a change in CONTRACT PRICE or TIME, or both, in which event the CONTRACTOR shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of such ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instructions from the PUBLIC BODY.
- H. All change orders must be approved in writing and in advance of any associated work performance by DHCD. Any change order, regardless of the cost, which results in a change in project scope will be disallowed.

24. Claims for Extra Cost/Subsurface Conditions

- A. Should the CONTRACTOR claim that any instructions by DRAWINGS or otherwise entitles him to a change in CONTRACT PRICE or TIME he shall follow the procedures in SECTION 23.
- B. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines or bench marks, will not be recognized unless accompanied by certified survey data made prior to the time the original ground was disturbed, clearly showing that errors exist which result in handling more material, or performing more work, than could be reasonably estimated from the CONTRACT DOCUMENTS.
- C. Any discrepancies which may be discovered between the actual conditions and those represented by the CONTRACT DOCUMENTS shall at once be reported to the PUBLIC BODY and work shall not proceed except at the CONTRACTOR' S risk until written instructions have been issued by the PUBLIC BODY.

- D. The PUBLIC BODY shall promptly investigate the conditions, and if it is found that such conditions do so materially differ from those upon which the CONTRACT DOCUMENTS are based, and cause an increase or decrease in the cost of, or time required for, performance of the WORK an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER.

Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless required WRITTEN NOTICE has been given; provided that the PUBLIC BODY may, if it determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

25. Time for Completion and Liquidated Damages

- A. The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on the date specified in the NOTICE TO PROCEED.
- B. The CONTRACTOR will proceed with the WORK at such rate of PROGRESS to insure full completion within the CONTRACT TIME. It is expressly understood and agreed by and between the CONTRACTOR and the PUBLIC BODY that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.
- C. Liquidated Damages for Delays

If the WORK is not completed within the time stipulated in the CONTRACT DOCUMENTS including any extensions of time for excusable delays as herein provided, the CONTRACTOR shall pay to the PUBLIC BODY as fixed, agreed and liquidated damages for each calendar day of delay, until the WORK is completed, the amount set forth in the CONTRACT DOCUMENTS hereof and the CONTRACTOR and his sureties shall be liable to the PUBLIC BODY for the amount thereof. These fixed, agreed and liquidated damages are being set for delay because fixing actual damages for delay is impractical and extremely difficult.

The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the PUBLIC BODY and the ENGINEER:

- (1) To any preference, priority or allocation order duly issued by the PUBLIC BODY.

- (2) To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God, or of the public enemy, acts of the PUBLIC BODY, acts of another CONTRACTOR in the performance of a contract with the PUBLIC BODY, fires, floods, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather, and
- (3) To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs C.(1) and C.(2) of this Section.

The aforementioned exemptions from payment of liquidated damages shall apply only if the CONTRACTOR promptly notifies the PUBLIC BODY within ten (10) days with WRITTEN NOTICE documenting the cause of such delay.

Upon receipt of such NOTICE the PUBLIC BODY shall ascertain the facts and the cause and the extent of such delay. If upon the basis of the facts and the terms of the CONTRACT DOCUMENTS, the delay is properly excusable, the PUBLIC BODY shall extend the CONTRACT TIME for completion of the WORK for a period commensurate with the period of excusable delay.

26. Suspension of Work, Termination And Delay

- A. The PUBLIC BODY may suspend the WORK or any portion thereof for a period of not more than ninety (90) days or such further time as agreed upon by the CONTRACTOR by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which shall fix the date on which the WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.
- B. If the CONTRACTOR is adjudged bankrupt or insolvent, or makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of its property or if the CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment, or disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK, or disregards the authority of the ENGINEER, or otherwise violates any provision of the CONTRACT DOCUMENTS, then the PUBLIC BODY may, without prejudice to any other right or remedy and after giving the CONTRACTOR and its surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate services of the CONTRACTOR and take possession of the PROJECT and all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR and finish the WORK by whatever method the PUBLIC

BODY may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess shall be paid to the CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the PUBLIC BODY. Such costs incurred by the PUBLIC BODY will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

- C. Where the CONTRACTOR'S services have been so terminated by the PUBLIC BODY, said termination shall not affect any right of the PUBLIC BODY against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the PUBLIC BODY due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.
- D. After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the PUBLIC BODY may, without cause or prejudice to any other right or remedy, elect to abandon the PROJECT and to terminate the CONTRACT. In such case the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.
- E. If through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the PUBLIC BODY or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the PUBLIC BODY fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded through the legally recognized disputed claim procedure within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the PUBLIC BODY terminate the CONTRACT and recover from the PUBLIC BODY payment for all WORK executed and expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the PUBLIC BODY has failed to make any payment as foresaid, the CONTRACTOR may upon ten (10) days WRITTEN NOTICE to the PUBLIC BODY and ENGINEER stop the WORK until all amounts then due are paid, in which event and upon resumption of the WORK CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME, or both, to compensate for the costs and delays attributable to the stoppage of the WORK.
- F. If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of the PUBLIC BODY or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the

CONTRACTOR for the Costs and delays necessarily caused by the failure of the PUBLIC BODY or ENGINEER.

27. Correction of Work

- A. The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the PUBLIC BODY and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.
- B. All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the PUBLIC BODY may remove such WORK and store the materials at the expense of the CONTRACTOR.
- C. If the PUBLIC BODY deems it not expedient to require the CONTRACTOR to correct WORK not done in accordance with the CONTRACT DOCUMENTS, an agreement may be made between the PUBLIC BODY and the CONTRACTOR for a change in CONTRACT PRICE with an equitable deduction in lieu of replacement and removal.

28. Cleanup Requirements

- A. The construction premises, job sites and any property leased for storage of equipment or materials shall be maintained by the CONTRACTOR in reasonably neat and orderly condition, free from accumulation of waste material and rubbish during the entire construction period. All crates, cartons and other flammable and trash shall be removed from work areas at the end of each working day. Trash burning on the site shall be prohibited unless done in accordance with local ordinance.
- B. The CONTRACTOR shall remove all rubbish and debris from WORK with reasonable promptness. Rubbish and debris shall not be permitted to accumulate in excessive amounts that will become hazardous underfoot and to vehicular traffic.
- C. Upon completion of the WORK, the CONTRACTOR shall remove all temporary construction facilities, including buildings, fences, scaffolding, unused materials; and rubbish of any kind. Buildings, job site and adjacent property shall be left in a neat and clean condition acceptable to the PUBLIC BODY.

29. Fitting and Coordination of the Work

The CONTRACTOR shall be responsible for the proper fitting of all WORK and for the coordination of the operation of all trades, SUBCONTRACTORS, or material supplies engaged in the WORK. The CONTRACTOR shall guarantee to each of his SUBCONTRACTORS the locations and measurements which they may require for the fitting of their work to all surrounding work.

30. Subcontracting

- A. The CONTRACTOR may utilize specialty SUBCONTRACTS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.
- B. The CONTRACTOR shall not contract with any proposed SUBCONTRACTOR without the prior written approval of the PUBLIC BODY. Prior to the award of each SUBCONTRACT, the CONTRACTOR shall notify the PUBLIC BODY and the ENGINEER in writing of the name and trade of each SUBCONTRACTOR proposed, and furnish such written information as the PUBLIC BODY and the ENGINEER may require concerning the proposed SUBCONTRACTOR. Any objection the PUBLIC BODY may have concerning the proposed SUBCONTRACT shall be expressed in writing within seven (7) days after receipt by the PUBLIC BODY of the CONTRACTOR'S proposal of a SUBCONTRACT.
- C. The PUBLIC BODY may, without claim for extra cost by the CONTRACTOR, disapprove of any SUBCONTRACTOR based upon its own determination, or because of the fact that the proposed SUBCONTRACTOR is listed as ineligible to receive award of CONTRACTS for federally funded jobs due to being listed as debarred by the U. S. Department of Housing and Urban Development, the U. S. Department of Labor, or the Commonwealth of Virginia.
- D. The CONTRACTOR shall be as fully responsible for the acts and omissions of its SUBCONTRACTORS, and for persons either directly or indirectly employed by them, as the CONTRACTOR is for the acts and omissions of persons employed by the CONTRACTOR.
- E. The CONTRACTOR shall cause appropriate provisions to be inserted in all SUBCONTRACTS relative to the WORK to bind SUBCONTRACTORS to applicable provisions of the CONTRACT DOCUMENTS.
- F. There shall be nothing contained in the CONTRACT DOCUMENTS that shall create any contractual relation between any SUBCONTRACTOR and the PUBLIC BODY.

31. Separate Contracts

- A. The PUBLIC BODY reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate the WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends on the work of any other contractors, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defect in such work that render it unsuitable for such proper execution and results.
- B. The PUBLIC BODY may perform additional work related to this PROJECT or the PUBLIC BODY may let other contracts containing provisions similar to these. The CONTRACTOR shall afford the other contractors who are parties to such contracts (or the PUBLIC BODY if the PUBLIC BODY is performing the additional work) reasonable opportunity for the introduction and storage of equipment and materials and the execution of work, and shall properly connect and coordinate the WORK with theirs.
- C. If the performance of additional work by other contractors or the PUBLIC BODY is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional work. If the CONTRACTOR believes that the performance of such additional work by the PUBLIC BODY entitles him to an extension of CONTRACT TIME, the CONTRACTOR may make a claim thereof for a CHANGE ORDER.

32. Lands and Rights-Of-Way

- A. Prior to issuance of NOTICE TO PROCEED the PUBLIC BODY shall obtain all land and rights-of-way necessary for carrying out and for completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.
- B. The PUBLIC BODY shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

33. As Constructed Drawings

The CONTRACTOR shall provide the ENGINEER with accurate information to be used in the preparation of permanent As Constructed Drawings. For this purpose, the CONTRACTOR shall record on one set of CONTRACT DRAWINGS all changes from the installations originally indicated, and record final locations of underground lines by

depth from finish grade and by accurate horizontal offset distances to permanent surface improvements such as buildings, curbs, or edges of walks etc.

34. Final Completion Inspection and Closeout

- A. When the WORK as described in the CONTRACT DOCUMENTS is substantially completed, the CONTRACTOR shall notify the ENGINEER and PUBLIC BODY by WRITTEN NOTICE that the WORK will be ready for final inspection on a definite date specified in such NOTICE. The WRITTEN NOTICE shall be given at least ten (10) days prior to the date state for final inspection. If the PUBLIC BODY determines that the status of the WORK is as represented, it will make arrangements necessary to conduct final inspection on the date stated in the NOTICE, or as soon thereafter as is practicable. The inspection party will include the ENGINEER and such representatives of the PUBLIC BODY as deemed appropriate.
- B. After the ENGINEER and the PUBLIC BODY have been satisfied that the CONTRACTOR has performed satisfactorily in accordance with the CONTRACT DOCUMENTS, the ENGINEER will certify that the CONTRACTOR is eligible for final payment by the PUBLIC BODY.
- C. The CONTRACTOR is required to execute a Release of Liens, Payment in Full to Subcontractors and Material Suppliers Certification, Warranty of Materials and Workmanship and all other appropriate documents that are essential to close out of the PROJECT as requested by the PUBLIC BODY.
- D. The PUBLIC BODY'S attorney will review the CONTRACTOR'S close out documents prior to acceptance by the PUBLIC BODY. If the PUBLIC BODY and its attorney are satisfied that the PUBLIC BODY is released from all liens, claims or other charges connected with the WORK, the PUBLIC BODY will make payment to the CONTRACTOR.

35. Insurance

- A. The CONTRACTOR shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of, or result from, the CONTRACTOR'S execution of the WORK, whether such execution be by the CONTRACTOR, any SUBCONTRACTOR, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:
 - (1) Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

- (2) Claims for damages because of bodily injury, occupational sickness or disease, or death of employees;
 - (3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than employees;
 - (4) Claims for damages insured by usual personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (b) by any other person; and
 - (5) Claims for damages because of injury to or destruction of tangible property, including loss of use resulting there from.
- B. Certificates of Insurance acceptable to the PUBLIC BODY shall be filed with the PUBLIC BODY prior to commencement of the WORK. These Certificates shall contain a provision that coverage afforded under the policies will not be cancelled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the PUBLIC BODY.
- C. The CONTRACTOR shall procure and maintain, at the CONTRACTOR'S own expense, during the CONTRACT TIME, Liability insurance as herein- after specified:
- (1) Contractor's General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting the CONTRACTOR from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by the CONTRACTOR or by any SUBCONTRACTOR employed by the CONTRACTOR or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR employed by the CONTRACTOR. Insurance shall be written with a limit of liability of not less than \$500,000 for all damages arising out of bodily injury, including death, at any time resulting there from, sustained by anyone person in any one accident; and a limit of liability of not less than \$500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$200,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than \$200,000 aggregate for any such damage sustained by two or more persons in any accident.
 - (2) The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the PUBLIC BODY, the CONTRACTOR, and

SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

- D. The CONTRACTOR shall procure and maintain, at the CONTRACTOR'S own expense, during the CONTRACT TIME, in accordance with the provisions of State law, Workman's Compensation Insurance, including occupational disease provisions, for all of the CONTRACTOR'S employees at the site of the PROJECT and in case any WORK is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site for the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of its employees not otherwise protected.
- E. The CONTRACTOR shall secure, if applicable, "All Risk" type Builder's Risk Insurance for WORK to be performed. Unless specifically authorized by the PUBLIC BODY, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the CONTRACT TIME, and until the WORK is accepted by the PUBLIC BODY. The policy shall name as the insured the CONTRACTOR, and the PUBLIC BODY.

36. Assignment of Contract

- A. The CONTRACTOR'S obligations and duties under this CONTRACT shall not be assigned in whole or in part by the CONTRACTOR without the prior written approval of the PUBLIC BODY. This shall not prohibit the assignment of the proceeds due hereunder to a bank or financial institution, provided however that such assignment does not encumber or in any way lay claim to materials, equipment or machinery to be incorporated into the WORK or otherwise to be vested in the PUBLIC BODY by terms of the CONTRACT DOCUMENTS. This provision shall not preclude the CONTRACTOR from subletting as provided in the CONTRACT DOCUMENTS, parts of the WORK.
- B. This CONTRACT may be assigned by the PUBLIC BODY to any corporation, agency, or instrumentally authorized to accept such assignment.

37. Indemnification

- A. The CONTRACTOR will indemnify and hold harmless the PUBLIC BODY and the ENGINEER and their agents and employees from and against all claims, damages, losses, and expenses including attorney fees arising out of or resulting from the performance of the WORK, provided that such claims, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use there- from; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.
- B. In any and all claims against the PUBLIC BODY or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, of benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or any other employee benefit acts.
- C. The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, its agents, or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

38. Guarantee

The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of substantial inspection. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of final inspection of the facility that the facility is free from all defects due to faulty materials and workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of the damages of other parts of the system resulting from such defects. The PUBLIC BODY will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments or other WORK that may be made necessary by such defects, the PUBLIC BODY may do so and charge the CONTRACTOR the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

39. Notices

- A. All NOTICES, demands, requests, instructions, approvals, proposals, and claims must be made in writing.
- B. Any NOTICE to or demand upon the CONTRACTOR shall be sufficiently given if delivered at the office of the CONTRACTOR stated on the signature page of the CONTRACT DOCUMENTS (or at such other office as he may from time to time designate in writing to the PUBLIC BODY, or deposited in the United States Mail in a sealed, postage paid envelope, or if delivered with charges prepaid to any telegraph company for transmission in each case addressed to such office).
- C. All NOTICES required to be delivered to the PUBLIC BODY shall, unless otherwise specified in writing to the CONTRACTOR, be delivered to the designated representative and any NOTICE to or demand upon the PUBLIC BODY shall be sufficiently given if so delivered in writing, or deposited in the United States Mail in a sealed, postage paid envelope, or delivered with charges prepaid to any telegraph company for transmission to said designated representative at such address, or to such other address as the PUBLIC BODY may subsequently specify in writing to the CONTRACTOR for such purposes.
- D. Any such WRITTEN NOTICE shall be deemed to have been given as of the time of actual delivery, or in the case of mailing, when the same should have been received in due course of post, or in the case of telegrams at the time of actual receipt, as the case may be.

40. Access to Records

The PUBLIC BODY, the Inspector General of the United States, U. S. Department of Housing and Urban Development, U. S. Department of Labor, the General Accounting Office, and DHCD shall be permitted by the CONTRACTOR to have full access to, and right to examine any pertinent books, documents, papers and records of the CONTRACTOR involving transactions related to this CONTRACT, during the period of this PROJECT and for five (5) years from the date of final payment or until all findings have been resolved to the satisfaction of the Commonwealth of Virginia. The CONTRACTOR agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. The CONTRACTOR agrees to maintain all books, documents, papers and records required under this CONTRACT for a period of not less than five (5) years from the date of final payment or until all findings have been resolved to the satisfaction of the Commonwealth of Virginia.

41. Withholding Of Funds

Notwithstanding the provisions of Section 20 herein, the following shall apply:

- A. The PUBLIC BODY may withhold or cause to be withheld from the CONTRACTOR so much of the accrued payments or advances as may be considered necessary to satisfy any liability of the CONTRACTOR or any SUBCONTRACTOR for liquidated damages under the CONTRACT Work Hours and Safety Standards Act - Overtime Compensation.
- B. If the CONTRACTOR or any SUBCONTRACTOR fails to pay any laborer, mechanic, apprentice, trainee, watchman or guard employed on the WORK all or part of the wages required by the CONTRACT DOCUMENTS, the PUBLIC BODY may, upon WRITTEN NOTICE to the CONTRACTOR, take such action as may be necessary to cause suspension of any further payments or advances until such violations have ceased.

42. Federal Funding Termination

In the event that federal funding is terminated or otherwise unavailable for the purpose of compensating the CONTRACTOR, the CONTRACT is null and void, releasing the CONTRACTOR from further obligations contained therein.

43. Interest of Contractor

The CONTRACTOR covenants that the CONTRACTOR presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the CONTRACTOR'S services hereunder. The CONTRACTOR further covenants that in the performance of this CONTRACT no person having any such interest shall be employed.

44. Political Activity

No portion of CONTRACT funds shall be directly used for any political activity or to further the election or defeat of any candidate for public office.

45. Interest of Officials

- A. No member of or delegate to the Congress of the United States, shall be admitted to any share or part of this CONTRACT or to any benefit to arise there from; but this

provision shall not be construed to extend to this CONTRACT if made with a corporation for its general benefit.

- B. No employee, officer or agent of the PUBLIC BODY shall participate in selection, or in the award or administration of this CONTRACT if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: the employee, officer or agent; any member of his immediate family; his partner; or an organization which employs or is about to employ any of the preceding persons has a financial or other interest in the CONTRACTOR or this CONTRACT.

46. Provisions Required By Law Deem Inserted

Each and every provision of law and clause required by law to be inserted in this CONTRACT shall be deemed to be inserted herein and the CONTRACT shall be read and enforced as though it were included herein.

47. Contract Security

Requirements: Section 2.2-4337 of the Virginia Public Procurement Act requires performance and payment bonds in the amount of the contract for construction contracts exceeding \$500,000 awarded to any prime contractor. State law does not preclude public bodies from requiring such bonds for construction contracts below \$500,000. Section 2.2-4337 also allows the contractor to require of each subcontractor a payment bond (but not a performance bond). HUD regulations at 24 CFR Part 85 requires performance and payment bonds for 100 percent of the contract price for contracts exceeding \$150,000 and such bonds must be obtained from companies listed in the U.S. Treasury Circular 570.

NOTE: The public body must use the sample wording or develop its own wording consistent with the requirements.

Sample

- A. Simultaneous with the delivery of the executed CONTRACT, the CONTRACTOR shall furnish to the PUBLIC BODY the following BONDS payable to the PUBLIC BODY:
1. A performance BOND in the sum of the CONTRACT amount conditioned upon the faithful performance of the CONTRACT in strict conformity with the CONTRACT DOCUMENTS.
 2. A payment BOND in the sum of the CONTRACT amount. Such BOND shall be for the protection of claimants who have and fulfill contracts to supply labor or materials to the CONTRACTOR, or to any of his SUBCONTRACTORS, in

the prosecution of the WORK, and shall be conditioned upon the prompt payment for all such material furnished or labor supplied or performed in the prosecution of the WORK. "Labor or materials" shall include public utility services and reasonable rental of equipment, but only for periods when the equipment rented is actually used at the site.

- B. Each of the BONDS shall be executed by one or more surety companies authorized to do business in Virginia. When the CONTRACT amount exceeds \$150,000, such company shall also be listed in the latest issue of the U.S. Treasury Circular 570 and the penal sum shall be within the maximum specified for such company in said Circular 570.
- C. In lieu of a payment or performance BOND, the CONTRACTOR may furnish a certified check or cash escrow in the face amount required by the BOND.

48. Contractual Disputes

Requirements: Section 2.2-4363 of the Virginia Public Procurement Act requires public bodies to include in their contracts (or by reference) a procedure for consideration of contractual claims. Such procedure must establish a time limit for a final decision in writing by the public body. OMB Part 85 provides that "The grantee is responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements entered in support of a grant. These include but are not limited to source evaluation, protests, disputes, and claims." As a minimum, ALL PUBLIC BODIES MUST ESTABLISH a procedure for consideration of contractual claims including a time limit for a final decision. TWO EXCEPTIONS MUST BE PROVIDED for in a general contractual disputes clause. These exceptions concern disputes arising out of the labor standards provisions of the contract and disputes relative to a contractor's compliance with the affirmative action clauses.

Sample

- A. Contractual claims whether for money or other relief, except disputes arising out of the Labor Standards Provisions of this CONTRACT and disputes relative to the CONTRACTOR'S compliance with the affirmative action clauses shall be submitted in writing no later than sixty (60) days after final payment, however, WRITTEN NOTICE of the CONTRACTOR'S intention to file such a claim must be given at the time of the occurrence or prior to beginning of that part of the WORK upon which the claim is based. Such WRITTEN NOTICE of the CONTRACTOR'S intention to file a claim need not detail the amount of the claim, but shall state the facts or issues relating to the claim in sufficient detail to identify the claim, together with its character and scope. Upon the filing of such WRITTEN NOTICE the CONTRACTOR shall proceed with the WORK as directed.

- B. The PUBLIC BODY, upon receipt of a detailed claim, may at any time render its decision and shall render such decision within days of final payment. Each such decision rendered by the PUBLIC BODY shall be forwarded to the CONTRACTOR by WRITTEN NOTICE.
- C. If the CONTRACTOR disagrees with the decision of the PUBLIC BODY concerning any pending claim he shall promptly notify the PUBLIC BODY by WRITTEN NOTICE that he is proceeding with the WORK under protest. Any claim not resolved, whether by failure of the CONTRACTOR to accept the decision of the PUBLIC BODY or under a WRITTEN NOTICE of CONTRACTOR'S intention to file a claim or a detailed claim not acted upon by the PUBLIC BODY, shall be specifically exempt by the CONTRACTOR from payment request, whether progress or final. Pendency of claims shall not delay payment of amounts agreed due in the final payment.
- D. The decision on contractual claims by the PUBLIC BODY shall be final and conclusive unless the CONTRACTOR appeals within six months of the date of the final decision on the claim by the PUBLIC BODY by invoking the administrative appeals procedure, if available, or by instituting legal action in the appropriate circuit court.

49. Administrative Appeals Procedure and Arbitration

Requirements: Under Section 2.2-4365 of the Virginia Public Procurement Act, a public body may establish an administrative appeals procedure for hearing protests of a decision to award or an award, appeals from refusals to allow withdrawal of bids, appeals from disqualifications and determinations of nonresponsibility, and appeals from decisions on disputes arising during the performance of a contract. And such administrative procedure shall provide for a hearing before a disinterested person or panel.

The sample administrative appeals procedure is optional.

Sample:

- A. Not later than six months from the date of the decision of the PUBLIC BODY, the CONTRACTOR may invoke the Administrative Appeals Procedure, by filing with the PUBLIC BODY a WRITTEN NOTICE of an intention to arbitrate, which NOTICE shall contain a statement setting forth the nature of the dispute, the amount involved, and the remedy sought. The CONTRACTOR shall file two copies of said NOTICE with any Regional Office of the American Arbitration Association (AAA), together with two copies of the arbitration provisions of this CONTRACT and the appropriate filing fee as provided for in the administrative fee schedule of the AAA in

effect at the time of filing. Such dispute shall be settled in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association.

- B. The award shall be final and conclusive and shall not be set aside unless the findings of fact contained therein are fraudulent or arbitrary or capricious, or so grossly erroneous as to imply bad faith.
- C. No determination on an issue of law shall be final if appropriate legal action is instituted in a timely manner. Any party to the Administrative Appeals Procedure shall be entitled to institute judicial review if such action is brought within thirty (30) days of the receipt of the written decision.
- D. Judgment upon the award may be entered in any court having jurisdiction thereof.
- E. Should the Administrative Appeals Procedure be invoked prior to completion of the WORK, the CONTRACTOR shall carry on the WORK and maintain the progress schedule unless otherwise agreed to by the CONTRACTOR and the PUBLIC BODY in writing.

50. Other Contractual Requirements

RETAINAGE: Section 2.2-4333 of the Virginia Public Procurement Act provides, "In any public contract for construction which provides for progress payments in installments based upon an estimated percentage of completion, the contractor shall be paid at least ninety-five percent of the earned sum when payment is due, with not more than five percent being retained to assure faithful performance of the contract. All amounts withheld may be included in the final payment... Any subcontract for a public project which provides for similar progress payments shall be subject to the same limitations."

There are no federal requirements addressing the retainage issues.

NOTE: The maximum five percent retainage allowable is incorporated in Section 20 of General Conditions - Part I.

EQUALS: Both 24 CFR Part 85 and Section 2.2-4315 of the Virginia Public Procurement Act require that in contracts the use of a certain brand, make or manufacture does not restrict the procurement to a specific brand, make or manufacturer. This requirement is found in Section 4 of General Conditions - Part I.

RECORDS RETENTION AND ACCESS TO: The federal requirements concerning retention of records and access to records and incorporated in Section 40 of General Conditions - Part I.

CONTRACT TERMINATION: The 24 CFR Part 85 requirements concerning contract termination are incorporated in the language found in Section 26 of General Conditions - Part I.

General Conditions - Part II

(TO BE INSERTED VERBATIM IN ALL CDBG CONSTRUCTION CONTRACTS; Except Subpart A, Federal Labor Standards Provisions; and Subpart B, Contract Work hours and Safety Standards Act, do not apply to rehabilitation of residential property, including bathroom additions, for use by less than eight families)

Subpart A: Federal Labor Standards Provisions

29 CFR 5.5 (a) - APPLICABILITY

The Project or Program to which the work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this contract pursuant to the provisions applicable to such Federal assistance.

(Applicable to all contracts/subcontracts in excess of \$2,000)

1. Minimum Wages

- A. All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once each week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section l(b) (2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph l(d) of this subpart; also regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits of the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including

any classification and wage rates conformed under paragraph 1(b) of this subpart) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

B.

- (1) The Virginia Department of Housing and Community Development (DHCD) and the Public Body shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. DHCD and the U.S. Department of Labor shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
 - i. The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - ii. The classification is utilized in the area by the construction industry; and
 - iii. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and DHCD agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by DHCD to the Administrator of the Wage and Hour Division, Employment Standards Administration, U. S. Department of Labor, in Washington D. C. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise DHCD, or will notify DHCD within the 30-day period that additional time is necessary.
- (3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), DHCD shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise DHCD or will notify DHCD within the 30-day period that additional time is necessary.

- (4) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs 1 (b) (B) or (C) of this subpart, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- C. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- D. If the contractor does not make payment to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

DHCD, or the Public Body, shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work all or part of the wages required by the contract, DHCD may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and Basic Records

- A. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid.

Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b) (2) (B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

A.

- (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the designated Public Body. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5 (a) (3) (i). This information may be submitted in any form desired. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.
- (2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
 - i. That the payroll for the payroll period contains the information required to be maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;
 - ii. That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;
 - iii. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3(b) (B) of this subpart.

- (4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.
- B. The contractor or subcontractor shall make the records required under paragraphs 3(a) of this subpart available for inspection, copying, or transcription by authorized representatives of the Public Body, DHCD or the U.S. Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees

- A. Apprentices: Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the contractor as to his entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage rate determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage

determination for the applicable classification. If the Administrator determined that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Employment and Training Administration, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- B. Trainees: Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for his level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the wage rate determined by the Secretary of Labor for the classification of work he actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- C. Equal Employment Opportunity: The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts

The contractor or subcontractor shall insert in any subcontract the clauses contained in 29 CFR 5.5(a) (1) through (12) and such other clauses as the Department of Housing and Community Development may by appropriate instruction require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontract. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract Termination: Debarment

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility

- A. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm which has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a) (1).
- B. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon act or 29 CFR 5.12(a)(1).

- C. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

11. Employment of Certain Persons Prohibited

No person under the age of sixteen years and no person who, at the time, is serving sentence in a penal or correctional institution shall be employed on the work covered by this Contract.

12. Questions Concerning Certain Federal Statutes and Regulations

All questions arising under this Contract not specifically addressed in the above paragraphs which relate to the application or interpretation of (a) the aforesaid Anti-Kickback Act, (b) the Contract Work Hours and Safety Standards Act, (c) the aforesaid Davis-Bacon Act, (d) the regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to said Acts, or (e) the labor standards provisions of any other pertinent Federal statute, shall be referred, through the Public Body to the Virginia Department of Housing and Community Development, to the Secretary of Labor, United States Department of Labor, for said Secretary's appropriate ruling or interpretation which shall be authoritative and may be relied upon for the purposes of this Contract.

Subpart B: Contract Work Hours And Safety Standards Act

(Applicable to all construction contracts. As used in this "Subpart" the terms "laborers" and "mechanics" include watchman and guards.)

1. Overtime Requirements

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

2. Violation; Liability for Unpaid Wages; Liquidated Damages

In the event of any violation of the clause set forth in paragraph (1) of this subpart, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this subpart, in the sum of \$10 for each calendar day or which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this subpart.

3. Withholding For Unpaid Wages and Liquidated Damages

The Public Body or DHCD shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this subpart.

4. Subcontract

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this subpart and also a clause requiring the subcontractors to include these clauses in any lower tier subcontract. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this subpart.

In addition to the clauses contained in Subpart B, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under Subpart B shall be made available by the contractor or subcontractor for inspection, copying, or

transcription by authorized representative of the Public Body, DHCD and/or the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

Subpart C: Equal Employment Opportunity

1. Executive Order 11246, As Amended.

(Applicable to all contracts/subcontracts in excess of \$10,000)

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

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
- (3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The contractor will comply with all provisions of Executive Order 11246, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) The contractor will furnish all information and reports required by Executive Order 11246, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his

books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

- (6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, as amended, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) The contractor will include the portion of the sentence immediately preceding paragraph (i) and the provisions of paragraphs (i) through (vii) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

B. Subcontracts: Each nonexempt prime contractor or subcontractor shall include the equal opportunity clause in each of its nonexempt subcontracts.

2. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246, as amended). (Applicable to all contracts and subcontracts exceeding \$10,000.)

- A. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
- B. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for minority participation in each trade	Goals for female participation in each trade
	2.6%	6.9%
(Insert goals for (each year.)		

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order 11246, as amended, and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- C. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the boundaries of the County of Washington, Virginia, in which the project area is located.

3. Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246).

(Applicable to all contracts/subcontracts in excess of \$10,000)

A. As used in these specifications:

- (1) "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- (2) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- (3) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- (4) "Minority" includes:
 - Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - Asian or Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
 - Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

B. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

C. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to

demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

- D. The Contractor shall implement the specific affirmative action standards provided in paragraphs g (1) through (16) of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract, shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
- E. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
- F. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
- G. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its action. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - (1) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign

two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

- (2) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to Community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- (3) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization, and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
- (4) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- (5) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under G (2) above.
- (6) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc. ; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- (7) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any

responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

- (8) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- (9) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- (10) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
- (11) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- (12) Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- (13) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- (14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

- (15) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - (16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- H. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations [g(1) through (16)]. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under g(1) through (16) of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
- I. A single goal for minorities and a separate rate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in a violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even through the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
- J. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- K. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246, as amended.
- L. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations,

by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

- M. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph g of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- N. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, whether age is greater than 62 years, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
- O. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents e.g.; those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program.

Subpart D: Title VI of the Civil Rights Act Of 1964, As Amended

No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Subpart E: Opportunities For Minority And Female-Owned Businesses

The work covered by this CONTRACT is subject to the provisions of OMB Part 85, Attachment 0 which requires that minority and female-owned businesses be solicited whenever they are sources of supplies, equipment, construction and services on federally funded projects.

- A. In procuring supplies, equipment, construction and services, the CONTRACTOR and all SUBCONTRACTORS will contact those appropriate minority and female-owned firms provided by the PUBLIC BODY on its solicitation list and provide such firms reasonable opportunities to compete for procurement contracts.
- B. The CONTRACTOR shall keep a complete and accurate record of all procurement of greater than ten thousand dollars (\$10,000) made in the execution of the PROJECT. Such record shall be on a form provided by the PUBLIC BODY and shall be submitted to the PUBLIC BODY no less than every thirty (30) days.

Subpart F: Compliance With Air And Water Acts

(Applicable to all contracts/subcontracts in excess of \$100,000)

In compliance with Section 306 of the Clean Air Act, as amended, (42 USC 1857(h)), Section 508 of the Clean Water Act, as amended, (33 USC 1368), Executive Order 11738, and the regulations (40 CFR, Part 15) of the Environmental Protection Agency with respect thereto the Contractor agrees that:

- A. Any facility to be utilized in the performance of this contract or any subcontract shall not be a facility listed on the EPA List of Violating Facilities pursuant to 40 CFR 15.20.
- B. He will comply with all requirements of Section 306 of the Clean Air Act, as amended, and Section 508 of the Clean Water Act, as amended, and all regulations and guidelines issued thereunder.
- C. He will promptly notify the PUBLIC BODY of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
- D. He will include or cause to be included the provisions of paragraph 1 through 4 of this subpart in every nonexempt subcontract and that he will take such action as the Government may direct as a means of enforcing such provisions.

Subpart G: Immigration Reform And Control Act Of 1986

The Contractor agrees by signing this contract that he/she does not and will not during the performance of this contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

Subpart H: Disclosure

All contractors and subcontractors shall complete a disclosure statement at the time of contract execution that discloses those persons who have an interest in the contract proceeds. Attach form follows this page.

Subpart I: Access To Records And Construction Site

The PUBLIC BODY, the Inspector General of the United States, Appalachian Regional Commission, United States Department of Labor, the General Accounting Office, and the Virginia Department of Housing and Community Development shall be permitted by the CONTRACTOR to have full access to, and right to examine any pertinent books, documents, papers and records and construction site of the CONTRACTOR involving transactions related to this CONTRACT, during the period of this PROJECT and for three (3) years from the date of final payment or until all findings have been resolved to the satisfaction of the Commonwealth of Virginia.

APPALACHIAN REGIONAL COMMISSION GRANT

DISCLOSURE REPORT

(Completed by all Developers, Contractors, Subcontractors or Consultants)

1. Local Government Name _____
2. ARC Contract # _____
3. Project Name _____
3. Name of Firm _____
President _____
Address _____
Telephone _____
FIN or SS# _____

Type of Contract (check applicable description)

- | | | | |
|--------------------|--------------------------|-------------------|--------------------------|
| Construction Prime | ☐ | *Construction Sub | ☐ |
| Design | ☐ | Other Specify | ☐ |

Description of work or service provided:

- _____
5. Date this Report _____ and ____ # of pages.
 6. Revision to Report Date _____ and ____ # pages.

**Note:* Housing Rehabilitation subcontractors are not required to be listed or to complete this Report.

Interested Parties	If Firm is an entity, identify each officer, director, principal stockholder and other persons who will have a \$50,000 or 10% interest, whichever is lower.		
Name (Last, First, Initial).	SS#	Type Participation	\$ and %

If there are no persons with a reportable financial interest, you must also certify that this is true.

I hereby certify this information is true.

(Signature) _____

Date _____

Title _____

Certification

Warning: If you knowingly make a false statement on this form you may be subject to civil or criminal penalties under Section 1001 of Title 18 of the United States Code. In addition, any person who knowingly and materially violates any required disclosure of information including intentional non-disclosure is subject to a civil money penalty not to exceed \$10,000 for each violation.

Note: Please copy this page and attach additional pages as needed. Please indicate number of pages and date on cover.

"General Decision Number: VA20260177 05/18/2026

State: Virginia

Construction Types: Building

Counties: Virginia Counties of
Scott and Washington

Modification Number Publication Date

1 01/16/2026

2 05/18/2026

ASBE0024-006 10/01/2024

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR - MECHANICAL (DUCT, PIPE & MECHANICAL SYSTEM INSULATION) A. PAID HOLIDAYS: NEW YEAR'S DAY, MARTIN LUTHER KING DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS' DAY, THANKSGIVING DAY, THE DAY AFTER THANKSGIVING AND CHRISTMAS DAY PROVIDED THE EMPLOYEE WORKS THE REGULAR WORK DAY BEFORE AND AFTER THE PAID HOLIDAY.....	\$ 40.77	20.17

BOIL0045-003 01/01/2025

	Rates	Fringes
BOILERMAKER.....	\$ 38.97	27.39

ENGI0147-019 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR (CRANES UNDER 90 TONS).....	\$ 39.99	18.05
POWER EQUIPMENT OPERATOR (CRANES 90 TONS & OVER CAPACITY; TOWER & CLIMBING CRANES WITH CONTROLS 100 FT. ABOVE GROUND).....	\$ 40.99	18.05

IRON0005-023 06/01/2024

	Rates	Fringes
IRONWORKER, ORNAMENTAL AND STRUCTURAL.....	\$ 37.86	25.86

PAIN0051-033 06/01/2025

	Rates	Fringes
PAINTER: SPRAY ONLY.....	\$ 29.16	11.86

SUVA2013-068 01/11/2016

	Rates	Fringes
TRUCK DRIVER: DUMP TRUCK.....	\$ 16.58	1.73
TILE SETTER.....	\$ 27.80	10.25
TILE FINISHER.....	\$ 23.40	0.00
SHEET METAL WORKER, INCLUDES HVAC DUCT INSTALLATION.	\$ 18.38	3.30

ROOFER.....	\$ 16.17	3.73
PLUMBER.....	\$ 21.15	3.92
PAINTER (BRUSH AND ROLLER).....	\$ 20.01	0.00
OPERATOR: ROLLER.....	\$ 16.25	4.88
OPERATOR: LOADER.....	\$ 21.28	3.17
OPERATOR: FORKLIFT.....	\$ 19.40	7.00
OPERATOR: BULLDOZER.....	\$ 16.00	0.00
OPERATOR: BOBCAT/SKID STEER/SKID LOADER.....	\$ 18.95	4.03
OPERATOR: BACKHOE/EXCAVATOR/TRACKHOE.....	\$ 16.24	0.87
LABORER: PIPELAYER.....	\$ 12.00	1.17
LABORER: MASON TENDER - CEMENT/CONCRETE.....	\$ 15.32	0.00
LABORER: MASON TENDER - BRICK.....	\$ 13.41	3.15
LABORER: COMMON OR GENERAL.....	\$ 11.10	0.00
IRONWORKER, REINFORCING.....	\$ 25.36	6.68
ELECTRICIAN.....	\$ 21.78	9.31
CARPENTER.....	\$ 14.68	0.00
BRICKLAYER.....	\$ 23.54	6.73

UAVGVA0001 01/01/2026

	Rates	Fringes
PIPEFITTER.....	\$ 40.25	20.29

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than **SU**, **UAVG**, **SA**, or **SC** denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The **SU** identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

SU wage rates typically remain in effect until a new survey

is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The **SA** identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the **SA** identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:
Administrative Review Board

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION

"



Glenn Youngkin
Governor

Juan Pablo Segura
Secretary of
Commerce and Trade

COMMONWEALTH of VIRGINIA

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

Maggie Beal
Director

MEMORANDUM

TO: CDBG & ARC Grantees 

FROM: Joanne Peerman, Acting Associate Director

SUBJECT: New Minimum Wage Requirements

DATE: January 5, 2026

As of January 1, 2026, all employers operating in Virginia will be required to pay each of their employees the adjusted state hourly wage of at least \$12.77 per hour.

Pursuant to § 40.1-28.10 (E and F), the state minimum wage will be adjusted annually by the Virginia Commissioner of the Department of Labor and Industry. The adjusted minimum wage calculation is based off the U.S. Department of Labor Bureau of Labor Statistics average Consumer Price Index for all items and urban consumers (CPI-U) and the state's minimum wage at the time of the adjustment. For the adjusted state minimum wage in effect January 1, 2026, the rate was calculated at 2.9% CPI-U of \$12.41.

This minimum wage increase applies to all *existing* CDBG and ARC contracts already underway as well as new projects. It also applies to all job classifications listed on the wage decisions issued for their respective project.





Abigail Spanberger
Governor

Carrie Chenery
Secretary of
Commerce and Trade

COMMONWEALTH of VIRGINIA

Tamarah Holmes, PhD
Director

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

June 30, 2026

Ms. Katy Brown
Producing Artistic Director
The Barter Foundation, Inc. dba Barter Theatre
127 West Main Street
Abingdon, Virginia 24210

Re: Appalachian Regional Commission Grant #23-04A
Barter Theatre Campus Renovation Phase 1 Project
Transmittal of Wage Decision(s)

Dear Ms. Brown:

You will find enclosed a copy of the U.S. Department of Labor's wage scale applicable to this project. Please be advised Area Rate VA20260177, Modification 2, dated 05/18/2026 expires when superseded by a new or modified decision. Since the Department of Labor is also using Area Rates published in the Federal Register, the locality must contact this office ten (10) days prior to opening bids to determine if new or modified rates have been issued by the Department of Labor. All new or modified rates published ten (10) days prior to bid opening become applicable to the contract. Any requests to appeal the wage decision must be made within thirty (30) days from the date of this letter.

Also enclosed are the required Federal Contract Inserts to be incorporated into the construction contracts for this project. As per 41 CFR Part 60-4 published October 3, 1980, the affirmative action goals established for Washington County are:

- | | | |
|----|------------|-------|
| 1) | Minorities | 02.6% |
| 2) | Females | 06.9% |

Prior to bidding, these affirmative action goals must be incorporated in the Federal Contract Inserts in the Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity section along with a description of the project area.



Virginia Department of Housing and Community Development | Partners for Better Communities
Main Street Centre | 600 East Main Street, Suite 300 Richmond, VA 23219
www.dhcd.virginia.gov | Phone (804) 371-7000 | Fax (804) 371-7090 | Virginia Relay 7-1-1

Ms. Katy Brown

Page 2

June 30, 2026

As the Program Administrator, if I am not invited to attend the pre-construction conference, the Grant Manager must re-identify the affirmative action goals to the contractor. Additionally, if more than one wage decision is applicable to the project, the Grant Manager must also identify which wage decision is applicable to which portions of the construction work to be completed.

Please remember to forward a copy of the Notice of Award and Notice to Proceed with Construction to me. If you have any questions on this matter, please do not hesitate to contact me by phone at (804) 773-0917 or by email at jennifer.ketchum@dhcd.virginia.gov.

Sincerely,



Program Administrator

Enclosure

c: Lenore Weiss, Spectrum
Matt Campbell, Barter Theatre
Mason Gragg, MRPDC
Bill Hartley, DHCD

01-01/REV05-24



EXPLANATION OF PAYROLL RECORD (FORM WH-347)

What It Is Used For: The contractor and subcontractors submit their weekly Payroll Report to the Grantee each week or part of a week in which there are employees assigned to the project. All workers assigned that week **MUST** be included.

When It Is Used: During the construction phase of the project.

Where It Goes: In the Grantee's Labor Standards project file.

General Instructions: The Grantee must review each Payroll Report to assure that the Contractor and all subcontractors are complying with *Davis-Bacon Act*, *Contract Work Hours and Standards Act*, and *Copeland "Anti-Kickback" Act* requirements. Payroll records must be verified by field inspections (See Appendix 51 for *Record of Employee Interview* form) and checked against the *Register of Assigned Employees* (See Appendix 54 for form).

Form Instructions:

PAYROLL REPORT

Contractor or Subcontractor: Fill in your firm's name and check appropriate box.

Address: Fill in your firm's address.

Payroll No.: Beginning with the number "1", list the payroll number for the submission.

For Week Ending: List the workweek ending date.

Project and Location: List the project's name as found on the CDBG Agreement.

Project or Contract No.: List the project's CIG number.

Column 1 - Name and Individual Identifying Number of Worker: Enter each worker's full name and an individual identifying number on each weekly payroll submitted e. g.; the last four digits of the employee's Social Security number (SSN). Full SSN shall not be included on the payroll. Employers must maintain the current address and full SSN for each employee and must provide this information upon request to the Grantee and DHCD.

Column 2 - No. of Withholding Exemptions: This column is merely inserted for the employer's convenience and is not a requirement of Regulations, Part 3 and 5.

Column 3 - Work Classifications: List the classification as shown on the wage decision issued for this project. Consult classification and minimum wage schedule set forth in contract specifications. If additional classifications are deemed necessary, consult with your Grantee's Contract Compliance Officer. An individual may be shown as having worked in more than one classification provided an accurate breakdown of hours worked in each classification is maintained and shown on the submitted payroll by use of separate entries. When listing a sole proprietor/subcontractor on a payroll, a prime contractor should record the sole proprietor/subcontractor's information in the same manner as an employee.

Column 4 - Hours worked: List the day and date and straight time and overtime hours worked in the applicable boxes. On all contracts subject to the Contract Work Hours Standard Act, enter hours worked in excess of 40 hours a week as "overtime".

Column 5 - Total: Self-explanatory

Column 6 - Rate of Pay (Including Fringe Benefits): In the "straight time" box for each worker, list the actual hourly rate paid for straight time worked, plus cash paid in lieu of fringe benefits paid. When recording the straight time hourly rate, any cash paid in lieu of fringe benefits may be shown separately from the basic rate. For example, "\$12.25/.40" would reflect a \$12.25 base hourly rate plus \$0.40 for fringe benefits. This is of assistance in correctly computing overtime. See "Fringe Benefits" below. When overtime is worked, show the overtime hourly rate paid plus any cash in lieu of fringe benefits paid in the "overtime" box for each worker; otherwise, you may skip this box. See "Fringe Benefits" below. Payment of not less than time and one-half the basic or regular rate paid is required for overtime under the Contract Work Hours Standard Act of 1962 if the prime contract exceeds \$100,000. In addition to paying no less than the predetermined rate for the classification which an individual works, the contractor must pay amounts predetermined as fringe benefits in the wage decision made part of the contract to approved fringe benefit plans, funds or programs or shall pay as cash in lieu of fringe benefits. See "FRINGE BENEFITS" below.

Column 7 - Gross Amount Earned: Enter gross amount earned on this project. If part of a worker's weekly wage was earned on projects other than the project described on this payroll, enter in column 7 first the amount earned on the Federal or Federally assisted project and then the gross amount earned during the week on all projects, thus "\$163.00/\$420.00" would reflect the earnings of a worker who earned \$163.00 on a Federally assisted construction project during a week in which \$420.00 was earned on all work.

Column 8 - Deductions: Five columns are provided for showing deductions made. An Employee Payroll Deduction Authorization must be provided for any deduction listed in the "Other" column. All deductions must be in accordance with the provisions of the Copeland Act Regulations, 29 C.F.R., Part 3. If an individual worked on other jobs in addition to this project,

show actual deductions from his/her weekly gross wage, and indicate that deductions are based on his gross wages.

Column 9 - Net Wages Paid for Week: Self-explanatory.

Totals - Space has been left at the bottom of the columns so that totals may be shown if the contractor so desires.

✱ **Submission of Payrolls** – Certified payroll reports may be submitted electronically, i.e., via the internet. However, the electronic signature/submission does not mean pdf files of signed payrolls attached to an email, or faxed copies of signed payrolls. These methods are comparable to photocopies and are not acceptable submissions.

STATEMENT OF COMPLAINT

Statement Required by Regulations, Parts 3 and 5: While the "statement of compliance" need not be notarized, the statement (on page 2 of the payroll form) is subject to the penalties provided by 18 U.S.C. § 1001, namely, a fine, possible imprisonment of not more than 5 years, or both. Accordingly, the party signing this statement should have knowledge of the facts represented as true.

Items 1 and 2: Space has been provided between items (1) and (2) of the statement for describing any deductions made. If all deductions made are adequately described in the "Deductions" column above, state "See Deductions column in this payroll." See "FRINGE BENEFITS" below for instructions concerning filling out paragraph 4 of the statement.

Item 4 FRINGE BENEFITS - Contractors who pay all required fringe benefits: If paying all fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of Labor, show the basic cash hourly rate and overtime rate paid to each worker on the face of the payroll and check paragraph 4(a) of the statement on page 2 of the WH-347 payroll form to indicate the payment. Note any exceptions in section 4(c).

Contractors who pay no fringe benefits: If not paying all fringe benefits to approved plans, funds, or programs in amounts of at least those that were determined in the applicable wage decision of the Secretary of Labor, pay any fringe benefit amount to each laborer and mechanic and insert in the "straight time" of the "Rate of Pay" column of the payroll an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the application wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringe benefits, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on basic or regular rate, plus the required cash in lieu of fringe benefits at the straight time rate. In addition, check paragraph 4(b) of the statement to indicate the payment of fringe benefits in cash directly to the workers. Note any exceptions in section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the covered worker as cash in lieu of fringe benefits. Enter any exceptions to section 4(a) or 4(b) in section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid each worker as cash in lieu of fringe benefits and the hourly amount paid to plans, funds, or programs as fringe benefits. The contractor must pay an amount not less than the predetermined rate plus cash in lieu of fringe benefits as shown in section 4(c) to each such individual for all hours worked (unless otherwise provided by applicable wage determination) on the Federal or Federally assisted project. Enter the rate paid and amount of cash paid in lieu of fringe benefits per hour in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

✱ If the wage decision(s) issued required no fringes to be paid, do not check off any of the boxes in Section 4. Make a note in the "Remarks" box that no fringes are required to be paid by the wage decision(s) issued.

U.S. Department of Labor
Wage and Hour Division

PAYROLL

(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.



NAME OF CONTRACTOR ☐ OR SUBCONTRACTOR ☐	ADDRESS	OMB No.:1235-0008 Expires: 07/31/2024
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PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION	PROJECT OR CONTRACT NO.
-------------	-----------------	----------------------	-------------------------

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT OR ST	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS						(9) NET WAGES PAID FOR WEEK
														FICA	WITH- HOLDING TAX			OTHER	TOTAL DEDUCTIONS	
				HOURS WORKED EACH DAY																
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

(over)

Date _____

I, _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____, on the
(Contractor or Subcontractor)
_____; that during the payroll period commencing on the
(Building or Work)
_____ day of _____, _____, and ending the _____ day of _____, _____,
all persons employed on said project have been paid the full weekly wages earned, that no rebates have
been or will be made either directly or indirectly to or on behalf of said

_____, from the full
(Contractor or Subcontractor)
weekly wages earned by any person and that no deductions have been made either directly or indirectly
from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part
3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,
63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are
correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the
applicable wage rates contained in any wage determination incorporated into the contract; that the classifications
set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship
program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and
Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered
with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ — in addition to the basic hourly wage rates paid to each laborer or mechanic listed in
the above referenced payroll, payments of fringe benefits as listed in the contract
have been or will be made to appropriate programs for the benefit of such employees,
except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ — Each laborer or mechanic listed in the above referenced payroll has been paid,
as indicated on the payroll, an amount not less than the sum of the applicable
basic hourly wage rate plus the amount of the required fringe benefits as listed
in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE

SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR
SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 3729 OF
TITLE 31 OF THE UNITED STATES CODE.

CERTIFICATION OF SUBCONTRACTORS ON SITE

(To Be Submitted As Part of Weekly Payroll Report)

I, _____, the general contractor, hereby certify
that the employees denoted on attached payroll reports for the week ending
_____/_____/_____ represent all employees that worked on CIG# _____ - _____ project for

(insert Grantee's Name), including employees of all
subcontractors.

Name and Title

_____/_____/_____
Date

Names of Subcontractors That Worked On Project for This Pay Period.

1. _____
2. _____
3. _____
4. _____
5. _____

EXPLANATION OF EMPLOYEE INTERVIEW FORM

What it is used for: To be used to interview project workers in order to determine that the Contractor and all subcontractors are complying with *Davis-Bacon Act*, *Contract Work Hours and Standards Act*, and *Copeland "Anti-Kickback" Act* requirements. It is used as a test against payroll information. It is also used to verify compliance with Section 3 requirements.

When It Is Used: During the construction phase of the project.

Where It Goes: Grantee's Labor Standards project file.

General Instructions: Employees should be selected for interviews either at random or on the basis of suspected irregularities as determined through the site visit or Payroll Reports. The number of interviews necessary is determined by the size of the Project. **A minimum of at least one worker per trade and 25% of the total number of workers must be interviewed. Interviews must be conducted during construction a minimum of once a month** to determine the Contractor's compliance with the aforementioned federal requirements. Interviews **must** take place during the times in which **each** subcontract is being performed to assure that all trades are covered. This may mean that interviews will have to be conducted during evening or weekend hours.

Form Instructions:

Items 1a - 1c: Self-explanatory

Items 2a – 2d: Enter the employee's full name, a telephone number where the employee can be reached, and the employee's home address. Many construction workers use a temporary address in the locality of the project and have a more permanent address elsewhere from which mail may be forwarded to them. Obtain a more permanent address, if available.

Items 3a – 4c: Enter the employee's responses. Ask the employee whether they have a pay stub with them; if so, determine whether the pay stub is consistent with the information provided by the employee.

Items 5 – 7: Try to get specific responses from the employee so it is easier to verify that the work observed is consistent with the job classification listed on the payroll report. For example, the job classification (#5) must identify the trade involved e.g.; Carpenter, Electrician, Plumber, etc.

Items 8 – 12b: Self-explanatory. If the employee will not sign the form, just note it in the appropriate box

Items 13 – 15c: These items represent some of the most important information that can be gathered while conducting on-site interviews. Please be specific about the duties you observed the employee performing. It may be easiest to make these observations before initiating the interview. Please record any comments or remarks that may be helpful. For example, if the

employee interviewed was working with a crew, how many workers were in the crew? What activities was the employee doing e.g.; dumping gravel, laying down pipe, connecting pipe in a ditch, etc. What tools and pieces of equipment was the employee using e.g.; shovel, level, pipe, pry bar, etc.

The level of specificity that is warranted is directly related to the extent to which interview(s) or other observations indicate that there may be violations present. If interviews indicate that there may be underpayments involving a particular trade(s), the interviewer is encouraged to interview as many workers in that trade(s) that are available.

Items 16 – 17b: The information on the form may be reviewed for general compliance, initially. For example, are the job classification and wage rate stated by the employee compatible with the classifications and wage rates on the applicable wage decision? Are the duties observed by the interviewer consistent with the job classification?

After completion of the interview the Contract Compliance Officer **must** note on the form whether the employee's statements were consistent and whether they verified what was observed.

The Contract Compliance Officer must cross reference the information on the Record of Employee Interview form with information from the Contractor's weekly Payroll Report, the Register of Assigned Employees, and the Wage Decision, indicating so by filling out the bottom part of the form. Appropriate action must be initiated to clear any discrepancies and questionable items.

Record of Employee Interview

U.S. Department of Housing and Urban Development Office of Davis-Bacon and Labor Standards

OMB Approval No. 2501-0009
(exp. 12/31/2024)

The public reporting burden estimate for this collection of information is 15 minutes per response on average. This includes reviewing instructions, searching existing data sources, gathering, and maintaining the data, and completing the collection of information. This information may not be collected, nor are you required to provide, the information requested unless it displays a currently valid OMB control number. The information collected ensures compliance with the Federal labor standards through recording interviews with construction workers. The information collected assists HUD in compliance monitoring of Federal labor standards. Any information collected is covered by the Privacy Act of 1974 and by 29 CFR 5.6(a)(5). Individuals and agencies collecting this information must maintain these records in a manner that protects the individuals on whom the information is maintained. The information collected herein is voluntary, and any information provided shall be kept confidential, but failure to provide the information collected may delay enforcement of any possible Federal labor standards violations if the information would have identified any. Comments concerning this burden statement, or this collection should be sent to: National Director, Office of Davis-Bacon and Labor Standards, 151 7th Street SW, Room 7108, Washington, DC 20410. When providing comments, please refer to OMB Approval 2501-0009.

Pursuant to 5 U.S.C. § 552a(e)(3), this Privacy Act Statement serves to inform you of the following concerning the collection of the information on this form.

A. **AUTHORITY:** Collection of the information solicited on this form is authorized by the Davis-Bacon Act as promulgated through Department of Labor Regulations under 29 CFR Part 5.

B. **PURPOSE:** The primary purpose for soliciting this information is to determine if the wages paid by an employer on a project covered by the Davis-Bacon Act are in compliance with federal labor standards.

C. **ROUTINE USES:** The information collected ensures compliance with the Federal labor standards through recording interviews with construction workers on topics related to wages paid on the project. The information is reviewed by HUD authorized personnel to ensure compliance with Federal labor standards under the Davis-Bacon Act on covered projects. If violations are found, the information collected is used to conduct enforcement actions to ensure restitution is paid to workers of covered projects are paid proper wages under the Davis-Bacon Act.

D. **CONSEQUENCES OF FAILURE TO PROVIDE INFORMATION:** The information collection is voluntary. Refusing to give information will not impact your status with your employer or the government. Failure to provide the information will limit the ability of HUD to determine if you were paid proper wages under the Davis-Bacon Act, and will limit the ability for HUD to seek restitution for you in the event a violation is found.

1a. Project Name			2a. Employee Name		
1b. Project Number			2b. Employee Phone Number (including area code)		
1c. Contractor or Subcontractor (Employer)			2c. Employee Home Address & Zip Code		
			2d. Verification of identification? Yes No		
3a. How long on this job?	3b. Last date on this job before today?	3c. No. of hours last day on this job?	4a. Hourly rate of pay?	4b. Fringe Benefits? Vacation Yes No Medical Yes No Pension Yes No	4c. Pay stub? Yes No
5. Your job classification(s) (list all) --- continue in block 18 if necessary					
6. Your duties --- continue in block 18 if necessary					
7. Tools or equipment used --- continue in block 18 if necessary					
8. Are you an apprentice or trainee? Yes No		10. Are you paid at least time and ½ for all hours worked in excess of 40 in a week? Yes No			
9. Are you paid for all hours worked? Yes No		11. Have you ever been threatened or coerced into giving up any part of your pay? Yes No			
12a. Employee Signature			12b. Date		
13. Duties observed by the Interviewer (Please be specific.)					
14. Remarks --- continue in block 18 if necessary					
15a. Interviewer Name (Please Print)		15b. Signature of Interviewer		15c. Date of Interview	

Payroll Examination

16. Remarks --- continue in block 18 if necessary	
17a. Signature of Payroll Examiner	17b. Date

Historial de Entrevista
Departamento de Vivienda yDesarrollo Urbano de EE.UU.
Aprobación de OMB No. 2501-0009

del Empleado
Oficina de Davis-Bacon y Normas Laborales
(exp. 12/31/2024)

La carga de trabajo que supone para el público esta recopilación de información es un promedio de 15 minutos por respuesta. Esto incluye revisar las instrucciones, buscar en las fuentes de datos existentes, recopilar y mantener los datos y completar la recopilación de información. Esta información no puede ser recopilada, ni usted está obligado a proporcionar la información solicitada, a menos que muestre un número de control válido de la Oficina de Gestión y Presupuesto (OMB, por sus siglas en inglés). La información recopilada garantiza el cumplimiento de las normas laborales federales mediante la grabación de entrevistas realizadas a trabajadores de la construcción. La información recopilada sirve de ayuda al Departamento de Vivienda y Desarrollo Urbano (HUD, por sus siglas en inglés) en la supervisión del cumplimiento de las normas laborales federales. Toda la información recopilada está amparada por la Ley de Privacidad de 1974 y por el Título 29 del Código Federal de Regulaciones (CFR, por sus siglas en inglés) 5.8(a)(5). Las personas y los organismos que recopilen esta información deben mantener estos registros de manera que se proteja a las personas de quienes se conserva la información. La información aquí recopilada es voluntaria, y cualquier información proporcionada se mantendrá confidencial, pero el hecho de no proporcionar la información solicitada puede retrasar la ejecución de cualquier posible violación de las normas laborales federales, en caso de que la información hubiera identificado alguna. Los comentarios sobre esta declaración de la carga de trabajo, o sobre esta recopilación, deben enviarse a: Director Nacional, Oficina de Davis-Bacon y Normas Laborales, 451 7th Street SW, Room 7108, Washington, DC 20410. Al proporcionar comentarios, sírvase referirse a la Aprobación OMB 2501-0009.

De conformidad con el artículo 5 del Código de los Estados Unidos (U.S.C.) § 552a(e)(3), esta Declaración de la Ley de Privacidad sirve para informarle de lo siguiente en relación con la recopilación de la información que figura en este formulario.

- AUTORIDAD: La recopilación de la información solicitada en este formulario está autorizada por la Ley Davis-Bacon promulgada a través de los Reglamentos del Departamento de Trabajo bajo el título 29 CFR Parte 5.
- PROPÓSITO: El propósito principal de solicitar esta información es determinar si los salarios pagados por un empleador en un proyecto cubierto por la Ley Davis-Bacon cumplen con las normas laborales federales.
- USOS RUTINARIOS: La información recopilada garantiza el cumplimiento de las normas laborales federales mediante la grabación de entrevistas realizadas a trabajadores de la construcción sobre temas relacionados con los salarios pagados en el proyecto. La información es revisada por personal autorizado por el HUD para garantizar el cumplimiento de las normas laborales federales según la Ley Davis-Bacon en los proyectos contemplados. En caso de descubrirse infracciones, la información recopilada se utiliza para emprender acciones de cumplimiento con el fin de garantizar que se pague la restitución a los trabajadores de los proyectos contemplados y que se les paguen los salarios adecuados en virtud de la Ley Davis-Bacon.
- CONSECUENCIAS DE NO PROPORCIONAR INFORMACIÓN: La recopilación de información es voluntaria. Negarse a proporcionar la información no afectará su situación con su empleador ni con el gobierno. La negativa a proporcionar la información limitará la capacidad del HUD para determinar si se le pagaron los salarios adecuados en virtud de la Ley Davis-Bacon y limitará la capacidad del HUD para solicitar una restitución para usted en caso de que se descubra una infracción.

1a. Nombre del Proyecto			2a. Nombre del empleado		
1b. Número del Proyecto			2b. Número de teléfono del empleado (incluso prefijo local)		
1c. Contratista o subcontratista (Patrón)			2c. Dirección residencial del empleado y código postal		
			2d. ¿Verificación de identificación? Sí No		
3a. ¿Cuánto tiempo en este trabajo?	3b. ¿Último día en este trabajo antes de hoy?	3c. ¿No. de horas en su ultimo día en este trabajo?	4a. ¿Salario por hora?	4b. ¿Beneficios complementarios?	4c. ¿Talonario de paga?
				Vacaciones Sí No Médicos Sí No Pensión Sí No	Sí No
5. Clasificación(es) de su trabajo(s) (enumere todas) --- continuar en el bloque 18 si es necesario					
6. Sus deberes --- continuar en el bloque 18 si es necesario					
7. Herramientas o equipo usado --- continuar en el bloque 18 si es necesario					
8. ¿Es aprendiz? Sí No		10. ¿Le pagan al menos tiempo y medio por todas las horas trabajadas superior a 40 horas semanales? Sí No			
9. ¿Le pagan todas las horas trabajadas? Sí No		11. ¿Alguna vez ha sido amenazado o coaccionado a entregar parte de su paga? Sí No			
12a. Firma del empleado			12b. Fecha		
13. Deberes observados por el entrevistador (Por favor sea específico.)					
14. Comentarios--- continuar en el bloque 18 si es necesario					
15a. Nombre del entrevistador (use letra de imprenta)		15b. Firma del entrevistador			15c. Fecha de la entrevista
Examinación de Nómina					
16. Comentarios --- continuar en el bloque 18 si es necesario					
17a. Firma del examinador de nómina				17b. Fecha	

Register of Assigned Employees

Month Covered: _____, 20____ Date Completed: _____

*Submit initial list of workforce prior to start of construction; update monthly throughout construction to show changes.***SECTION I: Identification of Level of Submittal, see instructions on back of form**

(1) Grantee: Barter Theatre Grant #: 23-04A / VA-21626 Project Name: Smith Theatre Renovation
 HIRING GOALS: N/A LOCAL LMI (Section 3) 2.6 % MINORITY 6.9 % FEMALE
 Prime Contractor _____ Contracted Amount \$ _____

(2) Subcontractor _____ Contracted Amount \$ _____

SECTION II: List all workers paid by this contract. For NEW HIRES: complete items 'a' thru 'h.' For MODIFICATIONS: complete only item 'a' and item(s) being modified. Update the Register to add new hires, rehires and changes to job classifications, rate of pay or authorized payroll deductions.

a. NAME OF EMPLOYEE b. COUNTY OF RESIDENCE	c. TRADE & JOB CLASSIFICATION d. RATE OF PAY & BENEFITS	e. (1). DATE HIRED or e (2). DATE RECALLED f. AUTHORIZED PAYROLL DEDUCTIONS	g. MINORITY	h. GENDER
a. b.	c. d.	e (1) _____ or e(2) _____ f. _____	____yes ____no	____female ____male
a. b.	c. d.	e (1) _____ or e(2) _____ f. _____	____yes ____no	____female ____male
a. b.	c. d.	e (1) _____ or e(2) _____ f. _____	____yes ____no	____female ____male
a. b.	c. d.	e (1) _____ or e(2) _____ f. _____	____yes ____no	____female ____male

SECTION 3 RESIDENT – A resident of the area in which Section 3 covered assistance is expended, and who qualifies as a low- or very low-income person.*SECTION 3 BUSINESS: - A business of the area in which 51% or more is owned by Section 3 Residents or 30% of employed staff are Section 3 Residents; or 25% of contracts committed to Section 3 Businesses**

EXPLANATION OF REGISTER OF ASSIGNED EMPLOYEES

What it is used for: To document all procurements of more than \$10,000 (or more than \$1,000 if a housing rehabilitation project) made in a CDBG project. To track progress toward hiring goals. To assist in assuring compliance with Section 3 and Davis-Bacon and Related Acts.

When it is used: To document the initial workforce and new hires, rehires and any changes in job classifications, rate of pay and authorized deductions throughout the construction process. It is updated on an ongoing basis.

Where it goes: The Grantee files all reviewed and accepted Registers in their labor standards and equal opportunity project files.

- Instructions:**
- COMPLETE THE “Month Covered” AND “Date Completed” IN THE TOP RIGHT CORNER.
 - The Local LMI (Section 3) Hiring Goal is always 30%. Insert the Minority and Female goals as found in the Transmittal of Wage Decision letter sent to the Chief Executive Official by the PMO Program Manager.
 - ROUND CONTRACT AMOUNTS TO THE NEAREST DOLLAR.
 - NEW HIRES are registered as such one time and only on the original submittal or for the month in which it occurred; DO NOT DUPLICATE ‘NEW HIRES’ ON SUBSEQUENT SUBMITTALS.
 - RECALLED means a person who was off of the Company’s payroll and is now back on the payroll. The person is treated as NEW HIRES except that the date recalled is entered in e (2). Subsequent recalls of any employees, whether originally listed as a ‘new hire’ or a ‘recall’ are treated as ‘modifications,’ see below.
 - MODIFICATIONS affect ONLY the following items: (ONLY ITEM ‘a’ AND ITEM(S) BEING MODIFIED ARE COMPLETED FOR MODIFICATIONS.)
 - o changes to employee’s name, e.g. due to marriage (item a) (if change is to name, show both old and new name)
 - o changes in trade and job classification (item c)
 - o changes in rate of pay and benefits (item d)
 - o changes in authorized payroll deductions (item f)
 - o a recall of an employee previously registered (item e (2)).

GRANTEE’S RESPONSIBILITIES: For every procurement with a prime contractor, the Grantee must complete item (1) of SECTION I and supply the prime contractor with enough copies for the duration of the contract. After submission of the Register by its Prime, the Grantee must review the Register for completeness, accuracy and consistency with the *Monthly CDBG Register of Contractors, Subcontractors, and Suppliers* and the *Payroll Report*.

PRIME CONTRACTOR’S RESPONSIBILITIES: The Prime Contractor must submit this prior to start of construction and update it as necessary throughout the construction process. The Prime Contractor must use the forms supplied by the Grantee in which item (1) of Section I is already completed; item (2) remains blank. In SECTION II, the Prime Contractor completes items ‘a’ thru ‘h’ on ‘new hires’ and first time ‘recalls’, and only item ‘a’ and the item(s) being modified for modifications.

For every procurement with a subcontractor, the Prime Contractor should complete item (2) of SECTION I (item (1) is already completed on the form) and supply the subcontractor with enough copies for the duration of the

subcontract. The Prime Contractor must obtain this form from all of its subcontractors for submission to the Grantee.

SUBCONTRACTOR'S RESPONSIBILITIES: The Subcontractor must submit this prior to start of construction, update it as necessary throughout the construction process and submit it to the Prime Contractor.

The Subcontractor must use the forms supplied by the Prime Contractor in which Section I is already completed. In SECTION II, the Subcontractor completes items 'a' thru 'h' on 'new hires' and first time 'recalls'; and only item 'a' and the item(s) being modified for modifications.

Monthly ARC Register of Contractors, Subcontractors and Suppliers

Month Covered: _____, 20__

Register all procurements of more than \$10,000 one time only, in month of occurrence

SECTION I: Identification of Level of Submittal, see instructions on back of form

(1) Grantee: Barter Theatre Grant #: 23-04A / VA-21626 Project Name: Smith Theatre Renovation "Local Business" County*: Washington
 (2) General Contractor _____ IRS# (or owner's SSN) _____
 (3) Subcontractor _____ IRS# (or owner's SSN) _____

SECTION II: Details of Procurements

Choose one (first row should be for the General Contractor)	Name and Physical Address of Business, and IRS# (or owners' SSN)	Contract Description or Items Supplied	Amount of Contract or Purchase	Ownership of Business (check all that apply; do not leave blank)
☐ General Contractor ☐ Subcontractor ☐ Supplier	IRS# (or SSN):		\$	☐ Minority Business ☐ Local (Section 3) Business ☐ Female-Owned Business ☐ White American ☐ Black American ☐ Native* American ☐ Hispanic American ☐ Asian American ☐ Not American Owned
☐ General Contractor ☐ Subcontractor ☐ Supplier	IRS# (or SSN):		\$	☐ Minority Business ☐ Local (Section 3) Business ☐ Female-Owned Business ☐ White American ☐ Black American ☐ Native* American ☐ Hispanic American ☐ Asian American ☐ Not American Owned
☐ General Contractor ☐ Subcontractor ☐ Supplier	IRS# (or SSN):		\$	☐ Minority Business ☐ Local (Section 3) Business ☐ Female-Owned Business ☐ White American ☐ Black American ☐ Native* American ☐ Hispanic American ☐ Asian American ☐ Not American Owned
☐ General Contractor ☐ Subcontractor ☐ Supplier	IRS# (or SSN):		\$	☐ Minority Business ☐ Local (Section 3) Business ☐ Female-Owned Business ☐ White American ☐ Black American ☐ Native* American ☐ Hispanic American ☐ Asian American ☐ Not American Owned

*SECTION 3 RESIDENT – A resident of the area in which Section 3 covered assistance is expended, and who qualifies as a low- or very low-income person

SECTION 3 BUSINESS – A business of the area in which 51% or more is owned by Section 3 residents or 30% of employed staff are Section 3 residents or 25% of subcontracts are committed to Section 3 businesses.

EXPLANATION OF MONTHLY REGISTER OF CONTRACTORS, SUBCONTRACTORS AND SUPPLIERS

What it is used for: To document all procurements of more than \$10,000 made in a CDBG project. To assist in assuring compliance with Section 3 and Davis-Bacon and the Related Acts.

When it is used: Procurements are registered as they occur or on a monthly basis prior to submittal. This form is compiled by the Grantee, the General Contractor, and each subcontractor per the instructions below for each month and part of month during the course of a contract.

Where it goes: The Grantee files all reviewed and accepted submittals in their procurement and equal opportunity project files.

- Instructions:*
- Complete the “Month Covered” and “Date Completed” in the top right corner.
 - ROUND CONTRACT AMOUNTS TO THE NEAREST DOLLAR.
 - RECORD THE PHYSICAL ADDRESS OF BUSINESS ONLY. P. O. Boxes and other mailing addresses are not acceptable.
 - A procurement is registered one time and only for the month in which it occurred; DO NOT DUPLICATE PROCUREMENTS ON SUBSEQUENT SUBMITTALS.

GRANTEE’S RESPONSIBILITIES: The Grantee should complete this form each month to register all applicable procurements with General Contractors, subcontractors and suppliers. For submittal to itself the Grantee completes line (1) of SECTION I; line (2) and (3) will be left blank. For every procurement with a General Contractor, the Grantee should complete lines (1) and (2) of SECTION I and supply the General Contractor with enough copies for the duration of the contract. After submission of the Register by its Prime, the Grantee must review the Register for completeness, accuracy and consistency with the *Register of Assigned Employees* and the *Payroll Report*. The Grantee should not pay the prime its final invoice until it has received all of the required Registers and has determined their accuracy.

GENERAL CONTRACTOR’S RESPONSIBILITIES: The General Contractor must prepare and submit this form every month and part of month to the Grantee along with any submittals received from subcontractors. The General Contractor must use the forms supplied by the Grantee in which lines (1) and (2) of SECTION I are already completed and line (3) remains blank.

In SECTION II, the Prime will identify each procurement as either ‘subcontractor’ or ‘supplier’ and will give complete information in the remaining columns. For every procurement with a subcontractor, the General Contractor should complete item (3) of SECTION I (lines (1) and (2) being already completed by the Grantee) and supply the subcontractor with enough copies for the duration of the subcontract. The General Contractor must obtain this form monthly from all of its subcontractors for submission to the Grantee.

SUBCONTRACTOR’S RESPONSIBILITIES: The Subcontractor must complete this form every month and part of month during the course of the contract for submittal to the General Contractor. The Subcontractor should use the forms supplied by the General Contractor in which SECTION I is already completed. In SECTION II, the Subcontractor will identify each procurement as either ‘subcontractor’ or ‘supplier’ and will give complete information in the remaining columns. The subcontractor must submit its final Register to the General Contractor with its final invoice. The General Contractor must review its subcontractor’s final register and verify that it is complete and accurate before payment of the final invoice to the subcontractor.

CONTRACTOR'S QUALIFICATION STATEMENT

Please attach a photocopy of contractor's license and EPA Certification. All questions must be answered in full. Additional sheets for clarification of answers or additional information must be attached. **This statement must be notarized.**

1. Name, address, phone number, contractor license #, and IRS number (or last 4 digits of owner's social security #) of company.

2. List the company's owner and principal officer and date and place organized.

3. Describe general character of work performed.

4. List any work awarded failed to be completed or contracts defaulted on. Note where and why.

5. List the three most important recent contracts over \$10,000. State the owner, work, approximate cost, place, date started and date completed.

1.	_____		\$	_____	
	_____	From	_____	To	_____
2.	_____		\$	_____	
	_____	From	_____	To	_____
3.	_____		\$	_____	
	_____	From	_____	To	_____

6. List the contracts upon which you are currently working. State the owner, location, approximate cost, and estimated date of completion.

7. List three material suppliers and amount of credit available.

1. _____ \$ _____
2. _____ \$ _____
3. _____ \$ _____

8. List bank references and amount of credit available.

1. _____ \$ _____
2. _____ \$ _____

9. List insurance coverage and amount.

Liability-Property : _____ \$ _____
Liability-Personal Injury: _____ \$ _____
Vehicle and Equipment: _____ \$ _____
Other- _____ : _____ \$ _____
(identify)

10. List subcontractors utilized. State name, address, specialty, subcontractor license #, and years of experience.

1. Name: _____
Address: _____
Specialty: _____
License # _____ Years of Experience _____

2. Name: _____
Address: _____
Specialty: _____
License # _____ Years of Experience _____

3. Name: _____
Address: _____
Specialty: _____
License # _____ Years of Experience _____

11. Provide a general description of the experience of the company and its key personnel.

12. Number of current full-time employees _____
Number employed at highest level in past twelve months _____

13. Are you on any list of debarred contractors maintained by the U.S. Department of Labor, U.S. Department of Housing & Urban Development, or Virginia Department of Highways?
☐ YES ☐ NO

14. All contractors, subcontractors and their workers, including electricians, must have appropriate lead-based paint training in order to be considered for work under this program.

a. Have any of your workers attended this training?
☐ YES ☐ NO If yes, complete the Employee Training Record.

If not, they will be required to attend the training before they can work on a project site. Do you need information about lead training and certification classes?

☐ YES ☐ NO

b. Are you an EPA certified "Renovation, Repair and Painting" firm?

☐ YES ☐ NO

The undersigned hereby authorizes and requests any person, firm or Corporation to furnish any information requested by _____ in verification of the recitals comprising this statement of contractor's qualifications:

Contractor's Name: _____

Authorized Signature: _____

Type Name and Title: _____

Date: _____

City/County/Town of _____,
Commonwealth of Virginia

_____ being duly sworn deposes and says that he/she is
_____ of _____ and
that the answers to the foregoing questions and all statements therein contained are true and correct.

My commission expires: _____.

Given under my hand this _____ day of _____, 20_____.

Notary Public

Registration Number

**LEAD BASED PAINT RELATED TRAINING AND CERTIFICATIONS
EMPLOYEE RECORD**

Contractor's Name: _____ Date: _____

Employee's Name	Training Type and Level
	Certified Renovator

Note: All contractors, subcontractors and workers must have, at a minimum, the Lead Safe Work Practices training to work on DHCD housing rehabilitation projects consisting of interim controls. Each contractor must also have EPA Certification in “Renovation, Repair and Painting” as a firm and at least one individual Certified Renovator assigned to the project.

EXPLANATION OF EQUAL OPPORTUNITY CHECKLIST

<i>What it is Used For:</i>	This is required to assure that all required Equal Opportunity requirements are explained and all appropriate forms are conveyed to the Contractor and subcontractors.
<i>When it is Used:</i>	During the Pre-construction Conference.
<i>Where it Goes:</i>	To Grantee's Equal Opportunity project file.
<i>Instructions:</i>	Part of the 'wage decision packet' sent by DHCD with the Wage Decision applicable to the activity(s) being contracted. Use the checklist to check off equal opportunity items as they are addressed at the Pre-construction Conference. Have the Contractor and any known subcontractors sign this checklist after completing review of items. Any subcontractors hired subsequent of the Pre-construction Conference must also sign the checklist. See also "Equal Opportunity Requirements," as found in Chapter 8: Federal Labor Standards and Equal Opportunity Requirements.

EQUAL OPPORTUNITY CHECKLIST

(to be completed initially at pre-construction conference)

- ☐ Contractors have reviewed and understand Equal Opportunity/Section 3 contract provisions.
- ☐ Contractors must inform unions or other source of workers of Equal Opportunity requirements such as:
 - a) taking applications at jobsite; and
 - b) advertising in local or appropriate media.
- *☐ Contractors have received DHCD forms "Register of Assigned Employees" and "Register of Contractors, Subcontractors and Suppliers"; and have been instructed to submit initial forms at Start of Construction and every month or part of month during the course of the contract.
- ☐ Contractors are aware of goals for utilization of minority and female workers.
- ☐ Contractors are aware that they are obligated to the greatest extent feasible to hire lower income project area residents as workers and trainees and to utilize project area businesses and businesses owned by project area residents.
- ☐ Prime contractor has been given Equal Opportunity poster and will display it in prominent place at jobsite(s).
- *☐ If contractors employ more than 50 persons and contract is over \$50,000 they have submitted form EEO-1 to the Joint Reporting Committee, P. O. Box 779, Norfolk, Virginia 23501; 804/461-1213.

* Denotes those items which must be submitted by the Contractor.

(Public Body):

Signature

Title

(Prime Contractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

EXPLANATION OF LABOR STANDARDS CHECKLIST

<i>What it is Used For:</i>	This is required to assure that all required Labor Standards requirements are explained and all appropriate forms are conveyed to the Contractor and subcontractors.
<i>When it is Used:</i>	During the Pre-construction Conference.
<i>Where it Goes:</i>	To Grantee's Labor Standards project file.
<i>Instructions:</i>	Part of the 'wage decision packet' sent by DHCD with the Wage Decision applicable to the activity(s) being contracted. Use the checklist to check off labor standards items as they are addressed at the Pre-construction Conference. Have the Contractor and any known subcontractors sign this checklist after completing review of items. Any subcontractors hired subsequent of the Pre-construction Conference must also sign the checklist. See also “Labor Standards Checklist,” as found in Chapter 8: Federal Labor Standards and Equal Opportunity Requirements.

LABOR STANDARDS CHECKLIST

(to be completed initially at pre-construction conference)

- ☐ Contractors have reviewed and understand all Labor Standards contract provisions.
- ☐ Contractors have reviewed and understand wage decision and job classifications.
- ☐ Contractors have been informed that all workers:
 - a) must be paid at least the appropriate minimum wage for the job classification;
 - b) must be paid time-and-a-half for all work beyond 40 hours per week;
 - c) must be paid at least weekly;
 - d) must perform only the work which is covered by the job classification they are listed and paid in. If a worker performs in more than one job classification, he must be paid either the wage of the highest paid job he works or time cards signed by the worker must document the amount of time worked in each job during the week.
- ☐ Contractors will inform all workers:
 - a) of their job classifications and duties;
 - b) of their wage rates and fringe benefits;
 - c) that they may be interviewed on the jobsite and are required to cooperate;
 - d) of deductions from pay.
- ☐ Contractors will obtain each worker's name, permanent address, and social security number prior to assigning them to a jobsite.
- *☐ Contractors will obtain certification of any apprentices and trainees, including registration number and year of program, and will submit the same to the Public Body.
- ☐ Contractors are aware that they are responsible for the compliance of their subcontractors with Labor Standards provisions.
- ☐ Contractors must verify that the subcontractors(s) is/are not debarred from Federal or State contracts.

- ☐ Contractors will construct and erect a project identification sign at the construction site identifying DHCD as a funding source per specifications as stated in contract documents.
- ☐ Prime contractor has received and will post in a prominent place on the site:
 - a) Wage Decision;
 - b) Labor Standards poster: "Notice to All Employees... " (Davis-Bacon Act) WH-1321
 - c) "Safety and Health Protection on the Job" poster (VA DOL).
- *☐ Contractors have received Payroll report form (WH-347) and understand:
 - a) how it is to be filled out;
 - b) that it must be filled out completely;
 - c) that it must include every worker assigned to the project (excluding non-working, supervisory, or clerical personnel);
 - d) that Payroll reports must be submitted for every week or part of a week during the course of the contract, and must be submitted by all subcontractors. Payroll reports will be submitted to the Grantee within seven (7) days of the end of the work week.
- ☐ Contractors will maintain employment and payroll records which will be accessible to the Public Body, DHCD, and appropriate federal agencies for 3 years.

*Denotes those items which must be submitted by the Contractor.

(Public Body):

Signature

Title

(Prime Contractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

(Subcontractor):

Signature

Title

Company

Minutes of Preconstruction Conference **

Grantee: _____

Contract # _____

Project Name: _____

Project Location: _____

Description of Project: _____

Prime Contractor: _____

Known Subcontractors: _____

Amount of Contract: \$ _____

Date and Place of Conference: _____

Attendees/Name and Title:

**** ATTACH AGENDA AND HANDOUTS**

Summary of Items Covered: (Include all major construction related issues and attach Labor Standards and Equal Opportunity (Section 3) checklists)

Comments of Unresolved Issues:

Prime Contractor & Title

Project Engineer

Project Manager - Public Body

EXPLANATION OF NOTICE TO PROCEED WITH CONSTRUCTION FORM

Explanation of Form

After all Pre-construction Conference issues are resolved and the General Contractor submits all required bonds and insurance certifications, the construction contract may be executed. Following that, the *Notice to Proceed with Construction* should be given to the Contractor.

✱ A copy of the *Notice to Proceed with Construction* must be sent to your DHCD Community Development Specialist.

NOTICE TO PROCEED WITH CONSTRUCTION

(Date)

TO: _____
(Successful Low Bidder)

ADDRESS: _____

PROJECT NAME: _____

CONTRACT FOR: _____

You are hereby notified to commence work in accordance with the Contract Documents dated *(insert date)* on or before *(insert date)* and you are to complete the work within _____ consecutive calendar days thereafter. The date of substantial completion of all work is therefore *(insert date)* and the date of final completion of construction is *(insert date)*.

A notice of Start of Construction and all required pre-construction documents must be submitted to the Public Body no later than one (1) day prior to commencement of work.

(Owner)

(Signature of Authorized Official)

(Type Title)

ACCEPTANCE OF AWARD

(Contractor)

(Signature of Authorized Official)

(Type Title)

cc: Engineer
DHCD Community Development Specialist

EXPLANATION OF APPLICABILITY OF EQUAL OPPORTUNITY CLAUSE

1. What contracts or subcontracts are subject to the Equal Opportunity Clause?
 - "Federal government contracts or subcontracts" exceeding \$10,000 or contracts or subcontracts with the Federal government which, in any 12 month period, total or can reasonably be expected to have an aggregate total value exceeding \$10,000.
 - "Federal assisted construction contracts/subcontracts and non-construction contracts/subcontracts" exceeding \$10,000.
2. When is a bidder required to have on file at each establishment, affirmative action programs?
 - For NON-CONSTRUCTION CONTRACTS (service and supply), DOL regulations (41 CFR 60-2) call for a Written Affirmative Action Plan from each prime contractor or subcontractor with 50 or more employees and (1) a contract of \$50,000 or more; or (2) Government bills of lading which, in any 12 month period, total or can be reasonably be expected to total \$50,000 or more.
 - For CONSTRUCTION CONTRACTS, DOL Regulations do not require a Written Affirmative Action Plan. However, Contractors must take specified Affirmative Action Steps and to demonstrate with evidence that the Specifications (41 CFR 60-4. 3) in the Equal Opportunity Clause have been implemented.
3. What reports are due under the applicable filing requirements?
 - Standard Form 100 (EEO-1)

Each person (contractor and subcontractor) shall file annually with the Joint Reporting Committee, on or before March 31, reports on Standard Form 100 (EEO-1), if such person (1) is not exempt as provided for by 41 CFR 60-1.5, (2) has 50 or more employees, and (a) a contract of \$50,000 or more; or (b) government bills of lading which, in any 12 month period, total or can reasonably be expected to total \$50,000 or more.

Each person required to submit reports shall file such report with the PUBLIC BODY within 30 days after the award to him of a contract or subcontract, UNLESS such person has submitted such a report within 12 months preceding the date of the award. Subsequent reports shall be submitted annually, on or before March 31, to the Joint Reporting Committee, P. O. Box 779, Norfolk, Virginia 23501. Forms can be requested in writing or by calling 804/461-1213.

BIDDER COMPLIANCE STATEMENT

CERTIFICATION REGARDING EQUAL EMPLOYMENT OPPORTUNITY

Applicability: Bid exceeding ten thousand dollars (\$10,000) for contract/subcontract of unlimited amount and non-construction contract/subcontract for less than one million dollars (\$1,000,000).

This statement relates to a proposed contract between (pick one): ☐ Contractor and Public Body OR ☐ Contractor and Subcontractor to be funded under a federally assisted project. Pursuant to Executive Order 11246 and its implementing regulations at 41 CFR 60-1.7(b) (1), as the undersigned bidder, I certify that:

- 1) Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
☐ YES ☐ NO
- 2) Bidder has developed and has on file at each establishment, affirmative action programs pursuant to 41 CFR 60-2 (applies only to non-construction contractors).
☐ YES ☐ NO (contract less than \$50,000 AND fewer than 50 employees)
- 3) Bidder has filed with the Joint Reporting Committee; the Director of the Office of Federal Contract Compliance Programs, U.S. Department of Labor; and agency; and/or the Equal Employment Opportunity Commission; all reports due under the applicable filing requirements.
☐ YES ☐ NO ☐ None Required

I understand that if I have failed to file any compliance reports which have been required of me, or have failed to develop and have on file at each establishment affirmative action programs pursuant to 41 CFR 60-2, when required, I am not eligible to have my bid or proposal considered, or to enter into the proposed contract.

I further understand that if awarded the proposed contract, and the contract for the FIRST time brings me under the filing requirements or the written affirmative action programs that I will, as applicable: (a) within 30 days file with the Public Body, Standard Form 100 (EEO- 1); and (b) within 120 days from the commencement of the contract, develop and submit to the Director of the Office of Federal Contract Compliance Programs, U.S. Department of Labor, for approval a Written Affirmative Action Plan.

Signature: _____
Type Name: _____ Title: _____
Address, including zip code: _____
IRS # (or owner's social security #): _____

Attachment: Any other reports that have been required pursuant to Executive Order 11246 by a contracting agency, the Equal Opportunity Commission, or the Director of the Office of Federal Contract Compliance Programs, U. S. DOL.

Attachment to Certain Construction Contracts

Applicable to contracts/subcontracts in excess of \$2,000 that are funded under legislation subject to Reorganization Plan Number 14 of 1950 (64 Stat. 1267), and which is for construction, alteration, and/or repair, including painting and decoration. Some of the legislation most likely to provide funding (that is, combined with CDBG funds) is: Appalachian Regional Development Act of 1965, Federal Water Pollution Control Act, as amended by the Water Quality Act of 1965, Public Works and Economic Development Act of 1965, Federal-Aid Highway acts, Vocational Education Act of 1963 and Vocational Education Amendments of 1968.

Subpart A: Contract Work Hours and Safety Standards Act- Safety and Health

1. The contractor shall not require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under construction safety and health standards promulgated by regulations of the Secretary of Labor.
2. The contractor shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.).
3. The contractor shall include or cause to be included in each nonexempt subcontract the clauses in (1) and (2) above.

A person who undertakes to perform a portion of a contract involving the furnishing of supplies of materials will be considered a "subcontractor" under section 107 if the work in question involves the performance of construction work and is to be performed: (a) Directly on or near the construction site, or (b) by the employer for the specific project on a customized basis. Thus, a supplier of materials which will become an integral part of the construction is a "subcontractor" if the supplier fabricates or assembles the goods or materials in question specifically for the construction project.

Subpart B: Immigration Reform and Control Act Of 1986

The Contractor agrees by signing this contract that he/she does not and will not during the performance of this contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

51. Build America Buy America

On November 15, 2021, the Build America, Buy America Act (the Act) was enacted as part of the Infrastructure Investment and Jobs Act (IIJA). Pub. L. 117-58. The Act establishes a domestic content procurement preference, the BAP, for Federal programs that permit Federal financial assistance to be used for infrastructure projects. In Section 70912, the Act further defines a project to include “the construction, alteration, maintenance, or repair of infrastructure in the United States” and includes within the definition of infrastructure those items traditionally included along with buildings and real property. Starting May 14, 2022, new awards of Federal financial assistance from a program for infrastructure, and any of those funds obligated by the grantee, are covered under the Build America, Buy America (BABA) provisions of the Act, 41 U.S.C. 8301 note.

All Appalachian Regional Commission (ARC) construction projects awarded after May 14, 2022, must comply with the requirements of the Act. Information on the ARC guidelines may be found here: <https://www.arc.gov/resource/buy-america-guidelines/>

The Virginia Department of Housing and Community Development (DHCD) is a Registered State Basic Agency (RSBA) with ARC. Accordingly, DHCD is required to follow the guidance from the U.S. Department of Housing and Urban Development (HUD) when managing and administering construction project funded with ARC monies. While HUD currently has a waiver of the application of the BAP through HUD’s Notice, “General Applicability Waiver of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance” (87 FR 26219), all ARC-funded construction projects awarded after May 14, 2022, must comply with the requirements of the Act. In addition, all Community Development Block Grant (CDBG) projects with funds obligated on or after November 14, 2022, will be required to comply with the Act, unless covered by a subsequent waiver. Final guidance will be provided by HUD prior to the expiration of the aforementioned waiver, and the full implementation requirements of the Act. Additional information on the HUD guidelines may be found here: https://www.hud.gov/program_offices/general_counsel/BABA.



Glenn Youngkin
Governor

Caren Merrick
Secretary of
Commerce and Trade

COMMONWEALTH of VIRGINIA

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

Bryan W. Horn
Director

MEMORANDUM

TO: CDBG & ARC Grantees
FROM: ^{AA} Amanda Healy & Dr. Tamarah Holmes ^{JB}
SUBJECT: Build America Buy America
DATE: December 10, 2024

On November 15, 2021, the Build America, Buy America Act (BABA) was enacted as part of the Infrastructure Investment and Jobs Act (IIJA). Pub. L. 117-58. The Act establishes a domestic content procurement preference, the Buy American Preference (BAP), for Federal programs that permit Federal financial assistance to be used for infrastructure projects. In Section 70912, the Act further defines a project to include "the construction, alteration, maintenance, or repair of infrastructure in the United States" and includes within the definition of infrastructure those items traditionally included along with buildings and real property.

All DHCD Community Development Block Grant (CDBG) and Appalachian Regional Commission (ARC) grantees must comply with the requirements of the BABA Act, 41 USC 8301 note, and all applicable rules and notices, as may be amended, if applicable to the grantee's infrastructure project. Specifically, ARC funds obligated on or after May 14, 2022, and CDBG funds obligated on or after November 14, 2022, and any of those funds obligated by the grantee, are covered under the BABA provisions.

As a Registered State Basic Agency (RSBA) with ARC, DHCD must follow the guidance from the U.S. Department of Housing and Urban Development (HUD) when managing and administering construction projects funded with ARC monies.

Pursuant to HUD's Notice, "Public Interest Phased Implementation Waiver for FY 2022 and 2023 of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance" (88 FR 17001), and funds obligated by HUD on or after the applicable listed effective dates, subject to BABA requirements, unless excepted by a waiver.

All contractors working on CDBG and/or ARC projects must complete HUD's Optional Buy America Preference Certification and DHCD's Buy America Build America Materials Certification Statement to verify their compliance toward meeting the BABA requirements. These forms will be verified during a project's compliance review(s). Copies are enclosed with this memo for reference.



December 10, 2024

For CDBG and ARC projects funded through DHCD, the following requirements apply:

Federal Fiscal Year	Products Subject to BABA
FY 2023	• Iron • Steel
FY 2024	• Iron • Steel • Specifically Listed Construction Materials: non-ferrous metals, lumber, plastic- and polymer-based composite building materials, pipe, and tube.
FY 2025 and all future FY appropriations	• Iron • Steel • Specifically Listed Construction Materials: non-ferrous metals, lumber, plastic- and polymer-based composite building materials, pipe, and tube. • Non Listed Construction Materials: all other plastic- and polymer-based materials (such as polymers used in fiber optic cables), glass, fiber optic cable, optical fiber, engineered wood, and drywall. • Manufactures Materials: articles, materials, or supplies that have either been processed into a specific shape; combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.



BUILD AMERICA BUY AMERICA ACT FEDERAL CONSTRUCTION CONTRACT INSERT

On November 15, 2021, the Build America, Buy America Act (the Act) was enacted as part of the Infrastructure Investment and Jobs Act (IIJA). Pub. L. 117-58. The Act establishes a domestic content procurement preference, the BAP, for Federal programs that permit Federal financial assistance to be used for infrastructure projects. In Section 70912, the Act further defines a project to include “the construction, alteration, maintenance, or repair of infrastructure in the United States” and includes within the definition of infrastructure those items traditionally included along with buildings and real property. Starting May 14, 2022, new awards of Federal financial assistance from a program for infrastructure, and any of those funds obligated by the grantee, are covered under the Build America, Buy America (BABA) provisions of the Act, 41 U.S.C. 8301 note.

All Appalachian Regional Commission (ARC) construction projects awarded after May 14, 2022, must comply with the requirements of the Act. Information on the ARC guidelines may be found here: <https://www.arc.gov/resource/buy-america-guidelines/>

The Virginia Department of Housing and Community Development (DHCD) is a Registered State Basic Agency (RSBA) with ARC. Accordingly, DHCD is required to follow the guidance from the U.S. Department of Housing and Urban Development (HUD) when managing and administering construction project funded with ARC monies. While HUD currently has a waiver of the application of the BAP through HUD’s Notice, “General Applicability Waiver of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance” (87 FR 26219), all ARC-funded construction projects awarded after May 14, 2022, must comply with the requirements of the Act. In addition, all Community Development Block Grant (CDBG) projects with funds obligated on or after November 14, 2022, will be required to comply with the Act, unless covered by a subsequent waiver. Final guidance will be provided by HUD prior to the expiration of the aforementioned waiver, and the full implementation requirements of the Act. Additional information on the HUD guidelines may be found here: https://www.hud.gov/program_offices/general_counsel/BABA.

**Virginia Department of Housing and Community Development
Build America Buy America
Materials Certification**

Name of CDBG or ARC Grantee: _____

CDBG and/or ARC Project Number: _____

General Contractor: _____

Subcontractor: _____

Invoice Number	Materials (Iron, Steel, Manufactured Goods, Construction Materials)	Description	Name of Manufacturer	Location of Production

By signing below, I certify that to the best of my knowledge and ability the materials listed above and used for this project were produced in the United States of America.

Contractor Signature:	Architect/Engineer Signature:
Print Contractor Name and Title:	Print Architect/Engineer Name:
Contractor Company:	Architect/Engineering Firm:
Date:	Date:

Explanation of Form

CDBG and/or ARC Grantee—Enter the name of the entity that received CDBG and/or ARC funds from the Virginia Department of Housing and Community Development (VDHCD).

CDBG and/or ARC Project Number—Enter the project number assigned by VDHCD.

General Contractor—Enter the name of the general contractor responsible for procuring the iron, steel, manufactured goods, or construction materials.

Subcontractor—Enter the name of the subcontractor responsible for procuring the iron, steel, manufactured goods, or construction materials.

Invoice Number—Enter the invoice number associated with the covered materials.

Materials—Indicate the type of material(s) associated with the invoice.

Iron and Steel includes an article, material, or supply that consists wholly or predominantly of iron or steel (predominantly means that the cost of the iron and steel exceeds 50% of the total cost of all its components), or a combination of both.

Manufactured Products include articles, materials, or supplies that have either been: processed into a specific form or shape, or combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. A manufactured product may include components that are construction materials or iron and steel products unless the manufactured product also meets the definition of iron and steel or construction materials. In such instances, the product should be recategorized in the appropriate category.

Specifically Listed Construction Materials include non-ferrous metals; lumber; and plastic- and polymer-based composite building materials, pipe, and tube. Not Listed Construction Materials include all other plastic- and polymer-based materials (such as polymers used in fiber optic cables), glass, fiber optic cable, optical fiber, engineered wood, and drywall.

Description—Provide descriptive information about the materials (iron, steel, manufactured goods, or construction materials) being supplied, including the quantity. Only include iron, steel, manufactured goods, or construction materials of a similar nature.

Name of Manufacturer—To the best of your ability, enter the name of the manufacturer that produced each type of material supplied (iron, steel, manufactured goods, or construction materials). Manufacturer means the entity that performs the final manufacturing process to produce the manufactured goods/materials.

Location of Production—To the best of your ability, enter the location in the United States where the iron, steel, manufactured goods, or construction materials were produced.

For *Iron and Steel*, all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

For *Manufactured Products*, the product was manufactured in the United States; the cost of components of the manufactured product were mined, produced, or manufactured in the United States is greater than 55% of the total cost of all components of the manufactured product, unless another standard meets or exceeds this standard has been established under applicable law or regulation for determining the minimum amount of domestic content of the manufactured product. See 2 CFR 184.2(a). The costs of components of a manufactured product are determined according to 2 CFR 184.5.iii.

For *Construction Materials*, all manufacturing processes for the construction material occurred in the United States. See 2 CFR 184.6 for more information on the meaning of “all manufacturing processes” for specific construction materials.

Signature—The general contractor **or** subcontract responsible for procuring the materials subject to Build America Buy America must sign and date the materials certification form. The project architect/engineer must also sign and date the certification form.

The grantee may also wish to obtain certification from the manufacturer to verify that the materials were produced in the United States.

SECTION 011000 SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Type of the Contract.
 - 3. Products ordered in advance.
 - 4. Use of premises.
 - 5. Owner's occupancy requirements.
 - 6. Work restrictions.
 - 7. Specification formats and conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work consists of the following:
 - 1. The Work includes the renovation of the Barter Theatre's Smith Theatre. The work is generally described as the leveling of the stage and theatre floor, waterproofing and the addition of a foundation drain at the building's West side, replacement of the existing risers and seating, replacement of the lighting and AV grid, improvements to the catwalk and acoustics, general finish upgrades, fire alarm, and electrical upgrades to support new lighting and AV equipment.
 - 2. The Contractor is to coordinate with the audiovisual and theatrical lighting improvements which are being provided under a separate contract.
 - 3. General Project Schedule Milestones:
 - a. Award of Contract: Sept. 15, 2026
 - b. Commencement of Work on Site: Jan. 4, 2027
 - c. Substantial Completion: Apr. 12, 2027
 - d. Project Close-Out: May 14, 2027

1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.

1.5 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
- B. Use of Site: Limit use of premises to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Limits: Confine constructions operations to areas within defined active phase of work only.
 - 2. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
 - 3. Driveways and Entrances: Keep driveways, loading areas, parking areas and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.6 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the CSI "MasterFormat" numbering system.
 - 1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
 - 2. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 012500
CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions" or other mutually acceptable documentation.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request, or 20 days, whichever is sooner, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include costs of labor and supervision directly attributable to the change.
 5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 6. Comply with requirements in Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- C. Proposal Request Form: Use AIA Document G709 for Proposal Requests, or other mutually acceptable documentation.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 012900
PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - c. Contractor's Construction Schedule.
 - 2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Application for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.

- c. Contractor's name and address.
 - d. Date of submittal.
- 2. Submit draft of AIA Document G703 Continuation Sheets.
- 3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Dollar value.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
- 4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
- 5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
- 6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
- 7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
- 8. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
- 9. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
- 10. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 - 5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of Values.

3. Contractor's Construction Schedule (preliminary if not final).
 4. Copies of building permits.
 5. Certificates of insurance and insurance policies.
 6. Performance and payment bonds.
- H. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706A, "Contractor's Affidavit of Release of Liens."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 013100
PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Project meetings.
 - 2. Requests for Interpretation (RFIs).
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Pre-installation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
 9. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.5 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days prior to commencement of work on site. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Critical work sequencing and long-lead items.

- c. Procedures for processing field decisions and Change Orders.
 - d. Procedures for RFIs.
 - e. Procedures for testing and inspecting.
 - f. Procedures for processing Applications for Payment.
 - g. Submittal procedures.
 - h. Use of the premises and existing building.
 - i. Work restrictions.
 - j. Owner's occupancy requirements.
 - k. Responsibility for temporary facilities and controls.
 - l. Parking availability.
 - m. Office, work, and storage areas.
 - n. Equipment deliveries and priorities.
 - o. Security.
 - p. Progress cleaning.
 - q. Working hours.
3. Minutes: Record and distribute meeting minutes.
- C. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Options.
 - b. Related RFIs.
 - c. Deliveries.
 - d. Submittals.
 - e. Review of mockups.
 - f. Compatibility problems.
 - g. Time schedules.
 - h. Weather limitations.
 - i. Warranty requirements.
 - j. Compatibility of materials.
 - k. Acceptability of substrates.
 - l. Temporary facilities and controls.
 - m. Space and access limitations.
 - n. Testing and inspecting requirements.
 - o. Installation procedures.
 - p. Coordination with other work.
 - q. Protection of adjacent work.
 - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

- D. Progress Meetings: Conduct progress meetings at biweekly intervals, or as acceptable to Owner and Architect. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Status of submittals.
 - 2) Deliveries.
 - 3) Access.
 - 4) Work hours.
 - 5) Progress cleaning.
 - 6) Quality and work standards.
 - 7) Field observations.
 - 8) RFIs.
 - 9) Status of proposal requests.
 - 10) Status of Change Orders.
 3. Minutes: Record the meeting minutes.
 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.6 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.

- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
 2. Date.
 3. Name of Contractor.
 4. Name of Architect.
 5. RFI number, numbered sequentially.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 10. Contractor's signature.
 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs: Form acceptable to Owner and Architect.
1. Identify each page of attachments with the RFI number and sequential page number.
- D. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow seven working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 1 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

- G. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect.
 4. RFI number including RFIs that were dropped and not submitted.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
 9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 013200
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.

1.3 SUBMITTALS

- A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
 - 1. Scheduled date for first submittal.
 - 2. Specification Section number and title.
 - 3. Submittal category (action or informational).
 - 4. Name of subcontractor.
 - 5. Description of the Work covered.
 - 6. Scheduled date for Architect's final release or approval.
- B. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.

1.4 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - 2. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. Time Frame: Extend schedule from date established for commencement of the Work to date of Final Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 10 days, unless specifically allowed by Architect.
 - 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 - 4. Startup and Testing Time: Include not less than 5 days for startup and testing.
 - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 - 1. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Submittals.
 - b. Deliveries.
 - c. Installation.
 - d. Tests and inspections.
 - e. Startup and placement into final use and operation.

2. Area Separations: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Structural completion.
 - b. Completion of mechanical installation.
 - c. Substantial Completion.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- F. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.
 1. Refer to Division 1 Section "Payment Procedures" for cost reporting and payment procedures.
 2. Contractor shall assign cost to construction activities on the schedule. Costs shall not be assigned to submittal activities unless specified otherwise but may, with Architect's approval, be assigned to fabrication and delivery activities. Costs shall be under required principal subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training (if applicable), in the amount of 5 percent of the Contract Sum.
 3. Each activity cost shall reflect an accurate value subject to approval by Architect.
 4. Total cost assigned to activities shall equal the total Contract Sum.
- G. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis to demonstrate the effect of the proposed change on the overall project schedule, if effect is greater than 14 days.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

- A. General: Prepare network diagrams using AON (activity-on-node) format.
- B. CPM Schedule: Prepare Contractor's Construction Schedule using a computerized, time-scaled CPM network analysis diagram for the Work.
 1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 30 days after date established for commencement of the Work.
 - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of the schedule.
 2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
 3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.

4. Use "one workday" as the unit of time. Include list of nonworking days and holidays incorporated into the schedule.
- C. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the preliminary network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Installation.
 - d. Testing.
 2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
 - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
- D. Initial Issue of Schedule: Prepare initial network diagram from a list of straight "early start-total float" sort. Identify critical activities. Prepare tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.
 2. Description of activity.
 3. Principal events of activity.
 4. Immediate preceding and succeeding activities.
 5. Early and late start dates.
 6. Early and late finish dates.
 7. Activity duration in workdays.
 8. Total float or slack time.
 9. Average size of workforce.
 10. Dollar value of activity (coordinated with the Schedule of Values).
- E. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed.
 2. Changes in early and late start dates.
 3. Changes in early and late finish dates.
 4. Changes in activity durations in workdays.
 5. Changes in the critical path.
 6. Changes in total float or slack time.
 7. Changes in the Contract Time.
- F. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.

1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.
3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.
 - a. In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.
 - b. Submit value summary printouts one week before each regularly scheduled progress meeting.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION

SECTION 013300
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD/BIM Drawings of the Contract Drawings may be provided by Architect for Contractor's use in preparing submittals, upon specific request and payment of handling fees.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.

- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- E. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06100.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
 - i. Number and title of appropriate Specification Section.
 - j. Other necessary identification.
- F. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- G. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
 2. Additional copies submitted for maintenance manuals will be marked with action taken (at Architect's discretion) and will be returned.

- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will discard submittals received from sources other than Contractor.
1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Specification Section number and title.
 - g. Transmittal number, numbered consecutively.
 - h. Remarks.
 - i. Signature of transmitter.
 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked "No Exceptions Taken" or "Approved as Noted."
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Use only final submittals with mark indicating "No Exceptions Taken" or "Approved as Noted" by Architect.

1.5 CONTRACTOR'S USE OF ARCHITECT'S CAD/BIM FILES

- A. General: At Contractor's written request, copies of Architect's CAD/BIM files will be provided to Contractor for Contractor's use in connection with Project, subject to the following conditions:
1. User assumes all responsibility for inaccuracies and field verification in using CAD/BIM files.
 2. User agrees to payment of any handling fees imposed by Architect in preparation of CAD/BIM files for Contractor's use.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Manufacturer's catalog cuts.
 - e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Testing by recognized testing agency.
 - 4. Submit Product Data before or concurrent with Samples.
 - 5. Number of Copies: Submit five copies of Product Data, unless otherwise indicated. Architect will return four copies. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal of Architect's CAD Drawings are otherwise permitted.
 - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Roughing-in and setting diagrams.
 - d. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - e. Schedules.
 - f. Compliance with specified standards.
 - g. Notation of dimensions established by field measurement.
 - h. Relationship to adjoining construction clearly indicated.
 - i. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
 3. Number of Copies: Submit five opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit six copies where copies are required for operation and maintenance manuals. Architect will retain one copy; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit two full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
- E. Submittals Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- F. Application for Payment: Comply with requirements specified in Division 1 Section "Payment Procedures."
- G. Schedule of Values: Comply with requirements specified in Division 1 Section "Payment Procedures."

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.
- B. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- C. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.
 - 1. Architect will not review submittals that include MSDSs and will return the entire submittal for resubmittal.

2.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S/ ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. No Exceptions Taken: Fabrication may proceed based upon submittal.
 - 2. Approved As Noted: Fabrication may proceed based on corrections indicated, if any.
 - 3. Submit as Specified: The product submitted is rejected – resubmittal is required.
 - 4. Revise and Resubmit: Fabrication may not proceed, drawings must be revised and resubmitted.
 - 5. Where submittal is returned with notation for special processing or other activity, Contractor shall comply with notations indicated.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION

SECTION 014000
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.

- D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.
- E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

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

1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Names of individuals making tests and inspections.
 - 5. Description of the Work and test and inspection method.
 - 6. Identification of product and Specification Section.
 - 7. Complete test or inspection data.
 - 8. Test and inspection results and an interpretation of test results.
 - 9. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

- F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- G. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.7 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation,

including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

- D. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - 5. Delivery of samples to testing agencies.
 - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.8 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Retesting and re-inspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
 2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."

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

END OF SECTION

SECTION 015000
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.3 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.4 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portable Chain-Link Fencing: Minimum 2-inch, 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch OD line posts and 2-7/8-inch OD corner and pull posts, with 1-5/8-inch OD top and bottom rails. Provide concrete or galvanized steel bases for supporting posts.
- B. Lumber and Plywood: Comply with requirements in Division 6 Section "Miscellaneous Carpentry" if included, or with local code.
- C. Paint: Comply with requirements in Division 9 painting Sections, as applicable.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of construction personnel. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
 - 2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with not less than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot square tack board.
 - 3. Drinking water and private toilet.
 - 4. Coffee machine and supplies.
 - 5. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
 - 6. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation and maintenance of fixtures and facilities.
- D. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
- B. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

3.3 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 1 Section "Closeout Procedures."

END OF SECTION

SECTION 016000
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use CSI Form 13.1A.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.

- b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - f. Cost information, including a proposal of change, if any, in the Contract Sum.
 - g. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - h. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Change Order.
 - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

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

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.

2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage:

1. Store materials in a manner that will not endanger Project structure.
2. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
3. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
4. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

PART 2 - PRODUCTS

2.1 PRODUCT SUBSTITUTIONS

- A. Timing: Architect will consider requests for substitution if received within 30 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect.
- B. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 4. Substitution request is fully documented and properly submitted.
 5. Requested substitution will not adversely affect Contractor's Construction Schedule.
 6. Requested substitution is compatible with other portions of the Work.
 7. Requested substitution has been coordinated with other portions of the Work.
 8. Requested substitution provides specified warranty.

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 017000
EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. General installation of products.
 - 2. Progress cleaning.
 - 3. Starting and adjusting.
 - 4. Protection of installed construction.
 - 5. Correction of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of 8 feet in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.

- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.5 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section "Quality Requirements."

3.6 PROTECTION OF INSTALLED CONSTRUCTION

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

3.7 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION

SECTION 017310
CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.

1.3 DEFINITIONS

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

1.4 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
 - 1. Primary operational systems and equipment.
 - 2. Air or smoke barriers.
 - 3. Mechanical systems piping and ducts.
 - 4. Electrical wiring systems.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
 - 1. Water, moisture, or vapor barriers.
 - 2. Membranes and flashings.
 - 3. Equipment supports.
 - 4. Piping, ductwork, vessels, and equipment.

- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 4. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION

SECTION 017700
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
 - 3. Final cleaning.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 3. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 4. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - 5. Complete startup testing of systems.
 - 6. Submit test/adjust/balance records.
 - 7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 8. Advise Owner of changeover in heat and other utilities.
 - 9. Complete final cleaning requirements, including touchup painting.
 - 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of

unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
 1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor, as applicable to project.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.

- d. Name of Contractor.
- e. Page number.

1.6 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - c. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - d. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - e. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - f. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 017810
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Product Data.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set of marked-up Record Prints.
 - 2. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Initial Submittal: Submit two sets of marked-up Record Prints. Architect will initial and date each plot and mark whether general scope of changes, additional information recorded, and quality of drafting are acceptable. Architect will return prints for organizing into sets, printing, binding, and final submittal.
 - b. Final Submittal: Submit two sets of marked-up Record Prints, and a CD including scans of all Record Drawings. Print and record each Drawing, whether or not changes and additional information were recorded.
- B. Record Product Data: Submit two copies of each Product Data submittal.
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Revisions to routing of piping and conduits.
 - d. Actual equipment locations.
 - e. Duct size and routing.
 - f. Changes made by Change Order or Construction Change Directive.
 - g. Changes made following Architect's written orders.
 - h. Details not on the original Contract Drawings.
 - 3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 - 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 - 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing Record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
 - 1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
 - 2. Consult Architect for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction.

Integrate newly prepared Record Drawings into Record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.

- C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
 - 1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - 2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.
 - 3. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders and Record Drawings where applicable.

2.3 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION

SECTION 017820
OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation manuals for systems, subsystems, and equipment.
 - 2. Maintenance manuals for the care and maintenance of products, materials, finishes, systems and equipment.

1.3 DEFINITIONS

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

1.4 SUBMITTALS

- A. Final Submittal: Submit two copies of each manual in final form at least 15 days before final inspection. Architect will return copy with comments within 15 days after final inspection.
 - 1. Correct or modify each manual to comply with Architect's comments. Submit 3 copies of each corrected manual within 15 days of receipt of Architect's comments.

1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 - PRODUCTS

2.1 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name, address, and telephone number of Contractor.
 - 6. Name and address of Architect.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
 - 1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
 - 1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 1. System, subsystem, and equipment descriptions.
 2. Operating standards.
 3. Operating procedures.
 4. Wiring diagrams.
 5. Control diagrams.
- B. Descriptions: Include the following:
 1. Product name and model number.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
 1. Startup procedures.
 2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instructions on stopping.
 6. Normal shutdown instructions.
 7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.

9. Special operating instructions and procedures.

- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.3 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Material and chemical composition.
 - 4. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

2.4 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 - 1. Standard printed maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 - 3. Identification and nomenclature of parts and components.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 - 1. Troubleshooting guide.
 - 2. Precautions against improper maintenance.
 - 3. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - 4. Aligning, adjusting, and checking instructions.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 - 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 - 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

- B. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- C. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
1. Do not use original Project Record Documents as part of operation and maintenance manuals.
 2. Comply with requirements of newly prepared Record Drawings in Division 1 Section "Project Record Documents."
- E. Comply with Division 1 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION

SECTION 055210
PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Steel pipe and tube railings.

1.3 PERFORMANCE REQUIREMENTS

- A. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
 - 1. Steel: 72 percent of minimum yield strength.
- B. Structural Performance: Provide railings capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Handrails:
 - a. Uniform load of 50 lbf/ ft. applied in any direction.
 - b. Concentrated load of 200 lbf applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 2. Top Rails of Guards:
 - a. Uniform load of 50 lbf/ ft. applied in any direction 50 lbf/ ft. applied horizontally and concurrently with 100 lbf/ ft. applied vertically downward.
 - b. Concentrated load of 200 lbf applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 3. Infill of Guards:
 - a. Concentrated load of 50 lbf 200 lbf applied horizontally on an area of 1 sq. ft.
 - b. Uniform load of 25 lbf/sq. ft. applied horizontally.
 - c. Infill load and other loads need not be assumed to act concurrently.
- C. Thermal Movements: Provide exterior railings that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F , ambient; 180 deg F , material surfaces.
- D. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.4 SUBMITTALS

- A. Product Data: For the following:
 1. Manufacturer's product lines of mechanically connected railings.
 2. Grout, anchoring cement, and paint products.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
 1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Initial Selection: For products involving selection of color, texture, or design.
- D. Samples for Verification: For each type of exposed finish required.
 1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters.
 2. Fittings and brackets.
 3. Assembled Sample of railing system, made from full-size components, including top rail, post, handrail, and infill. Sample need not be full height.
 - a. Show method of connecting members at intersections.
- E. Mill Certificates: Signed by manufacturers of stainless-steel products certifying that products furnished comply with requirements.
- F. Welding certificates.
- G. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of railing through one source from a single manufacturer.
- B. Welding: Qualify procedures and personnel according to the following:
 1. AWS D1.1, "Structural Welding Code--Steel."
- C. Stairs, guardrails and handrails shall comply with the Virginia Building Code (VBC).

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating railings without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.
 - 2. Provide allowance for trimming and fitting at site.

1.7 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Steel Pipe and Tube Railings:
 - a. Pisor Industries, Inc.
 - b. Sharpe Products.
 - c. Wagner, R & B, Inc.; a division of the Wagner Companies.

2.2 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.

2.3 STEEL AND IRON

- A. Tubing: ASTM A 500 (cold formed) or ASTM A 513, Type 5 (mandrel drawn).
- B. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
 - 1. Provide galvanized finish for exterior installations and where indicated.
- C. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- D. Castings: Either gray or malleable iron, unless otherwise indicated.
 - 1. Gray Iron: ASTM A 48/A 48M, Class 30, unless another class is indicated or required by structural loads.
 - 2. Malleable Iron: ASTM A 47/A 47M.
- E. Expanded Metal: ASTM F 1267, Type I (expanded), Class 1 (uncoated).

2.4 FASTENERS

- A. General: Provide the following:
 - 1. Steel Railings: Plated steel fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating.
- B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- C. Fasteners for Interconnecting Railing Components:
 - 1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless otherwise indicated.
- D. Anchors: Provide cast-in-place or torque-controlled expansion anchors, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.

2.5 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Shop Primers: Provide primers that comply with Division 09 painting Sections.
- C. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Benjamin Moore & Co.; Epoxy Zinc-Rich Primer CM18/19.

- b. Carboline Company; Carbozinc 621.
 - c. ICI Devoe Coatings; Catha-Coat 313.
 - d. International Coatings Limited; Interzinc 315 Epoxy Zinc-Rich Primer.
 - e. PPG Architectural Finishes, Inc.; Aquapon Zinc-Rich Primer 97-670.
 - f. Sherwin-Williams Company (The); Corothane I GalvaPac Zinc Primer.
 - g. Tnemec Company, Inc.; Tneme-Zinc 90-97.
- D. Shop Primer for Galvanized Steel: Zinc-dust, zinc-oxide primer formulated for priming zinc-coated steel and for compatibility with finish paint systems indicated, and complying with SSPC-Paint 5.
- E. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.
- F. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.
- G. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- H. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.
1. Water-Resistant Product: At exterior locations where indicated provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

2.6 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded connections, unless otherwise indicated.

- H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove flux immediately.
 - 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- I. Form changes in direction as follows:
 - 1. By radius bends of radius indicated or by inserting prefabricated elbow fittings of radius indicated.
- J. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- K. Close exposed ends of railing members with prefabricated end fittings.
- L. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.
- M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work, unless otherwise indicated.
 - 1. At brackets and fittings fastened to plaster or gypsum board partitions, provide fillers made from crush-resistant material, or other means to transfer wall loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.
- N. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.
- O. For railing posts set in concrete, provide steel sleeves not less than 6 inches long with inside dimensions not less than 1/2 inch greater than outside dimensions of post, with steel plate forming bottom closure.
- P. For removable railing posts, fabricate slip-fit sockets from steel tube or pipe whose ID is sized for a close fit with posts; limit movement of post without lateral load, measured at top, to not more than one-fortieth of post height. Provide socket covers designed and fabricated to resist being dislodged.
 - 1. Provide chain with eye, snap hook, and staple across gaps formed by removable railing sections at locations indicated. Fabricate from same metal as railings.

2.7 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

2.8 STEEL AND IRON FINISHES

- A. Galvanized Railings:
 - 1. Hot-dip galvanize exterior steel and iron railings, including hardware, after fabrication.
 - 2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
 - 3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.
- B. Fill vent and drain holes that will be exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.
- C. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.
- D. For nongalvanized steel railings, provide nongalvanized ferrous-metal fittings, brackets, fasteners, and sleeves, except galvanize anchors to be embedded in exterior concrete or masonry.
- E. Preparation for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with metallic-phosphate process.
- F. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed railings:
 - 1. Exterior Railings (SSPC Zone 1B): SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
 - 2. Interior Railings (SSPC Zone 1A): SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
- G. Apply shop primer to prepared surfaces of railings, unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.

1. Do not apply primer to galvanized surfaces.
2. Stripe paint corners, crevices, bolts, welds, and sharp edges.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- C. Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- D. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.3 RAILING CONNECTIONS

- A. Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Use wood blocks and padding to prevent damage to railing members and fittings. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of railings.
- B. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in Part 2 "Fabrication" Article whether welding is performed in the shop or in the field.
- C. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve

extending 2 inches beyond joint on either side, fasten internal sleeve securely to 1 side, and locate joint within 6 inches of post.

3.4 ANCHORING POSTS

- A. Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
- B. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
- C. Cover anchorage joint with flange of same metal as post, welded to post after placing anchoring material.
- D. Leave anchorage joint exposed; wipe off surplus anchoring material; and leave 1/8-inch buildup, sloped away from post.
- E. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:
 - 1. For steel pipe railings, weld flanges to post and bolt to metal supporting surfaces.
- F. Install removable railing sections, where indicated, in slip-fit metal sockets cast in concrete.

3.5 ANCHORING RAILING ENDS

- A. Anchor railing ends to concrete and masonry with round flanges connected to railing ends and anchored to wall construction with anchors and bolts.
- B. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and welded to railing ends or connected to railing ends using nonwelded connections.

3.6 ATTACHING HANDRAILS TO WALLS

- A. Attach handrails to wall with wall brackets. Provide brackets with 1-1/2-inch clearance from inside face of handrail and finished wall surface.
 - 1. Use type of bracket with flange tapped for concealed anchorage to threaded hanger bolt.
 - 2. Use type of bracket with predrilled hole for exposed bolt anchorage.
- B. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
- C. Secure wall brackets to building construction as follows:

1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
2. For hollow masonry anchorage, use toggle bolts.
3. For wood stud partitions, use hanger or lag bolts set into wood backing between studs. Coordinate with carpentry work to locate backing members.
4. For steel-framed gypsum board partitions, use hanger or lag bolts set into fire-retardant-treated wood backing between studs. Coordinate with stud installation to locate backing members.

3.7 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
- B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Division 9 painting Sections.
- C. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

3.8 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

END OF SECTION

SECTION 061050
MISCELLANEOUS CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

- 1. Framing with dimension lumber.
- 2. Wood blocking and nailers.
- 3. Plywood.

1.3 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 - 2. SPIB: The Southern Pine Inspection Bureau.
 - 3. WCLIB: West Coast Lumber Inspection Bureau.
 - 4. WWPA: Western Wood Products Association.
 - 5. NLGA: National Lumber Grades Authority.
 - 6. RIS: Redwood Inspection Service.
 - 7. WCLIB: West Coast Lumber Inspection Bureau.
 - 8. WWPA: Western Wood Products Association.

1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
 - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
- B. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
1. Preservative-treated wood.
 2. Power-driven fasteners.
 3. Powder-actuated fasteners.
 4. Expansion anchors.
 5. Metal framing anchors.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.
- B. Deliver interior wood materials that are to be exposed to view only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece .
 3. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 4. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPAC2.
1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
 - 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece .
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood equipment support bases.
 - 2. Wood blocking at coping.

2.3 PRESERVATIVE TREATMENT BY PRESSURE PROCESS:

- 1. Lumber: AWPAC2 except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPAC31 with inorganic boron (SBX). Kiln dry after treatment to a maximum moisture content of 19 percent.
- 2. Plywood: AWPAC9. Kiln dry after treatment to a maximum moisture content of 18 percent.
- 3. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- 4. For exposed items indicated to receive transparent finish, do not use chemical formulations that contain colorants or that bleed through or otherwise adversely affect finishes.
- 5. Do not use material that is warped or does not comply with requirements for untreated material.
- 6. Mark lumber with treatment quality mark of an inspection agency approved by ALSC's Board of Review.
 - a. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece.
- 7. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
 - a. For exposed plywood indicated to receive a stained or natural finish, mark back of each piece.

2.4 DIMENSION LUMBER FRAMING

- A. Maximum Moisture Content: 19 percent .
- B. Other Framing: No. 2 grade and any of the following species:
 - 1. Southern pine; SPIB.

2.5 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1. Blocking.
 - 2. Nailers.
 - 3. Rooftop equipment bases and support curbs.
- B. For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber with 19 percent maximum moisture content and any of the following species:
 - 1. Mixed southern pine; SPIB.
 - 2. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
- C. For blocking not used for attachment of other construction Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

2.6 FIRE-RETARDANT-TREATED PLYWOOD

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested in accordance with ASTM E84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.
 - 1. Use treatment that does not promote corrosion of metal fasteners.
 - 2. Exterior Type: Treated materials are to comply with requirements specified above for fire-retardant-treated plywood by pressure process after being subjected to accelerated weathering in accordance with ASTM D2898. Use for exterior locations and where indicated.
 - 3. Interior Type A: Treated materials are to have a moisture content of 28 percent or less when tested in accordance with ASTM D3201/D3201M at 92 percent relative humidity. Use where exterior type is not indicated.
 - 4. Design Value Adjustment Factors: Treated lumber plywood is to be tested in accordance with ASTM D5516 and design value adjustment factors are to be calculated in accordance with ASTM D6305. Span ratings after treatment are to be not less than span ratings specified.
- C. Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.

- D. Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.
- E. Application: Treat all plywood unless otherwise indicated.
- F. Subflooring and underlayment for raised platforms.
 - 1. Plywood Underlayment for Resilient Flooring: Plywood must comply with ASTM F1482 Standard Practice for Installation and Preparation of Panel Underlayments to Receive Resilient Flooring. APA Trademarked Plywood or Equivalent Agency Certified Plywood.
 - 2. Finish surface to have a smooth, fully sanded face so graining or texture will not telegraph through.

2.7 PLYWOOD BACKING PANELS

- A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2-inch nominal thickness.

2.8 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M .
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.1.
- G. Bolts: Steel bolts complying with ASTM A 307, Grade A ; with ASTM A 563 hex nuts and, where indicated, flat washers.
- H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

2.9 METAL FRAMING ANCHORS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Cleveland Steel Specialty Co.
 - 2. Harlen Metal Products, Inc.
 - 3. KC Metals Products, Inc.
 - 4. Simpson Strong-Tie Co., Inc.
 - 5. Southeastern Metals Manufacturing Co., Inc.
 - 6. USP Structural Connectors.
- B. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 coating designation.
 - 1. Use for interior locations where stainless steel is not indicated.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.
- D. Do not splice structural members between supports, unless otherwise indicated.
- E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
 - 1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.
- F. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
 - 1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
 - 2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal- thickness.

3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. and to solidly fill space below partitions.
 4. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet o.c.
- G. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- H. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
1. Use inorganic boron for items that are continuously protected from liquid water.
 2. Use copper naphthenate for items not continuously protected from liquid water.
- I. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. NES NER-272 for power-driven fasteners.
 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
- J. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.
- 3.2 WOOD BLOCKING, AND NAILER INSTALLATION
- A. Install where indicated and where required for screeding or attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.
- 3.3 WOOD FURRING INSTALLATION
- A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.
- 3.4 PROTECTION
- A. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION

SECTION 064100
INTERIOR ARCHITECTURAL WOODWORK

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Interior standing and running trim.
 - 2. Plastic laminate countertops.
 - 3. Custom wood slats.
 - 4. Laminate flooring.
 - 5. Shop finishing of woodwork.

1.2 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction prior to woodwork installation.

1.3 REFERENCES

- A. Architectural Woodwork quality Standards, Architectural Woodwork Institute (AWI)

1.4 SUBMITTALS

- A. Comply with the requirements of Div 1 Section 01340 Submittal Procedures.
- B. For Approval:
 - 1. Product data for each type of product and process specified and incorporated into items of architectural woodwork during fabrication, finishing, and installation.
 - 2. Shop drawings showing location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - a) Show details full size.
 - b) Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcing specified in other Sections.
 - c) Show locations and sizes of cutouts and holes for items installed in architectural woodwork.
 - d) Show veneer leaves with dimensions, grain direction, exposed face, and an identification number indicated for each leaf. Identification number shall indicate the flitch and the sequence within the flitch for each leaf.
- C. Samples for initial selection of the following in the form of manufacturer's color charts consisting of actual units or sections of units showing the full range of

colors, textures, and patterns available for each type of material indicated.

1. Shop-applied transparent finishes.
 2. Plastic laminates.
- D. Samples for verification of the following:
1. Lumber with or for stained and transparent finish, 50 sq. in., for each species and cut, finished on one side and one edge.
 2. Veneer leaves representative of and selected from flitches to be used for transparent-finished woodwork.
 3. Wood-veneer-faced panel products, with or for transparent finish, 8 by 10 inches, for each species and cut. Include at least one face-veneer seam and finish one-half of face as specified.
 4. Step finish materials on sample to show and clearly define each coat.
 5. Provide separate samples of unfaced panel product used for core.
 6. Wood slats not less than 6" in length of custom wood slat assembly showing profile, wood species, stain color, and transparent finish for each color and size described on the Drawings.
 7. Laminate flooring equal to one full sized plank to verify size, thickness, and color.
 8. Plastic laminates to be used for countertops.
 9. Exposed hardware, one unit for each type and finish.
- E. Product Data: For fire-retardant-treated materials.
1. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
 2. Include product data for laminate flooring to match existing.
- F. For Information:
1. Product certificates signed by woodwork fabricator certifying that products comply with specified requirements.
 2. Qualification data for firms and persons specified in the *Quality Assurance* Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Firm experienced in producing architectural woodwork similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units without delaying the Work.
- B. Installer Qualifications: Arrange for interior architectural woodwork installation by a firm that can demonstrate successful experience in installing architectural woodwork items similar in type and quality to those required for this Project.
- C. Single-Source Responsibility: Arrange for production of interior architectural woodwork with sequence-matched wood veneers by a single firm.

1. Include the veneering of wood doors in the single-firm production where veneer matching extends across wood doors.
- D. Single-Source Responsibility for Fabrication and Installation: Engage a qualified woodworking firm to assume undivided responsibility for fabricating, finishing, and installing woodwork specified in this Section.
- E. Quality Standard: Except as otherwise indicated, comply with the following standard:
 1. AWI Quality Standard: "Architectural Woodwork Quality Standards" of the Architectural Woodwork Institute for grades of interior architectural woodwork, construction, finishes, and other requirements.
 - a) Custom Grade

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soilage, and deterioration.
- B. Do not deliver woodwork until painting and similar operations that could damage, soil, or deteriorate woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas whose environmental conditions meet requirements specified in the *Project Conditions* Article of this Section.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet-work is completed, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Environmental Limitations: Obtain and comply with woodwork fabricator's and Installer's coordinated advice for optimum temperature and humidity conditions for woodwork during its storage and installation. Do not install woodwork until these conditions have been attained and stabilized so that woodwork will be within plus or minus 1.0 percent of optimum moisture content from date of installation through remainder of construction period.
- C. Field Measurements: Where woodwork is indicated to be fitted to other construction, check actual dimensions of other construction by accurate field measurements before fabrication, and show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 1. Verify locations of concealed framing, blocking, reinforcements, and furring that support woodwork by accurate field measurements before being enclosed. Record measurements on final shop drawings.

1.8 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of the AWI quality standard for each type of woodwork and quality grade indicated and, where the following products are part of interior woodwork, with requirements of the referenced product standards that apply to product characteristics indicated:
 - 1. Medium-Density Fiberboard: ANSI A208.2.
 - 2. Hardwood Plywood and Face Veneers: HPVA HP-1.
- B. Fiberboard: Medium-density fiberboard made without formaldehyde and complying with ANSI A208.2. Color to be selected from manufacturer's full range including charcoal gray.
 - 1. Product: Provide MDF equal Medite II by Medite Corp.
- C. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated, or if not indicated, as required by woodwork quality standard.
 - 1. Manufacturer: Subject to compliance with requirements, provide high-pressure decorative laminates by one of the following:
 - a) Design Standard: Wilsonart.
 - b) Formica Corporation.
 - c) Nevamar.
- D. Adhesive for Bonding Plastic Laminate: As recommended by laminate manufacturer for the intended use of the laminate assembly.
- E. Wood materials:
 - 1. Exposed face and veneer lumber:
 - a) Graded in accordance with AWI for grade of work specified.
 - b) Maple.
 - c) Plain Sawn
 - d) Of quality suitable for transparent finish in compliance with Custom Grade standards.
 - e) Book matched unless otherwise noted.
 - 2. Plywood:
 - a) Veneer core all hardwood.
 - b) Graded in accordance with AWI for grade of work specified.
 - 3. Wood slats:
 - a) Graded in accordance with AWI for grade of work specified.
 - b) Maple nominal 1x2 or 2x2 as indicated on the drawings.
 - c) Plain Sawn
 - d) Of quality suitable for transparent finish in compliance with Custom

Grade standards.

2.2 HARDWARE AND ACCESSORY MATERIALS

- A. For concealed hardware, where finish is not indicated, provide manufacturer's standard finish that complies with product class requirements of BHMA A156.9.
- C. Exposed Hardware finish: unless otherwise noted, hardware finish shall be brushed stainless or brushed chrome.
- D. Countertop hardware & mounting:
 - 1. Grommets for cable passage: HAFELE Catalog #429.93.322
 - 2. Flat hidden countertop bracket attached at each stud.

2.3 INSTALLATION MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content, fire retardant treated as required by Code.
- B. Screws: Select material, type, size, and finish required for each use. Comply with ASME B18.6.1 for applicable requirements.
 - 1. For metal framing supports, provide screws as recommended by metal-framing manufacturer.
- C. Nails: Select material, type, size, and finish required for each use.
- D. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed steel or lead expansion bolt devices for drilled-in-place anchors.

2.4 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Provide interior woodwork complying with the referenced quality standard and of the following grade:
 - 1. Grade: Custom.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to relative humidity conditions existing during time of fabrication and in installation areas.
- C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Corners of cabinets and edges of solid-wood (lumber) members 3/4 inch thick or less: 1/16 inch.
 - 2. Edges of rails and similar members more than 3/4 inch thick: 1/8 inch.
 - 3. Corners of cabinets and edges of solid-wood (lumber) members and rails: 1/16 inch.

- D. Complete fabrication, including assembly, finishing, and hardware application, before shipment to Project site to maximum extent possible. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 - 1. Trial fit assemblies at the fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on approved shop drawings before disassembling for shipment.
- E. Shop-cut openings, to maximum extent possible, to receive hardware, fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Smooth edges of cutouts and, where located in countertops and similar exposures, seal edges with a water-resistant coating.
- F. Core Material:
 - 1. Horizontal surfaces: All hardwood veneer core plywood
 - 2. Vertical Surfaces: All hardwood veneer core plywood for MDF 40 at Contractor's option.
 - 3. Doors: Provide solid bearing for hinges.

2.5 FINISH

- A. Finish work in the factory in accordance with AWI Quality Standards - Section 1500 Systems.
 - 1. Quality Standard: Custom Grade.
- B. Stain and transparent finish to match color and sheen selected and approved for wood doors.

2.6 INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

- A. Quality Standard: Comply with AWI Section 300.
 - 1. Grade: Custom.
- B. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
- C. Assemble casings in plant except where limitations of access to place of installation require field assembly.
- D. Assemble moldings in plant to maximum extent possible. Miter corners in plant and prepare for field assembly with bolted fittings designed to pull connections together.
- E. Wood Species: Match species and cut indicated for other types of transparent-finished architectural woodwork located in same area of building, unless

otherwise indicated.

1. Provide split species on trim that face areas with different wood species, matching each face of woodwork to species and cut of finish wood surfaces in areas finished.

2.7 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH (PAINT GRADE)

- A. Quality Standard: Comply with AWI Section 300.
 1. Grade: Custom.
- B. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
- C. Assemble casings in plant except where limitations of access to place of installation require field assembly.
- D. Assemble moldings in plant to maximum extent possible. Miter corners in plant and prepare for field assembly with bolted fittings designed to pull connections together.
- E. Wood Material: Provide paint-grade hardwood or medium-density fiberboard (MDF) in profiles to match existing trim, suitable to receive an opaque finish. Material shall be free of defects that would telegraph through the finish coating.
- F. Factory prepare exposed surfaces for field-applied opaque finish by filing, sanding, and applying on coat of compatible primer.

2.8 CUSTOM WOOD SLATS

- A. Quality Standard: Comply with AWI Section 300.
 1. Grade: Custom
- B. Fabricate custom wood slats from solid, kiln-dried plain-sawn maple, free of knots, splits, checks, and other defects.
- C. Nominal sizes: As indicated on Drawings, including nominal 1 inch by 2 inch and 2 inch by 2 inch members.
- D. Profile: Rout front exposed face of each slat with a continuous concave profile using a core-box router bit or other approved method to match profiles indicated on Drawings. Maintain uniform profile dimensions, and smooth, consistent machining free of tear-out, burn marks, or machining defects.
- E. Transparent Finish [ST-1 & ST-2 as indicated on Drawings]:
 1. Apply penetrating stain selected by Architect from manufacturer's full range of transparent stain colors. Allow for (2) colors. Apply compatible clear sealer and protective topcoat system recommended by finish manufacturer in satin sheen.
- F. Concealed fasteners: Fabricate and install slats to minimize visible fasteners. Where mechanical fasteners penetrate exposed faces, countersink, fill, sand smooth, and finish fastener holes to match adjacent stained wood.
- G. Running joints are not acceptable.
- H. Field Cutting: Minimize field cutting and drilling. Where field modifications are required, repair exposed surfaces and refinish cut edges and penetrations to match adjacent finished woodwork.

2.9 COUNTERTOPS

- A. Quality Standard: Comply with AWI Section 400 requirements for countertops.
 - 1. Grade: Custom.
 - 2. High Pressure Decorative Laminate, "Premium" grade. Provide edge profile indicated.
 - 3. Board Material:
 - a) Provide 1-3/16" solid particleboard, 45 psf density (industrial grade).
- B. Laminate Cladding for Horizontal Surface: High pressure decorative laminate complying with NEMA LD 3 and as follows:
 - 1. Colors, Patterns, and Finishes: As indicated or, if not otherwise indicated, as selected from laminate manufacturer's standard products in full range of solid & matrix colors, matte finish.
 - 2. Grade: PF-42 (0.042" nominal thickness, roll-form material) at sink counters. GP-50 (0.050" nominal thickness) at counters without sinks.
 - 3. Edge Treatment: Same as laminate cladding on horizontal surface unless noted otherwise.

2.10 LAMINATE FLOORING

- A. To match existing laminate flooring in color, pattern, plank size, and laying direction.
 - 1. Manufacturer: Pergo
 - 2. Pattern/Style: TimberCraft + WetProtect
 - 3. Color: Spring Bank Oak
 - 4. Construction: High Density Fiberboard (HDF)
 - 5. Installation: Click-lock system
 - 6. Floor Score Certified: True
 - 7. Installation: Attached Underlayment
 - 8. Total Thickness: 10 mm + 2 mm attached pad
 - 9. Width: 5.25"
 - 10. Length: 47.25"

2.11 SHOP FINISHING OF INTERIOR ARCHITECTURAL WOODWORK

- A. Quality Standard: Comply with AWI Section 1500, unless otherwise indicated.
 - 1. Grade: Provide finishes of same grades as items to be finished.
- B. General: The entire finish of interior architectural woodwork is specified in this Section, regardless of whether shop applied or applied after installation.
 - 1. Shop Finishing: To the greatest extent possible, finish architectural woodwork at the fabrication shop. Defer only final touch up, cleaning, and polishing until after installation.
- C. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
 - 1. Backpriming: Apply one coat of sealer or primer compatible with finish

coats to concealed surfaces of woodwork, including backs of trim, cabinets, paneling, and ornamental work and the underside of countertops. Apply 2 coats to back of paneling. Concealed surfaces of plastic laminate-clad woodwork do not require backpriming when surfaced with plastic laminate or thermoset decorative overlay.

- D. Washcoat for Stained Finish: Apply a vinyl washcoat to woodwork made from closed-grain wood before staining and finishing.
- E. Open Finish for Open-Grain Woods: Do not apply filler to open-grain woods.
- F. Filled Finish for Open-Grain Woods: After staining (if any), apply paste wood filler to open-grain woods and wipe off excess. Tint filler to match stained wood.
 - 1. Apply vinyl washcoat sealer after staining and before filling.
- G. Transparent Finish: Comply with requirements indicated below for grade, finish system, staining, and sheen, with sheen measured on 60-degree gloss meter per ASTM D 523.
 - 1. Grade: Custom.
 - 2. AWI Finish System TR-2: Catalyzed lacquer or TR-4 Conversion Varnish as used on interior doors. Refer to Division 8 Section *Flush Wood Doors*.
 - 3. Staining: Match approved door finish
 - 4. Sheen: Match approved door finish

PART 3 EXECUTION

3.1 PREPARATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas before installing.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including back priming and removal of packing.

3.2 INSTALLATION

- A. Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified in Part 2 of this Section for type of woodwork involved.
- B. Install woodwork plumb, level, true, and straight with no distortions. Shim as required with concealed shims. Install to a tolerance of 1/8 inch in 96 inches for plumb and level (including tops).
- C. Scribe and cut woodwork to fit adjoining work and refinish cut surfaces or repair damaged finish at cuts.

- D. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with recommendations of chemical treatment manufacturer, including those for adhesives used to install woodwork.
- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork and matching final finish where transparent finish is indicated.
- F. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to the greatest extent possible. Do not use pieces less than 36 inches long, except where necessary. Stagger joints in adjacent and related members. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base, if finished.
 - 1. Install standing and running trim with no more than 1/8 inch in 96-inch variation from a straight line.
- G. Tops: Anchor securely to base units and other support systems as indicated. Calk space between backsplash and wall with specified sealant.
 - 1. Install countertops with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
- H. Paneling: Anchor paneling to supporting substrate with concealed panel-hanger clips and by blind nailing on backup strips, splined-connection strips, and similar associated trim and framing. Do not face nail unless otherwise indicated.
 - 1. Install flush paneling with no more than 1/16 inch in 96-inch vertical cup or bow and 1/8 inch in 96-inch horizontal variation from a true plane.
- I. Complete the finishing work specified in this Section to the extent not completed at shop or before installation of woodwork. Fill nail holes with matching filler where exposed. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats were applied in the shop.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork where possible to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

3.4 PROTECTION

- A. Provide final protection and maintain conditions in a manner acceptable to fabricator and Installer that ensures that woodwork is without damage or deterioration at the time of Substantial Completion.

END OF SECTION

SECTION 079200
JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes joint sealants for the following applications:
 - 1. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints of exterior openings where indicated.
 - c. Vertical joints on exposed surfaces of interior unit masonry concrete walls and partitions.
 - d. Other joints as indicated.
 - 2. Interior joints in the following horizontal traffic surfaces:
 - a. Isolation joints in cast-in-place concrete slabs.
 - b. Other joints as indicated.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- C. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.
- D. SWRI Validation Certificate: For each elastomeric sealant specified to be validated by SWRI's Sealant Validation Program.

- E. Qualification Data: For Installer.
- F. Field Test Report Log: For each elastomeric sealant application.
- G. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: 5 years from date of Substantial Completion.
- C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
 - 1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
 - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.

4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- C. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.
- D. Single-Component Neutral- and Basic-Curing Silicone Sealant :
 1. Available Products:
 - a. Tremco; Spectrem 1 (Basic).
 2. Type and Grade: S (single component) and NS (nonsag).
 3. Class: 100/50.
 4. Use Related to Exposure: NT (nontraffic).
 5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 6. Stain-Test-Response Characteristics: Nonstaining to porous substrates per ASTM C 1248.

E. Single-Component Mildew-Resistant Neutral-Curing Silicone Sealant:

1. Available Products:
 - a. Pecora Corporation; 898.
 - b. Tremco; Tremsil 600 White.
2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 25.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: ceramic tile .

F. Multicomponent Nonsag Urethane Sealant :

1. Available Products:
 - a. Pecora Corporation; Dynatrol II.
 - b. Tremco; Dymeric 511.
 - c. Tremco; Vulkem 922.
2. Type and Grade: M (multicomponent) and NS (nonsag).
3. Class: 50.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: M, A, and, as applicable to joint substrates indicated, O.

G. Multicomponent Nonsag Urethane Sealant :

1. Available Products:
 - a. Schnee-Morehead, Inc.; Permthane SM 7200.
 - b. Sika Corporation, Inc.; Sikaflex - 2c NS TG.
 - c. Sonneborn, Division of ChemRex Inc.; NP 2.
 - d. Tremco; Vulkem 227.
 - e. Tremco; Vulkem 322 DS.
2. Type and Grade: M (multicomponent) and NS (nonsag).
3. Class: 25.
4. Uses Related to Exposure: T (traffic) and NT (nontraffic).
5. Uses Related to Joint Substrates: M, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: aluminum coated with a high-performance coating brick.

H. Single-Component Nonsag Urethane Sealant :

1. Available Products:
 - a. Sika Corporation, Inc.; Sikaflex - 1a.
 - b. Sonneborn, Division of ChemRex Inc.; Ultra.
 - c. Sonneborn, Division of ChemRex Inc.; NP 1.

- d. Tremco; Vulkem 116.
- 2. Type and Grade: S (single component) and NS (nonsag).
- 3. Class: 25.
- 4. Uses Related to Exposure: T (traffic) and NT (nontraffic).
- 5. Uses Related to Joint Substrates: M, A, and, as applicable to joint substrates indicated, O.

2.4 LATEX JOINT SEALANTS

- A. Latex Sealant: Comply with ASTM C 834, Type P, Grade NF.
- B. Available Products:
 - 1. Bostik Findley; Chem-Calk 600.
 - 2. Pecora Corporation; AC-20+.
 - 3. Schnee-Morehead, Inc.; SM 8200.
 - 4. Sonneborn, Division of ChemRex Inc.; Sonolac.
 - 5. Tremco; Tremflex 834.

2.5 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) , and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
- C. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F . Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.6 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Masonry.
 - c. Unglazed surfaces of ceramic tile.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:

- a. Metal.
 - b. Glass.
 - c. Porcelain enamel.
 - d. Glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.

3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 FIELD QUALITY CONTROL

A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:

1. Extent of Testing: Test completed elastomeric sealant joints as follows:
 - a. Perform 10 tests for the first 1000 feet of joint length for each type of elastomeric sealant and joint substrate.
 - b. Perform 1 test for each of joint length thereafter or 1 test per each floor per elevation.
2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab in Appendix X1 in ASTM C 1193.
 - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; do this by extending cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
3. Inspect joints for complete fill, for absence of voids, and for joint configuration complying with specified requirements. Record results in a field-adhesion-test log.
4. Inspect tested joints and report on the following:
 - a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
 - b. Whether sealants filled joint cavities and are free of voids.
 - c. Whether sealant dimensions and configurations comply with specified requirements.
5. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
6. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

B. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION

SECTION 081113
HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Standard hollow metal doors and frames.

1.3 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings.
- B. Standard Hollow Metal Work: Hollow metal work fabricated according to ANSI/SDI A250.8.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, fire-resistance rating, and finishes.
- B. Shop Drawings: Include the following:
 - 1. Elevations of each door design.
 - 2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
 - 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 - 4. Locations of reinforcement and preparations for hardware.
 - 5. Details of each different wall opening condition.
 - 6. Details of anchorages, joints, field splices, and connections.
 - 7. Details of accessories.
 - 8. Details of moldings, removable stops, and glazing.
 - 9. Details of conduit and preparations for power, signal, and control systems.
- C. Other Action Submittals:
 - 1. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with door hardware schedule.

- D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each type of hollow metal door and frame assembly.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain hollow metal work from single source from single manufacturer.
- B. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 257 or UL 10C.
- C. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9. Label each individual glazed lite.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
 - 1. Provide additional protection to prevent damage to finish of factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch-high wood blocking. Do not store in a manner that traps excess humidity.
 - 1. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.8 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
1. Amweld Building Products, LLC.
 2. Benchmark; a division of Therma-Tru Corporation.
 3. Ceco Door Products; an Assa Abloy Group company.
 4. Curries Company; an Assa Abloy Group company.
 5. Deansteel Manufacturing Company, Inc.
 6. Firedoor Corporation.
 7. Fleming Door Products Ltd.; an Assa Abloy Group company.
 8. Habersham Metal Products Company.
 9. Karpen Steel Custom Doors & Frames.
 10. Kewanee Corporation (The).
 11. Mesker Door Inc.
 12. Pioneer Industries, Inc.
 13. Security Metal Products Corp.
 14. Steelcraft; an Ingersoll-Rand company.
 15. Windsor Republic Doors.

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum A40 metallic coating.
- D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z coating designation; mill phosphatized.
1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow metal frames of type indicated.
- G. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.

- H. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- I. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.3 STANDARD HOLLOW METAL DOORS

- A. General: Provide doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8.
 - 1. Design: Flush panel.
 - 2. Core Construction: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core.
 - 3. Vertical Edges for Single-Acting Doors: Beveled edge.
 - a. Beveled Edge: 1/8 inch in 2 inches.
 - 4. Vertical Edges for Double-Acting Doors: Round vertical edges with 2-1/8-inch radius.
 - 5. Top and Bottom Edges: Closed with flush or inverted 0.042-inch- thick, end closures or channels of same material as face sheets.
 - 6. Tolerances: Comply with SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."
- B. Interior Doors: Face sheets fabricated from cold-rolled steel sheet. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
 - 1. Level 2 and Physical Performance Level B (Heavy Duty), Model 2 (Seamless).
- C. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
- D. Fabricate concealed stiffeners and hardware reinforcement from either cold- or hot-rolled steel sheet.

2.4 STANDARD HOLLOW METAL FRAMES

- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
- B. Interior Frames: Fabricated from cold-rolled steel sheet.
 - 1. Fabricate frames with mitered or coped corners.
 - 2. Fabricate frames as knocked down or face welded unless otherwise indicated.
 - 3. Fabricate knocked-down, drywall slip-on frames for in-place gypsum board partitions.
 - 4. Frames for Level 3 Steel Doors: 0.053-inch- thick steel sheet.

5. Frames for Wood Doors: 0.053-inch- thick steel sheet.
 6. Frames for Borrowed Lights: 0.053-inch- thick steel sheet, same as adjacent door frame.
- C. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

- A. Jamb Anchors:
1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
 2. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.
 3. Compression Type for Drywall Slip-on Frames: Adjustable compression anchors.
 4. Postinstalled Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch- diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.
- B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch thick, and as follows:
1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
 2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at finish floor surface.

2.6 HOLLOW METAL PANELS

- A. Provide hollow metal panels of same materials, construction, and finish as specified for adjoining hollow metal work.

2.7 STOPS AND MOLDINGS

- A. Moldings for Glazed Lites in Doors: Minimum 0.032 inch thick, fabricated from same material as door face sheet in which they are installed.
- B. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch high unless otherwise indicated.
- C. Loose Stops for Glazed Lites in Frames: Minimum 0.032 inch thick, fabricated from same material as frames in which they are installed.

2.8 LOUVERS

- A. Provide louvers for interior doors, where indicated, that comply with SDI 111C, with blades or baffles formed of 0.020-inch- thick, cold-rolled steel sheet set into 0.032-inch-thick steel frame.
 - 1. Sightproof Louver: Stationary louvers constructed with inverted V-shaped or Y-shaped blades.

2.9 ACCESSORIES

- A. Ceiling Struts: Minimum 1/4-inch-thick by 1-inch- wide steel.
- B. Grout Guards: Formed from same material as frames, not less than 0.016 inch thick.

2.10 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.
- C. Hollow Metal Doors:
- D. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 1. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
 - 2. Sidelight Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
 - 3. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 - 4. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
 - 5. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
 - 6. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Two anchors per jamb up to 60 inches high.
 - 2) Three anchors per jamb from 60 to 90 inches high.

- 3) Four anchors per jamb from 90 to 120 inches high.
 - 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
- b. Stud-Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Three anchors per jamb up to 60 inches high.
 - 2) Four anchors per jamb from 60 to 90 inches high.
 - 3) Five anchors per jamb from 90 to 96 inches high.
 - 4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
 - 5) Two anchors per head for frames above 42 inches wide and mounted in metal-stud partitions.
 - c. Compression Type: Not less than two anchors in each jamb.
 - d. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.
7. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
 - b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
- E. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.
- F. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 8 Section "Door Hardware."
1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8 .
 2. Reinforce doors and frames to receive nontemplated, mortised and surface-mounted door hardware.
 3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
 4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 16 Sections.
- G. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints.
1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow metal work.
 2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.

3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
4. Provide loose stops and moldings on inside of hollow metal work.
5. Coordinate rabbet width between fixed and removable stops with type of glazing and type of installation indicated.

2.11 STEEL FINISHES

- A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.
 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.
- C. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness to the following tolerances:
 1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 2. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 3. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.

4. Plumbness: Plus or minus 1/16 inch, measured at jambs on a perpendicular line from head to floor.
- C. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11.
1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - a. At fire-protection-rated openings, install frames according to NFPA 80.
 - b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
 - c. Install frames with removable glazing stops located on secure side of opening.
 - d. Install door silencers in frames before grouting.
 - e. Remove temporary braces necessary for installation only after frames have been properly set and secured.
 - f. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
 - g. Field apply bituminous coating to backs of frames that are filled with grout or mortar.
 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with powder-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation behind frames.
 4. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
 5. Concrete Walls: Solidly fill space between frames and concrete with grout. Take precautions, including bracing frames, to ensure that frames are not deformed or damaged by grout forces.
 6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.

7. In-Place Gypsum Board Partitions: Secure frames in place with postinstalled expansion anchors through floor anchors at each jamb. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
 8. Ceiling Struts: Extend struts vertically from top of frame at each jamb to overhead structural supports or substrates above frame unless frame is anchored to masonry or to other structural support at each jamb. Bend top of struts to provide flush contact for securing to supporting construction. Provide adjustable wedged or bolted anchorage to frame jamb members.
 9. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.
- C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.
1. Non-Fire-Rated Standard Steel Doors:
 - a. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
 - b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
 - c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
 - d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.
 2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
- D. Glazing: Comply with installation requirements in Division 8 Section "Glazing" and with hollow metal manufacturer's written instructions.
1. Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches o.c. and not more than 2 inches o.c. from each corner.

3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection and prior to 1 year warranty date after substantial completion. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

- D. Metallic-Coated Surfaces: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION

SECTION 082113
FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Solid-core doors with wood-veneer faces.
 - 2. Factory fitting flush wood doors to frames and factory machining for hardware.
 - 3. Door Hardware.

1.3 SUBMITTALS

- A. Product Data: For each type of door indicated. Include details of core and edge construction, louvers, and trim for openings. Include factory-finishing specifications.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.
 - 1. Indicate dimensions and locations of mortises and holes for hardware.
 - 2. Indicate dimensions and locations of cutouts.
 - 3. Indicate requirements for veneer matching.
 - 4. Indicate doors to be factory finished and finish requirements.
 - 5. Indicate fire-protection ratings for fire-rated doors.
- C. Samples for Verification:
 - 1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish. For each wood species and transparent finish, provide set of three samples showing typical range of color and grain to be expected in the finished work.
 - 2. Corner sections of doors, approximately 8 by 10 inches, with door faces and edges representing actual materials to be used.
 - a. Provide samples for each species of veneer and solid lumber required.
 - b. Finish veneer-faced door samples with same materials proposed for factory-finished doors.
 - 3. Louver blade and frame sections, 6 inches long, for each material and finish specified.

4. Frames for light openings, 6 inches long, for each material, type, and finish required.

D. Warranty: Sample of special warranty.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain flush wood doors from single manufacturer.
- B. Quality Standard: In addition to requirements specified, comply with WDMA I.S.1-A, "Architectural Wood Flush Doors."
- C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.
- B. Package doors individually in plastic bags or cardboard cartons.
- C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
 - b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.
 2. Warranty Period for Solid-Core Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
1. Algoma Hardwoods, Inc.
 2. Buell Door Company Inc.
 3. Chappell Door Co.
 4. Eagle Plywood & Door Manufacturing, Inc.
 5. Eggers Industries.
 6. Graham.
 7. Ideal Architectural Doors & Plywood.
 8. Ipik Door Company.
 9. Lambton Doors.
 10. Marshfield Door Systems, Inc.
 11. Oshkosh Architectural Door Company.
 12. Vancouver Door Company.
 13. VT Industries Inc.

2.2 DOOR CONSTRUCTION, GENERAL

- A. WDMA I.S.1-A Performance Grade:
1. Heavy Duty unless otherwise indicated.
- B. Particleboard-Core Doors:
1. Particleboard: ANSI A208.1, Grade LD-2.
 2. Blocking: Provide wood blocking in particleboard-core doors as follows:
 - a. 5-inch top-rail blocking, in doors indicated to have closers.
 - b. 5-inch bottom-rail blocking, in exterior doors and doors indicated to have kick, mop, or armor plates.
 3. Provide doors with either glued-wood-stave or structural-composite-lumber cores instead of particleboard cores for doors indicated to receive exit devices.
- C. Structural-Composite-Lumber-Core Doors:
1. Structural Composite Lumber: WDMA I.S.10.
 - a. Screw Withdrawal, Face: 700 lbf.
 - b. Screw Withdrawal, Edge: 400 lbf.
- D. Fire-Protection-Rated Doors: Provide core specified or mineral core as needed to provide fire-protection rating indicated.

1. Edge Construction: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed edges.
2. Pairs: Provide fire-retardant stiles that are listed and labeled for applications indicated without formed-steel edges and astragals. Provide stiles with concealed intumescent seals. Comply with specified requirements for exposed edges.

E. Mineral-Core Doors:

1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
2. Blocking: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated as needed to eliminate through-bolting hardware and as follows:
 - a. 5-inch top-rail blocking.
 - b. 5-inch bottom-rail blocking, in doors indicated to have protection plates.
 - c. 5-inch midrail blocking, in doors indicated to have armor plates.
 - d. 4-1/2-by-10-inch lock blocks 5-inch midrail blocking, in doors indicated to have exit devices.
3. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.

2.3 VENEERED-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Solid-Core Doors :

1. Grade: Premium, with Grade A faces.
2. Species to be select by Architect from following: Select white maple.
3. Cut: Plain sliced (flat sliced).
4. Match between Veneer Leaves: Bookmatch.
5. Assembly of Veneer Leaves on Door Faces: Runningmatch.
6. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
7. Transom Match: Continuous match.
8. Exposed Vertical and Top Edges: Same species as faces
9. Core: Either glued wood stave or structural composite lumber.
10. Construction: Five plies. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering. Faces are bonded to core using a hot press.
11. WDMA I.S.1-A Performance Grade: Heavy Duty.

2.4 LOUVERS AND LIGHT FRAMES

- A. Wood Louvers: Door manufacturer's standard solid-wood louvers unless otherwise indicated.
 - 1. Wood Species: Same species as door faces.
- B. Wood Beads for Light Openings in Wood Doors: Provide manufacturer's standard wood beads as follows unless otherwise indicated.
 - 1. Wood Species: Same species as door faces.
 - 2. Profile: Manufacturer's standard shape.
 - 3. At wood-core doors with 20-minute fire-protection ratings, provide wood beads and metal glazing clips approved for such use.
- C. Wood-Veneered Beads for Light Openings in Fire-Rated Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire-protection rating indicated. Include concealed metal glazing clips where required for opening size and fire-protection rating indicated.

2.5 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
 - 1. Comply with requirements in NFPA 80 for fire-rated doors.
- B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
 - 1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
- C. Transom and Side Panels: Fabricate matching panels with same construction, exposed surfaces, and finish as specified for associated doors. Finish bottom edges of transoms and top edges of rabbeted doors same as door stiles.
 - 1. Fabricate door and transom panels with full-width, solid-lumber meeting rails. Provide factory-installed spring bolts for concealed attachment into jambs of metal door frames.
- D. Openings: Cut and trim openings through doors in factory.
 - 1. Light Openings: Trim openings with moldings of material and profile indicated.
 - 2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Division 8 Section "Glazing."
 - 3. Louvers: Factory install louvers in prepared openings.

2.6 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
 - 1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.
- B. Finish doors at factory.
- C. Transparent Finish:
 - 1. Grade: Premium.
 - 2. Finish: WDMA TR-6 catalyzed polyurethane.
 - 3. Staining: As selected by Architect from manufacturer's full range.
 - 4. Effect: Semifilled finish, produced by applying an additional finish coat to partially fill the wood pores.
 - 5. Sheen: Satin.

2.7 HARDWARE

- A. Door 101, 201
 - 1. Lockset: Schlage H-12818C Entry 626, or equivalent by Sargent, Dormakaba, or Yale. Match Owners Keyway standard.
 - 2. (3) Hinges: Five Knuckle Ball bearing hinges by Stanley, Bommer, or McKinney. Match size to existing hollow metal frame.
 - 3. (1) Door Stop Rockwood 409 or equivalent.
- B. Door 102
 - 1. (6) Hinges: Five Knuckle Ball bearing hinges by Stanley, Bommer, or McKinney.
 - 2. (1) Removable Mullion Precision KR 822 or equivalent.
 - 3. (1) Exit Device Precision 3RO 2103 CA-03 CD 630 or equivalent.
 - 4. (1) Exit Device Precision 3RO 2103 CD 630 or equivalent.
 - 5. (2) Rim Cylinder Housing
 - 6. (2) Mortise Cylinder Housing Match Owners Keyway standard.
 - 7. (4) Cylinder Combined Core Match Owners Keyway Standard.
 - 8. (2) Door Pull Trimco 1191-4 x N x Door thickness as req. 630.
 - 9. (2) Door Closer CLD-4551 EDA AVB 689 SD
 - 10. (2) Kick Plate K0050 10" x 2" LDW x B4E-Heavy x CSK 630 TR
 - 11. (2) Convex Wall Stop 1270CX 626 TR
 - 12. (1) Mullion Seal 5100 SNA
 - 13. (2) Door Silencers 1229A GREY TR
- C. Door 102.1
 - 1. (3) Hinges: Five Knuckle Ball bearing hinges by Stanley, Bommer, or McKinney.
 - 2. (1) Exit Device Precision 3RO 2103 CA-03 CD 630 or equivalent.
 - 3. (1) Rim Cylinder Housing
 - 4. (1) Mortise Cylinder Housing Match Owners Keyway standard.
 - 5. (2) Cylinder Combined Core Match Owners Keyway Standard.

6. (1) Door Pull Trimco 1191-4 x N x Door thickness as req. 630.
7. (1) Door Closer CLD-4551 EDA AVB 689 SD
8. (1) Kick Plate K0050 10" x 2" LDW x B4E-Heavy x CSK 630 TR
9. (1) Convex Wall Stop 1270CX 626 TR
10. (1) Door Silencers 1229A GREY TR

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and installed door frames before hanging doors.
 1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Division 8 Section "Door Hardware."
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.
 1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.
- C. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.
 1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.
 - a. Comply with NFPA 80 for fire-rated doors.
 2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
 3. Bevel fire-rated doors 1/8 inch in 2 inches at lock edge; trim stiles and rails only to extent permitted by labeling agency.
- D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- E. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION

SECTION 083113
ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Access doors and frames for walls and ceilings.

1.3 SUBMITTALS

- A. Product Data: For each type of access door and frame indicated. Include construction details, fire ratings, materials, individual components and profiles, and finishes.
- B. Shop Drawings: Show fabrication and installation details of access doors and frames for each type of substrate. Include plans, elevations, sections, details, and attachments to other work.
- C. Access Door and Frame Schedule: Provide complete access door and frame schedule, including types, locations, sizes, latching or locking provisions, and other data pertinent to installation.
- D. Ceiling Coordination Drawings: Reflected ceiling plans, drawn to scale, on which ceiling-mounted items including access doors and frames, lighting fixtures, diffusers, grilles, speakers, sprinklers, and special trim are shown and coordinated with each other.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain access door(s) and frame(s) through one source from a single manufacturer.
- B. Fire-Rated Access Doors and Frames: Units complying with NFPA 80 that are identical to access door and frame assemblies tested for fire-test-response characteristics per the following test method and that are listed and labeled by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1. NFPA 252 or UL 10B for vertical access doors and frames.
 - 2. ASTM E 119 or UL 263 for horizontal access doors and frames.
- C. Size Variations: Obtain Architect's acceptance of manufacturer's standard-size units, which may vary slightly from sizes indicated.

1.5 COORDINATION

- A. Verification: Determine specific locations and sizes for access doors needed to gain access to concealed plumbing, mechanical, or other concealed work, and indicate in the schedule specified in "Submittals" Article.

PART 2 - PRODUCTS

2.1 STEEL MATERIALS

- A. Steel Sheet: electrolytic zinc-coated, ASTM A 591/A 591M with cold-rolled steel sheet substrate complying with ASTM A 1008/A 1008M, Commercial Steel (CS), exposed.
- B. Steel Finishes: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Surface Preparation for Steel Sheet: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning," to remove dirt, oil, grease, or other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
 - 2. Factory-Primed Finish: Apply shop primer immediately after cleaning and pretreating.

2.2 ACCESS DOORS AND FRAMES FOR WALLS AND CEILINGS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Babcock-Davis; A Cierra Products Co.
 - 2. Bar-Co, Inc. Div.; Alfab, Inc.
 - 3. Dur-Red Products.
 - 4. J. L. Industries, Inc., as standard of quality use Model TM and FD for fire-rated.
 - 5. Nystrom, Inc.
- B. Flush Access Doors and Frames with Exposed Trim: Fabricated from steel sheet.
 - 1. Locations: Masonry wall surfaces.
 - 2. Door: Minimum 0.060-inch-thick sheet metal, set flush with exposed face flange of frame.
 - 3. Frame: Minimum 0.060-inch-thick sheet metal with 1-inch- or 1-1/4-inch- wide, manufacturer's standard, surface-mounted trim.
 - 4. Hinges: Spring-loaded, concealed-pin type or Continuous piano, manufacturer's standard.
 - 5. Lock: Cylinder.
- C. Flush Access Doors and Trimless Frames: Fabricated from metallic-coated steel sheet.
 - 1. Locations: Gypsum board wall and ceiling surfaces.
 - 2. Door: Minimum 0.060-inch-thick sheet metal, set flush with surrounding finish surfaces.

3. Frame: Minimum 0.060-inch-thick sheet metal with drywall bead flange.
 4. Hinges: Spring-loaded, concealed-pin type or Continuous piano, manufacturer's standard.
 5. Lock: Cylinder.
- D. Fire-Rated, Insulated, Flush Access Doors and Frames with Exposed Trim: Fabricated from metallic-coated steel sheet.
1. Locations: Masonry wall surfaces.
 2. Fire-Resistance Rating: Not less than that of adjacent construction.
 3. Temperature Rise Rating: 250 deg F at the end of 30 minutes.
 4. Door: Flush panel with a core of mineral-fiber insulation enclosed in sheet metal with a minimum thickness of 0.036 inch.
 5. Frame: Minimum 0.060-inch-thick sheet metal with 1-inch- or 1-1/4-inch- wide, manufacturer's standard, surface-mounted trim.
 6. Hinges: Spring-loaded, concealed-pin type or Continuous piano, manufacturer's standard.
 7. Automatic Closer: Spring type.
 8. Lock: Self-latching device with cylinder lock.
- E. Fire-Rated, Insulated, Flush Access Doors and Trimless Frames: Fabricated from metallic-coated steel sheet.
1. Locations: Gypsum board wall and ceiling surfaces.
 2. Fire-Resistance Rating: Not less than that of adjacent construction.
 3. Temperature Rise Rating: 250 deg F at the end of 30 minutes.
 4. Door: Flush panel with a core of mineral-fiber insulation enclosed in sheet metal with a minimum thickness of 0.036 inch.
 5. Frame: Minimum 0.060-inch-thick sheet metal with drywall bead flange.
 6. Hinges: Spring-loaded, concealed-pin type or Continuous piano, manufacturer's standard.
 7. Automatic Closer: Spring type.
 8. Lock: Self-latching device with cylinder lock.

2.3 FABRICATION

- A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.
- B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.
- C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access panels to types of supports indicated.
1. Exposed Flanges: Nominal 1 to 1-1/2 inches wide around perimeter of frame.
 2. Provide mounting holes in frames for attachment of units to metal or wood framing.
 3. Provide mounting holes in frame for attachment of masonry anchors. Furnish adjustable metal masonry anchors.

- D. Latching Mechanisms: Furnish number required to hold doors in flush, smooth plane when closed.
 - 1. For cylinder lock, furnish two keys per lock and key all locks alike.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with manufacturer's written instructions for installing access doors and frames.
- B. Set frames accurately in position and attach securely to supports with plane of face panels aligned with adjacent finish surfaces.
- C. Install doors flush with adjacent finish surfaces or recessed to receive finish material.

3.2 ADJUSTING AND CLEANING

- A. Adjust doors and hardware after installation for proper operation.
- B. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

END OF SECTION

SECTION 088000
GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Glass products.
2. Glazing sealants.
3. Glazing tapes.
4. Miscellaneous glazing materials.

1.2 DEFINITIONS

- A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.
- B. Glass Thicknesses: Indicated by thickness designations in millimeters in accordance with ASTM C1036.
- C. IBC: International Building Code.

1.3 COORDINATION

- A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances to achieve proper safety margins for glazing retention under each design load case, load case combination, and service condition.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 2. Review temporary protection requirements for glazing during and after installation.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.
- C. Delegated Design Submittal: For glass indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by qualified professional engineer responsible for their preparation.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer manufacturers of fabricated glass units .
- B. Product Certificates: For glass.
- C. Product Test Reports: For fabricated glass and glazing sealants, for tests performed by a qualified testing agency.
 - 1. For glazing sealants, provide test reports based on testing current sealant formulations within previous 36-month period.
- D. Preconstruction adhesion and compatibility test report.
- E. Sample Warranties: For special warranties.

1.7 QUALITY ASSURANCE

- A. Fabricated-Glass Manufacturer Qualifications: A qualified manufacturer of fabricated glass units who is approved and certified by primary glass manufacturer.
- B. Installer Qualifications: A qualified glazing contractor for this Project who is certified under the North American Contractor Certification Program (NACC) for Architectural Glass & Metal (AG&M) contractors and who employs glazing technicians certified under the Architectural Glass and Metal Technician (AGMT) certification program.
- C. Glass Testing Agency Qualifications: A qualified independent testing agency accredited according to the NFRC CAP 1 Certification Agency Program.
- D. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C1021 to conduct the testing indicated.
- E. Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for materials and execution.
 - 1. Install glazing in mockups specified in Section 084113 "Aluminum-Framed Entrances and Storefronts" to match glazing systems required for Project, including glazing methods.
 - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 PRECONSTRUCTION TESTING

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials in accordance with manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1.10 FIELD CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.

- 1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or are below 40 deg F.

1.11 WARRANTY

- A. Manufacturer's Special Warranty for Heat-Soaked Tempered Glass: Manufacturer agrees to replace heat-soaked tempered glass units that spontaneously break due to nickel sulfide (NiS) inclusions at a rate exceeding 0.3 percent (3/1000) within specified warranty period. Coverage for any other cause is excluded.

- 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Glass: Obtain tinted and coated glass from single source from single manufacturer.
- B. Source Limitations for Glazing Accessories: For each product and installation method, obtain from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

- B. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design glazing.
- C. Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined in accordance with the IBC and ASTM E1300:
 - 1. Design Wind Pressures: As indicated on Drawings .
 - a. Wind Design Data: As indicated on Drawings.
 - 2. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 1 inch, whichever is less.
- D. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.
- E. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
 - 1. For monolithic-glass lites, properties are based on units with lites 6 mm thick .
 - 2. For laminated-glass lites, properties are based on products of construction indicated.
 - 3. SHGC and Visible Transmittance: Center-of-glazing values, in accordance with NFRC 200 and based on most current non-beta version of LBL's WINDOW computer program.
 - 4. Visible Reflectance: Center-of-glazing values, in accordance with NFRC 300.
- F. Acoustic Performance:
 - 1. Interior Glazing: Provide sound control assemblies identical to those of assemblies tested as sound-retardant units by an acoustical testing agency, and have the following minimum rating: 48 STC for assemblies indicated with [AW ##]

2.3 GLASS PRODUCTS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. NGA Publications: "Laminated Glazing Reference Manual" and "Glazing Manual."
 - 2. AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR A7, "Sloped Glazing Guidelines."
- B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

- C. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than thickness indicated.
- D. Strength: Where annealed float glass is indicated, provide annealed float glass, heat-strengthened float glass, or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened float glass is indicated, provide heat-strengthened float glass or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where fully tempered float glass is indicated, provide fully tempered float glass.

2.4 GLASS PRODUCTS

- A. Clear Annealed Float Glass: ASTM C1036, Type I, Class 1 (clear), Quality-Q3.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Guardian Glass LLC.
 - b. Pilkington North America; NSG Group.
 - c. Vitro Architectural Glass.
- B. Fully Tempered Float Glass: ASTM C1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- C. Heat-Strengthened Float Glass: ASTM C1048, Kind HS (heat strengthened), Type I, Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- D. Reflective- and Low-E-Coated Vision Glass: ASTM C1376.
- E. Ceramic-Coated Spandrel Glass: ASTM C1048, Type I, Condition B, Quality-Q3.

2.5 GLAZING SEALANTS

- A. General:
 - 1. Compatibility: Compatible with one another and with other materials they contact, including glass products and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
 - 2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.

3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range of industry colors.
- B. Neutral-Curing Silicone Glazing Sealant, Complying with ASTM C920, Type S, Grade NS, Use NT.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Pecora Corporation.
 - b. Sika Corporation.
 - c. The Dow Chemical Company.
 - d. Tremco Incorporated.

2.6 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C1281 and AAMA 800 for products indicated below:
1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
 2. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.
- B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:
1. AAMA 810.1, Type 1, for glazing applications in which tape acts as primary sealant.
 2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.7 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, recommended in writing by manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks:
1. Silicone with Shore A durometer hardness of 85, plus or minus 5.
 2. Type recommended in writing by sealant or glass manufacturer.

D. Spacers:

1. Neoprene blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
2. Type recommended in writing by sealant or glass manufacturer.

E. Edge Blocks:

1. Silicone with Shore A durometer hardness per manufacturer's written instructions.
2. Type recommended in writing by sealant or glass manufacturer.

F. Cylindrical Glazing Sealant Backing: ASTM C1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

2.8 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

1. Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
 - a. Temperature Change: 120 deg F , ambient; 180 deg F , material surfaces .

B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.

C. Grind smooth and polish exposed glass edges and corners.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Presence and functioning of weep systems.
3. Minimum required face and edge clearances.
4. Effective sealing between joints of glass-framing members.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

3.3 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.
- C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.
- D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- F. Provide spacers for glass lites where length plus width is larger than 50 inches.
 - 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
 - 2. Provide 1/8-inch- minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and in accordance with requirements in referenced glazing publications.
- H. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- I. Set glass lites with proper orientation so that coatings face exterior or interior as specified.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

- K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended in writing by gasket manufacturer.

3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first, then to jambs. Cover horizontal framing joints by applying tapes to jambs, then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until right before each glazing unit is installed.
- F. Center glass lites in openings on setting blocks, and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- G. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.5 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended in writing by gasket manufacturer.
- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending

stresses in glass. Seal gasket joints with sealant recommended in writing by gasket manufacturer.

- E. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.7 CLEANING AND PROTECTION

- A. Immediately after installation, remove nonpermanent labels and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains.
 - 1. If, despite such protection, contaminating substances do contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.
- C. Remove and replace glass that is damaged during construction period.
- D. Wash glass on both exposed surfaces not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

3.8 MONOLITHIC GLASS SCHEDULE

- A. Clear Glass Type : Annealed Heat-strengthened Fully tempered float glass.
 - 1. Minimum Thickness: 6 mm .
 - 2. Safety glazing required.
 - 3. Provide or decorative film overlay where indicated.

END OF SECTION

SECTION 092900
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes metal stud wall framing; metal channel ceiling framing; gypsum board and joint treatment; gypsum sheathing; and acoustic insulation.

1.2 REFERENCES

- A. ASTM C36 - Gypsum Wallboard.
- B. ASTM C475 - Joint Compound and Joint Tape for Finishing Gypsum Board.
- C. ASTM C645 - Non-Load Bearing (Axial) Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
- D. ASTM C754 - Installation of Steel Framing Members to Receive Screw-Attached Gypsum Board.
- E. ASTM C840 - Application and Finishing of Gypsum Board.
- F. ASTM E119 - Test Methods for Fire Tests of Building Construction and Materials.
- G. GA-216 (Gypsum Association) - Recommended Specifications for the Application and Finishing of Gypsum Board.
- H. GA-600 (Gypsum Association) - Fire Resistance Design Manual.
- I. UL (Underwriters Laboratories, Inc.) - Fire Resistance Directory.

1.3 PERFORMANCE REQUIREMENTS

- A. Conform to applicable code for fire rated assemblies as follows:
 - 1. Fire Rated Partitions: Listed assembly by UL Numbers as indicated on partition types.
 - 2. Fire Rated Ceiling and Soffits: Listed assembly by UL as indicated.

1.4 SUBMITTALS

- A. Shop Drawings: Indicate special details associated with fireproofing, and acoustic seals.
- B. Product Data: Submit data on metal framing, gypsum board, joint tape; acoustic accessories and all trim pieces.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with ASTM C840, ASTM C1280, GA-214, GA-216 and GA-600.

1.6 QUALIFICATIONS

- A. Installer: Company specializing in performing Work of this section with minimum five years documented experience.

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

- A. Manufacturers:
 - 1. National Gypsum Co.
 - 2. G-P Gypsum Corp.
 - 3. Celotex Building Products.
 - 4. United States Gypsum Co.
 - 5. No Substitutions.

2.2 COMPONENTS

- A. Studs: ASTM C645; nominal 25-guage; 0.0179" minimum thickness of base metal for interior assemblies except 20-guage 0.0328" minimum thickness for reinforcement at door frames and ceramic wall tile assemblies.
- B. Depth of Section: As indicated on the drawings.
- C. Runners: Match studs; provide type recommended by stud manufacturer for floor and ceiling support of studs. Top track connection to structural steel frame shall be by deep leg tracks, metal angle clips or zee sections as required for spray-on fireproofing of steel members.
- D. Coating: All members shall be galvanized per ASTM A525 and ASTM A591.
- E. Furring, Framing, and Accessories: ASTM C645, GA-216 and GA-600.
- F. Fasteners: ASTM C514, ASTM C1002 and GA-216 as recommended by board manufacturer.
- G. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.
- H. Adhesive: ASTM C557, GA-216 and as recommended by board manufacturer

J. Gypsum Board Materials:

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - i. American Gypsum Co.
 - ii. G-P Gypsum.
 - iii. National Gypsum Company.
 - iv. USG Corporation.
2. Standard Gypsum Board: ASTM C36; 5/8 inch thick, maximum available length in place; ends square cut, tapered edges
3. Fire Rated Gypsum Board: ASTM C36; fire resistive type, UL; 5/8 inch thick, maximum available length in place; ends square cut, tapered edges.
5. Ceiling Type: Manufactured to have more sag resistance than regular-type gypsum board.
 - a. Thickness: 1/2 inch.
 - b. Long Edges: Tapered.

2.3 ACCESSORIES

- A. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.
- B. Corner Beads: Metal.
- C. Edge Trim: GA-216; Type LC, L, LK, U exposed reveal bead. Shape as required.
- D. Joint Materials: ASTM C475; GA-201 and GA-216; reinforcing tape, joint compound, adhesive, and water.
- E. Fasteners: ASTM C1002, Type S12 and GA-216 as recommended by accessory manufacturer.
- F. Drywall Suspension System: For ceilings provide Direct Suspension as manufactured by U. S. Gypsum Company or approved equal. Install per manufacturer's directions.
- G. Preformed Drywall Trims:
 1. Reveals: Gordon Series 400 #412-518 Pittcon Model SWR-0630-063, where indicated on drawings.

- H. Screws: ASTM C1002, with corrosion resistant treatment (at tiled areas)
- I. Aluminum LED Lighted Drywall Base (Refer to elec for information regarding lighting components)
 - a. Basis of Design: Fry Reglet - LI Drywall Base R3
 - b. Description: Flat base shall create a lighted horizontal recessed reveal
 - c. Material: Extruded Aluminum
 - d. Finish/Color: To be selected by Architect from manufacturer's full range of standard and premium finishes/colors including powder coat solid colors.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that site conditions are ready to receive work and opening dimensions are as instructed by the manufacturer.

3.2 INSTALLATION

A. Metal Stud Installation:

1. Install studs in accordance with ASTM C754, GA-216 and GA-600.
2. Metal Stud Spacing: 16 inches on center.
3. Extend stud framing to bottom of roof deck or structure. Attach ceiling runner securely to framing in accordance with details indicated. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners.
4. Door Opening Framing: Install double studs at door frame jambs. Install stud tracks on each side of opening, at frame head height, and between studs and adjacent studs.
5. Blocking: Screw wood blocking to studs. Bolt or screw steel channels to studs. Install blocking for support of plumbing fixtures, toilet partitions, wall cabinets, toilet accessories, hardware, etc.

B. Ceiling Framing Installation:

1. Install in accordance with ASTM C754.
2. Coordinate location of hangers with other work.
3. Install ceiling framing independent of walls, columns, and above ceiling work.

4. Reinforce openings in ceiling suspension system which interrupt main carrying channels or furring channels, with lateral channel bracing. Extend bracing minimum 24 inches past each end of openings.
 5. Laterally brace entire suspension system.
- C. Acoustic Accessories Installation:
1. Install acoustic sealant within partitions.
- D. Gypsum Board Installation:
1. Install gypsum board in accordance with GA-216 and GA-600.
 2. Erect single layer gypsum board in most economical direction, with ends and edges occurring over firm bearing. Extend board 4 inches above ceiling or to roof deck, whichever is lower.
 3. Erect exterior gypsum sheathing in accordance with ASTM C1280, horizontally, with edges butted and ends occurring over firm bearing.
 4. Use screws when fastening gypsum board to metal furring or framing.
 5. Double Layer Applications for Rated Partitions: Place first layer perpendicular to framing members. Use fire rated gypsum backing board for fire rated partitions and ceilings.
 6. Place second layer perpendicular to first layer. Offset joints of second layer from joints of first layer.
 7. Treat cut edges and holes in moisture resistant gypsum board with sealant.
 8. Place control joints consistent with lines of building spaces as indicated or as directed.
 9. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
 10. Gypsum Board Application and Finishing Standard: Install and finish gypsum board to comply with ASTM C840.
 - a. Install sound attenuation blankets (where required) prior to gypsum board unless readily installed after board has been installed.
 - b. Locate exposed end-butt joints as far from center of walls and ceilings as possible, and stagger not less than 24 inches in alternate courses of board.
 - c. Install ceiling boards across framing in the manner which minimizes the number of end-butt joints, and which avoids end joints in the central area of each ceiling. Stagger end joints at least 24 inches.

- d. Install wall/partition boards in manner which minimizes the number of end-butt joints or avoids them entirely where possible. At stairwells and similar high walls, install boards horizontally with end joints staggered over studs.
- e. Do not install imperfect, damaged or damp boards.
- f. Spot grout hollow metal door frames for solid core wood doors, hollow metal doors and doors over 32 inches wide. Apply spot grout at each jamb anchor clip just before inserting board into frame.
- g. Isolate perimeter of non-load-bearing drywall partitions at structural abutments. Provide ¼ inch to ½ inch space and trim edge with “L” or “LC” edge trim. Seal joints with acoustical sealant.

12. Install reveal moldings where board abuts dissimilar materials.

E. Joint Treatment:

- 1. Finish in accordance with GA-214 Level (1) above ceilings only, behind ceramic tile or (2 and 3) above ceilings only, (4) storage and utility areas, (5) all public and office areas.
- 2. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
- 3. Feather coats on to adjoining surfaces so that camber is per finish level (i.e., 1/32 inch for level (4) and no camber for level (5)).
- 4. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile.

END OF SECTION

SECTION 095113
ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Section includes acoustical panels and exposed suspension systems for interior ceilings.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified, 6 inches in size.
- C. Samples for Initial Selection: For components with factory-applied finishes.
- D. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of sizes indicated below:
 - 1. Acoustical Panels: Set of 6-inch-square Samples of each type, color, pattern, and texture.
 - 2. Exposed Suspension-System Members, Moldings, and Trim: Set of 6-inch-long Samples of each type, finish, and color.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Reflected ceiling plans, drawn to scale, and coordinated with each other, using input from installers of the items involved.
 - 1. Ceiling suspension-system members
 - 2. Structural members to which suspension systems will be attached
 - 3. Method of attaching hangers to building structure.
 - a. Furnish layouts for cast-in-place anchors, clips, and other ceiling attachment devices whose installation is specified in other Sections.
 - 4. Carrying channels or other supplemental support for hanger-wire attachment where conditions do not permit installation of hanger wires at required spacing.
 - 5. Size and location of initial access modules for acoustical panels.

6. Items penetrating finished ceiling and ceiling-mounted items including the following:
 - a. Lighting fixtures.
 - b. Diffusers.
 - c. Grilles
 - d. Speakers.
 - e. Access panels.
 - f. Perimeter moldings
7. Show operation of hinged and sliding components covered by or adjacent to acoustical panels.
8. Minimum Drawing Scale: 1/4 inch = 1 foot.

B. Product test reports.

C. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Acoustical Ceiling Units: Full-size panels equal to 2 percent of quantity installed.
2. Suspension-System Components: Quantity of each exposed component equal to 2 percent of quantity installed.

1.7 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Build mockup of typical ceiling area.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical panels, suspension-system components, and accessories to Project site and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.

- B. Before installing acoustical panels, permit them to reach room temperature and a stabilized moisture content.

1.9 FIELD CONDITIONS

- A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain each type of acoustical ceiling panel and its supporting suspension system from single source from single manufacturer

2.2 ACOUSTICAL PANELS, GENERAL

- A. Source Limitations: Obtain each type of acoustical ceiling panel and supporting suspension system from single source from single manufacturer.
- B. Multiple products will be required
- C. Acoustical Panel Standard: Provide manufacturer's standard panels of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectances unless otherwise indicated.
 - 1. Mounting Method for Measuring NRC: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches away from test surface according to ASTM E 795.
- D. Acoustical Panel Colors and Patterns: Match appearance characteristics indicated for each product type.

2.3 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Flame-Spread Index: Class A in accordance with ASTM E1264.
 - 2. Smoke-Developed Index: 50 or less.
- B. Fire-Resistance Ratings: Comply with ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL or from the listings of another qualified testing agency.

2.4 ACOUSTICAL PANELS [ACP]

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Armstrong Ceiling & Wall Solutions.
2. Rockfon; ROCKWOOL International.
3. USG Corporation.

- B. Acoustical Panel Standard: Manufacturer's standard panels in accordance with ASTM E1264.

C. **[ACP-1]** ACOUSTICAL PANELS FOR ACOUSTICAL PANEL CEILING

1. Basis of Design: Armstrong Mesa Tegular (Item Number 681) 15/16" Angled Tegular.
2. Color: White.
3. Light Reflectance (LR): 0.85.
4. Ceiling Attenuation Class (CAC): 35.
5. Noise Reduction Coefficient (NRC): 0.60.
6. Thickness: 3/4 inch.
7. Modular Size: 24 by 24 inches.

2.5 METAL SUSPENSION SYSTEMS, GENERAL

- A. Finishes and Colors, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Provide manufacturer's standard factory-applied finish for type of system indicated.
- B. Attachment Devices: Size for five times the design load indicated in ASTM C635, Table 1, "Direct Hung", unless otherwise indicated. Comply with seismic design requirements.

2.6 METAL SUSPENSION SYSTEM

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Armstrong Ceiling & Wall Solutions.
2. Certainteed; SAINT-GOBAIN.

3. Rockfon; ROCKWOOL International.
 4. USG Corporation.
- B. Metal Suspension-System Standard: Manufacturer's standard, direct-hung, metal suspension system and accessories in accordance with ASTM C635/C635M.
- C. Narrow-Face, Capped, Double-Web, Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet; prepainted, electrolytically zinc coated, or hot-dip galvanized, G30 coating designation; with prefinished 9/16-inch- wide metal caps on flanges.
1. Structural Classification: Intermediate Heavy-duty system.
 2. End Condition of Cross Runners: Override (stepped) or butt-edge type.
 3. Face Design: Flat, flush Flanges formed with an integral center reveal.
 4. Cap Material: Cold-rolled steel or aluminum.
 5. Cap Finish: Painted in color as selected from manufacturer's full range.
 6. Location: Typical unless noted otherwise.

2.7 ACCESSORIES

- A. Attachment Devices: Size for five times the design load indicated in ASTM C635/C635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.
1. Anchors in Concrete: Anchors of type and material indicated below, with holes or loops for attaching hangers of type indicated and with capability to sustain, without failure, a load equal to five times that imposed by ceiling construction, as determined by testing according to ASTM E 488/E 488M or ASTM E 1512 as applicable, conducted by a qualified testing and inspecting agency.
 - a. Type: Post installed bonded anchors
 - b. Corrosion Protection: Stainless-steel components complying with ASTM F 593 and ASTM F 594, Group 1 Alloy 304 or 316.
 2. Wire Hangers, Braces, and Ties: Provide wires as follows:
 - a. Zinc-Coated, Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
 - b. Size: Wire diameter sufficient for its stress at three times hanger design load (ASTM C 635/C 635M, Table 1, "Direct Hung") will be less than yield stress of wire, but not less than 0.106-inch-diameter wire.
 3. Hanger Rods: Mild steel, zinc coated or protected with rust-inhibitive paint
 4. Angle Hangers: Angles with legs not less than 7/8 inch wide; formed with 0.04-inch-thick, galvanized-steel sheet complying with ASTM A 653/A 653M, G90 coating designation; with bolted connections and 5/16-inch-diameter bolts

2.8 METAL EDGE MOLDINGS AND TRIM

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Armstrong Ceiling & Wall Solutions.

2. Certainteed; SAINT-GOBAIN.
 3. Fry Reglet Corporation.
 4. Gordon Inc.
 5. Rockfon; ROCKWOOL International.
 6. USG Corporation.
- B. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that comply with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension-system runners.
1. Edge moldings shall fit acoustical panel edge details and suspension systems indicated and match width and configuration of exposed runners unless otherwise indicated.
 2. For lay-in panels with reveal edge details, provide stepped edge molding that forms reveal of same depth and width as that formed between edge of panel and flange at exposed suspension member.
- C. Extruded-Aluminum Edge Moldings and Trim: Where indicated, provide manufacturer's extruded-aluminum edge moldings and trim of profile indicated or referenced by manufacturer's designations, including splice plates, corner pieces, and attachment and other clips.
1. Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker
 2. Baked-Enamel or Powder-Coat Finish: Minimum dry film thickness of 1.5 mils. Comply with ASTM C 635/C 635M and coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

2.9 ACOUSTICAL SEALANT

- A. Products: Subject to compliance with requirements, provide one of the following:
1. Acoustical Sealant for Exposed and Concealed Joints:
 - a. Pecora Corporation; AC-20 FTR Acoustical and Insulation Sealant
 - b. USG Corporation; SHEETROCK Acoustical Sealant.
 2. Acoustical Sealant for Concealed Joints:
 - a. Henkel Corporation; OSI Pro-Series SC-175 Acoustical Sound Sealant.
 - b. Hilti CP605
 - c. Pecora Corporation; AIS-919.
 - d. Tremco, Inc.; Tremco Acoustical Sealant.
 3. Acoustical Sealant: Manufacturer's standard sealant complying with ASTM C 834 and effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
 - a. Exposed and Concealed Joints: Nonsag, paintable, nonstaining latex sealant.
 - b. Concealed Joints: Nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic-rubber sealant.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.
- B. Examine acoustical panels before installation. Reject acoustical panels that are wet, moisture damaged, or mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected

3.2 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders unless otherwise indicated.
- B. Layout openings for penetrations centered on the penetrating items.

3.3 INSTALLATION

- A. Install acoustical panel ceilings in accordance with ASTM C636/C636M and manufacturer's written instructions.
- B. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.
 - 1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
 - 2. Do not use exposed fasteners, including pop rivets, on moldings and trim.
 - 3. Arrange directionally patterned acoustical panels as follows:
 - a. As indicated on reflected ceiling plans.
 - 4. Screw attach moldings to substrate at intervals not more than 16 inches o.c. and not more than 3 inches from ends. Miter corners accurately and connect securely.
 - 5. Install [**hold-down**] and clips in areas indicated; space in accordance with panel manufacturer's written instructions unless otherwise indicated.
- C. Suspend ceiling hangers from building's structural members and as follows:
 - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
 - 2. Splay hangers only where required and, if permitted with fire-resistance-rated ceilings, to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension-system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
 4. Secure wire hangers to ceiling-suspension members and to supports above with a minimum of three tight turns. Connect hangers directly to structure or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
 5. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both the structure to which hangers are attached and the type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
 6. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, post installed mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
 7. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
 8. Do not attach hangers to steel deck tabs
 9. Do not attach hangers to steel roof deck. Attach hangers to structural members.
 10. Space hangers not more than 48 inches o.c. along each member supported directly from hangers unless otherwise indicated; provide hangers not more than 8 inches from ends of each member
 11. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards
- D. Install acoustical panels with undamaged edges and fit accurately into suspension-system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide precise fit.
1. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension-system runners and moldings.
 2. For reveal-edged panels on suspension-system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges
 3. For reveal-edged panels on suspension-system members with box-shaped flanges, install panels with reveal surfaces in firm contact with suspension-system surfaces and panel faces flush with bottom face of runners.
 4. Paint cut edges of panel remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer.
 5. Protect lighting fixtures and air ducts according to requirements indicated for fire resistance-rated assembly.

3.4 ERECTION TOLERANCES

- A. Suspended Ceilings: Install main and cross runners level to a tolerance of 1/8 inch in 12 feet, non-cumulative.

- B. Moldings and Trim: Install moldings and trim to substrate and level with ceiling suspension system to a tolerance of 1/8 inch in 12 feet, non-cumulative.

3.5 CLEANING

- A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension-system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage.
- B. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

SECTION 096513
RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Thermoset-rubber base.
 - 2. Rubber molding accessories.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified, not less than 12 inches long.
- C. Samples for Initial Selection: For each type of product indicated.
- D. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size Samples, but not less than 12 inches long.
- E. Product Schedule: For resilient base and accessory products.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Furnish not less than 10 linear feet for every 500 linear feet or fraction thereof, of each type, color, pattern, and size of resilient product installed.

1.5 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E-648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class II, not less than 0.22 W/sq. cm.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F.

1.7 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F , in spaces to receive resilient products during the following periods:
 1. 48 hours before installation.
 2. During installation.
 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 RESILIENT BASE

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Johnsonite; a Tarkett company. (Basis of Design)
 2. Flexco Corporation.
 3. Roppe Corporation; Roppe Holding Company.
- B. Performance requirements meets ASTM F1861 Standard Specification for Resilient Thermoset Rubber Wall Base, Type TS, Group 1.
 1. Location:
 - a. Provide in areas with resilient floor coverings & carpet.
- C. Thickness: 0.125 inch.
- D. Type: Coved
- E. Height:
 1. WB-1: 4 Inches

- F. Lengths: Coils in manufacturer's standard length.
- G. Outside Corners: Job formed as directed in manufacturer's installation instructions.
- H. Inside Corners: Job formed as directed in manufacturer's installation instructions.
- I. Colors: As selected by Architect from full range of industry colors.
- J. Test Data:
 - 1. Flexibility, ASTM F137: Passes ¼ inch mandrel
 - 2. Resistance to light, ASTM F1515: Passes
 - 3. Resistance to chemicals, ASTM F925: Passes
 - 4. ASTM E648, Standard Test Method for Critical Radiant Flux of 0.45 watts/cm2 or greater, Class 1.
 - 5. ASTM E84, Flame Spread and Smoke Development: Class B, ≤ 450

2.2 RESILIENT MOLDING ACCESSORY (TRANSITIONS AND NOSINGS)

A. Transitions:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Johnsonite; a Tarkett company. (Basis of Design)
 - b. Roppe Corporation; Roppe Holding Company.
 - c. VPI Corporation.
- 2. Description: Rubber carpet edge – 3/8" to floor with 3-5/8" wide support base, wheel traffic design, compliant with ADA requirements of Section 4.5.2 Changes of Level.
- 3. Profile and Dimensions: As required between dissimilar floor surfaces and materials. Use as indicated on drawings.
- 4. Colors and Patterns: As selected by Architect from full range of industry colors.
- 5. Product Performance and Technical Data:
 - a. Hardness: ASTM D 2240 – Not less than 856 Shore A
 - b. Abrasion Resistance: ASTM D 3389 – 0.22 mg/cycle
 - c. Slip Resistance: ASTM D 2047 – Exceeds Federal Standards and ADA recommendations of .5 for flat surfaces
 - d. Fire Resistance: ASTM E 648/NFPA 253 (critical Radiant Flux) – Class 1

B. Nosings:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Mannington Commercial, Burke Flooring Products (Basis of Design)
 - b. Roppe Corporation; Roppe Holding Company.
 - c. VPI Corporation.
- 2. Description: Thermoplastic rubber universal top-set stair nosing with ribbed tread surface.
- 3. Profile and Dimensions: Universal top set nosing, Style 585. Use as indicated on drawings.

4. Colors and Patterns: As selected by Architect from full range of industry colors.

2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.
- C. Stair-Tread Nose Filler: Two-part epoxy compound recommended by resilient stair-tread manufacturer to fill nosing substrates as required.
- D. Floor Polish: Provide protective, liquid floor-polish products recommended by resilient stair-tread manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
 1. Installation of resilient products indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates for Resilient Stair Accessories: Prepare horizontal surfaces according to ASTM F 710.
 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.

3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer.
4. Moisture Testing: Perform tests so that each test area does not exceed 1000 sq. ft. , and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
 - a. Anhydrous Calcium Chloride Test: ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
 - b. Relative Humidity Test: Using in-situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install resilient products until materials are the same temperature as space where they are to be installed.
 1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.3 RESILIENT BASE INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient base.
- B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
- D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- E. Do not stretch resilient base during installation.
- F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- G. Job-Formed Corners:
 1. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.
 - a. Miter or cope corners to minimize open joints.
 2. Outside Corners: Follow manufacturer's written instructions for job-formed outside corners. Ensure tight fit to substrate.

3.4 RESILIENT ACCESSORY INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient accessories.
- B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

3.5 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.
- B. Perform the following operations immediately after completing resilient-product installation:
 - 1. Remove adhesive and other blemishes from surfaces.
 - 2. Sweep and vacuum horizontal surfaces thoroughly.
 - 3. Damp-mop horizontal surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION

SECTION 096516
RESILIENT SHEET FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Vinyl sheet flooring with backing.
 - 2. Metal edge protection and transition profiles for resilient coverings.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of resilient sheet flooring.
 - 1. Include sheet flooring layouts, locations of seams, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
 - 2. Show details of special patterns.
- C. Samples: For each exposed product and for each color, texture, and pattern specified, in manufacturer's standard size, but not less than 6-by-9-inch sections.
 - 1. For heat-welding bead, manufacturer's standard-size Samples, but not less than 9 inches long, of each color required.
 - 2. For metal edge protection, manufacturers standard-size Samples, but not less than 6 inches long, of each product required
- D. Samples for Initial Selection: For each type of resilient sheet flooring indicated.
- E. Samples for Verification: For each type of resilient sheet flooring, in manufacturer's standard size, but not less than 6-by-9-inch sections of each color, texture, and pattern required.
 - 1. For heat-welding bead, manufacturer's standard-size Samples, but not less than 9 inches long, of each color required.
 - 2. For metal edge protection, manufacturers standard-size Samples, but not less than 6 inches long, of each product required
- F. Welded-Seam Samples: For seamless-installation technique indicated and for each resilient sheet flooring product, color, and pattern required; with seam running lengthwise

and in center of 6-by-9-inch Sample applied to a rigid backing and prepared by Installer for this Project.

- G. Product Schedule: For resilient sheet flooring. Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of resilient sheet flooring to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Resilient Sheet Flooring: Furnish not less than 10 linear feet for every 500 linear feet or fraction thereof, in roll form and in full roll width for each type, color, and pattern of flooring installed.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for resilient sheet flooring installation and seaming method indicated.
 - 1. Engage an installer who employs workers for this Project who are trained or certified by resilient sheet flooring manufacturer for installation techniques required.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Coordinate mockups in this Section with mockups specified in other Sections.
 - a. Size: Minimum 100 sq. ft. for each type, color, and pattern.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient sheet flooring and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store rolls upright.

1.9 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 85 deg F, in spaces to receive resilient sheet flooring during the following periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Close spaces to traffic during resilient sheet flooring installation.
- D. Close spaces to traffic for 48 hours after resilient sheet flooring installation.
- E. Install resilient sheet flooring after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 VINYL SHEET FLOORING WITH BACKING [SV-1]

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Mannington Commercial (Basis of Design)
 - 2. Tarkett Commercial
 - 3. Forbo Flooring Systems
- B. Product Standard: ASTM F 1303 Type 1, grade 1, Class B
- C. Total Thickness: 0.275" (7.0 mm)
- D. Wear Layer Thickness: 20mil (0.51 mm)
- E. Sheet Width: As standard with manufacturer.
- F. Seamless-Installation Method: Heat welded.
- G. Colors and Patterns: As indicated on Room Finish Legend (Basis of Design).

2.2 METAL EDGE PROTECTION AND TRANSITION PROFILES FOR RESILIENT COVERINGS

- A. Manufacturers: Schluter or approved equal subject to compliance with requirements.
- B. Description: J-shaped profile with 1/4 inch (6 mm) wide visible surface and integrated perforated tapered anchoring leg – Schluter VINPRO-S (or approved equal).
- C. Material and Finish: As selected by architect from manufacturers full offering
- D. Height: As required.
- E. Locations: As indicated on drawings and required at dissimilar floor surfaces and materials.

2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by resilient sheet flooring manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by flooring and adhesive manufacturers to suit resilient sheet flooring and substrate conditions indicated.
- C. Seamless-Installation Accessories:
 - 1. Heat-Welding Bead: Manufacturer's solid-strand product for heat welding seams.
 - a. Colors: As selected by Architect from manufacturer's full range to contrast with flooring Match flooring.
 - 2. Chemical-Bonding Compound: Manufacturer's product for chemically bonding seams.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient sheet flooring.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare substrates according to resilient sheet flooring manufacturer's written instructions to ensure adhesion of resilient sheet flooring.
- B. Concrete Substrates: Prepare according to ASTM F 710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by resilient sheet flooring manufacturer. Do not use solvents.
 - 3. Alkalinity and Adhesion Testing: Perform tests recommended by resilient sheet flooring manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
 - 4. Moisture Testing: Perform tests so that each test area does not exceed 200 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
 - a. Anhydrous Calcium Chloride Test: ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
 - b. Relative Humidity Test: Using in-situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install resilient sheet flooring until materials are the same temperature as space where they are to be installed.
 - 1. At least 48 hours in advance of installation, move flooring and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient sheet flooring.

3.3 RESILIENT SHEET FLOORING INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient sheet flooring.
- B. Unroll resilient sheet flooring and allow it to stabilize before cutting and fitting.
- C. Lay out resilient sheet flooring as follows:
 - 1. Maintain uniformity of flooring direction.
 - 2. Minimize number of seams; place seams in inconspicuous and low-traffic areas, at least 6 inches away from parallel joints in flooring substrates.
 - 3. Match edges of flooring for color shading at seams.

4. Avoid cross seams.

- D. Scribe and cut resilient sheet flooring to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend resilient sheet flooring into toe spaces, door reveals, closets, and similar openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on resilient sheet flooring as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Adhere resilient sheet flooring to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
- H. Seamless Installation:
 - 1. Heat-Welded Seams: Comply with ASTM F 1516. Rout joints and heat weld with welding bead to fuse sections permanently into a seamless flooring installation. Prepare, weld, and finish seams to produce surfaces flush with adjoining flooring surfaces.
- I. Integral-Flash-Cove Base: Cove resilient sheet flooring 6 inches 4 inches up vertical surfaces. Support flooring at horizontal and vertical junction with cove strip. Butt at top against cap strip.
 - 1. Install metal corners at inside and outside corners.

3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting resilient sheet flooring.
- B. Perform the following operations immediately after completing resilient sheet flooring installation:
 - 1. Remove adhesive and other blemishes from surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect resilient sheet flooring from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Floor Polish: Remove soil, adhesive, and blemishes from flooring surfaces before applying liquid floor polish.
 - 1. Apply three coat(s).

- E. Cover resilient sheet flooring until Substantial Completion.

END OF SECTION

SECTION 096816
SHEET CARPETING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This section includes the following:
 - 1. Sheet carpet flooring
 - 2. Metal edge protection and transitions
 - 3. Aluminum stair nosings
 - 4. Lit stair nosings

1.3 SUBMITTALS

- A. Product Data: For the following, including installation recommendations for each type of substrate:
 - 1. Carpet: For each type indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance.
 - 2. Metal edge protection and transitions for carpeting: Include manufacturer's written data.
 - 3. Aluminum stair nosings: Include manufacturer's written data.
- B. Shop Drawings: Show the following:
 - 1. Columns, doorways, enclosing walls and partitions, built-in cabinets, and locations where cutouts are required in carpet.
 - 2. Carpet type, color and dye lot.
 - 3. Locations where dye lot changes occur.
 - 4. Seam locations, types and methods.
 - 5. Type of subfloor.
 - 6. Type of installation.
 - 7. Pattern type, repeat size, location, direction, and starting point.
 - 8. Pile direction.
 - 9. Type, color, and location of edge, transition, and other accessory strips.
 - 10. Transition details to other flooring materials.
- C. Samples: For each of the following products and for each color and texture required. Label each sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
 - 1. Carpet: 12-inch square sample.
 - 2. Exposed Edge, Transition and other Accessory Stripping: 12-inch long samples.
 - 3. Carpet Seam: 6-inch sample.
 - 4. For metal edge protection, manufacturers standard-size Samples, but not less than 6 inches long, of each product required

- 5. For aluminum nosings, manufacturers standard-size Samples, but not less than 6 inches long, of each product required
- D. Product Schedule: For carpet. Use same designations indicated on Drawings.
- E. Qualification Data: For installer.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency.
- G. Maintenance Data: For carpet to include in maintenance manuals. Include the following:
 - 1. Methods for maintaining carpet, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
 - 2. Precautions for cleaning materials and methods that could be detrimental to carpet.
- H. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified by the Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements.
- B. Flooring contractor to be specialty contractor normally engaged in this type of work and shall have three (3) years minimum documented experience in commercial installation of these materials

1.5 DELIVERY, STORAGE AND HANDLING

- A. Comply with CRI 104, Section 5, "Storage and Handling".

1.6 PROJECT CONDITIONS

- A. Comply with CRI 104, Section 7.2, "Site Conditions: Temperature and Humidity" and Section 7.12, "Ventilation".
- B. Environmental Limitations: Do not install carpet until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for project when occupied for its intended use.
- C. Do not install carpet over concrete slabs until slabs have cured, are sufficiently dry to bond with adhesive, and have pH range recommended by carpet manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet, install carpet before installing these items.

1.7 WARRANTY

- A. Special Warranty for Carpet: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet installation that fail in materials or workmanship within special warranty period.
 - 1. All warranties must be issued by the manufacturer as standard published warranties on all types of carpet within this document. Second source warranties that involve parties other than the carpet manufacturer are unacceptable. If the product fails to perform as warranted when installed according to the carpet installation instructions and maintained according to maintenance instructions, the affected area will be repaired or replaced at the expense of the manufacturer. The carpet manufacturer will provide standard published written performance warranties for the following:
 - a. Lifetime warranty against excessive surface wear. Excessive wear means no more than 10% loss of pile fiber weight measured before and after use as tested under ASTM D-3936.
 - b. Lifetime static protection, meaning built-in protection below 3.0 kv as tested under AATCC-134.
 - c. Tuft Bind (edge ravel, yarn pulls, zippering)
 - d. Delamination
 - e. Lifetime Moisture Barrier
- B. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Carpet: Full-width rolls equal to 5 percent of amount installed for each type indicated, but not less than 10 sq.yd.

PART 2 PRODUCTS

2.1 BROADLOOM CARPET (CPT-1)

- A. Manufacturer:
 - 1. J+J Flooring (Basis of Design)
 - 2. Mohawk Group
 - 3. Tarkett
- B. Product: Verify 6097
- C. Color: Inherent Accent 3569

- D. Construction: Patterned Loop
- E. Backing: Endure Plus
- F. Dye Method: Solution Dyed
- G. Fiber Type: Encore SD Ultima
- H. Face Weight: 15 oz./sy. (509 grams/m²)
- I. Pile Density: 5364 oz/y³. (198.90 kg/m³)
- J. Gauge: 1/12 (4.72 rows/cm)
- K. Stitches: 10.00 stitches/in (3.94 stitches/cm)
- L. Pattern Repeat: 24.00" (w) x 24.00" (l) approx. (60.96cm x 60.96cm)
- M. Soil Release: Yes
- N. Stain Resistance: Yes
- O. Bleach Resistance: Yes
- P. Optional Treatments: Yes
- Q. Standard Size: 12 ft (3.66 m)
- R. Performance Characteristics: As follows:
 - 1. Radiant Panel: Class 1
 - 2. Smoke Density: ASTM E 662 - Less than 450
 - 3. Static Test: AATCC-134 – Less than 3 kv
 - 4. ADA Compliance: Compliant for accessible routes
 - 5. Pill Test: Yes
 - 6. Lightfastness: Yes

2.2 METAL EDGE PROTECTION AND TRANSITION PROFILES

- A. Manufacturers: Schluter or approved equal subject to compliance with the requirements
- B. Description: J-shaped profile with ¼" (6mm) wide visible surface and integrated perforated tapered anchoring leg – Schluter VINPRO-S (or approved equal)
- C. Material and Finish: As selected by architect from manufacturers full offering
- D. Height: As required
- E. Locations: As indicated on drawings and required at dissimilar floor surfaces and materials.

2.3 ALUMINUM NOSINGS

- A. Manufactures: Tredsafe or approved equal.

- B. Description: Extruded anodized aluminum stair nosing with satin finish and integral slip resistant insert.
- C. Material and Finish: As selected by architect from manufacturers full offering
- D. Profile & Length: Provide profile to match stair nosing in lengths to avoid running joints.
- E. Locations: As indicated on drawings at stair nosings.

2.4 ILLUMINTATED STAIR NOSINGS

- A. Manufacturers: StepGuard or approved equal.
- B. Description: Extruded aluminum stair nosing profile with integrated electroluminescent (EL) downlight, slip-resistant tread insert, and concealed anchoring leg for installation at the leading edge of stair treads. Basis of Design – Max Immersive StepGuard SG-MAX-DL.
- C. Color/Finish: Architect to select from manufacturer's full range of options.
- D. Locations: As indicated on drawings – refer to Architectural and Electrical drawings.

2.5 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet manufacturer.
- B. Adhesives: Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet and is required by the carpet manufacturer.
- C. Tackless Carpet Stripping: Water-resistant plywood, in strips as required to match cushion thickness and that comply with CRI 104, Section 12.2.
- D. Seam Adhesive: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for sealing and taping seams and butting cut edges At backing to form secure seams and to prevent pile loss at seams.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances and other conditions affecting carpet performance. Examine carpet for type, color, pattern, and potential defects.
- B. Examine and verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet.
- C. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive carpet.
- D. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Comply with CRI 104, Section 7.3 "Site Conditions; "Floor Preparation" and carpet manufacturer's written installation instructions for preparing substrates.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch, unless more stringent requirements are required by manufacturer's written instructions.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil or silicone, without using solvents. Use mechanical methods recommended in writing by carpet manufacturer.
- D. Broom and vacuum clean substrates to be covered immediately before installing carpet.

3.3 INSTALLATION

- A. Comply with CRI 104 and carpet manufacturer's written installation instructions for the following:
 - 1. Direct-Glue-Down Installation: Comply with CRI 104, Section 9 "Direct Glue-Down-Installation".
- B. Comply with carpet manufacturer's written recommendations and shop drawings for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under the door in closed position.

1. Bevel adjoining border edges at seams with hand shears.
- C. Do not bridge building expansion joints with carpet.
- D. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet manufacturer.
- E. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves and similar openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use a nonpermanent, nonstaining marking device.
- G. Install pattern parallel to walls and borders to comply with CRI 104, Section 15 "Patterned Carpet Installations" and with carpet manufacturer's written recommendation.

3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet:
 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
 2. Remove yarns that protrude from carpet surface.
 3. Vacuum carpet using commercial machine with face-beater element.
- B. Protect installed carpet to comply with CRI 104, Section 16 "Protection of Indoor Installations".
- C. Protect carpet against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet manufacturer.

END OF SECTION

SECTION 098433
ACOUSTICAL TREATMENT

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Custom fabric wrapped acoustical wall panels, shapes and sizes as indicated on the drawings.
2. Felt acoustical wall panels, shapes and sizes as indicated on the drawings.
3. Acoustical theater board.

1.2 REFERENCES

A. ASTM International:

1. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
2. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.

1.3 SYSTEM DESCRIPTION

A. Performance Requirements:

1. Surface Burning Characteristics (ASTM E84):
 - a. Flamespread: 25, maximum.
 - b. Smoke Developed: 450, maximum.
 - c. This rating applies to all acoustical wall treatment unless specifically excluded in the product specification section 2.02.

1.4 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, edge profiles and panel components, including anchorage, accessories, finish colors and textures.
- D. Samples: Submit selection and verification samples of finishes, colors and textures.
- E. Test Reports: Certified test reports showing compliance with specified performance requirements.
 1. Standard Systems: Submit certified copies of previous test reports substantiating performance of system in lieu of retesting.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Installer to have minimum of 5 years documented experience installing the specified product. To provide evidence of appropriate experience in system installation and method proposed and acceptable to panel manufacturer.

1.6 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

1.7 PROJECT CONDITIONS

- A. Environmental Requirements: Do not install panels until wet work, such as concrete and plastering, is complete; the building is enclosed; and the temperature and relative humidity are stabilized at 60 - 80 degrees F (16 - 27 degrees C) and 45%, respectively. Maintain temperature and humidity as recommended by panel manufacturer.

1.8 WARRANTY

- A. Special Warranty for Acoustic Room Components: Manufacturer's written warranty indicating manufacturer's intent to repair or replace panels that fail in materials or workmanship. Failures are defined to include, but are not limited to, the following:
 - 1. Fracturing or breaking of unit components which results from normal wear and tear and normal use other than vandalism.
 - 2. Warping of components not resulting from leaks, flooding, or other uncontrolled moisture or humidity.
 - 3. Failure of unit to perform acoustically in accordance with manufacturer's published data.
 - 4. Sound-Absorbing and Sound-Diffusing Panels Warranty Period: 5 years.

PART 2 PRODUCTS

2.1 FABRIC WRAPPED ACOUSTICAL WALL PANELS

- A. Provide products from the following Manufacturer:
 - 1. AVL Systems (Basis of Design)- Carnegie Fabric
 - 2. Sound Seal
 - 3. Primacoustic
- B. Basis of Design: AcousTech High Impact – Abuse Resistant Panels
 - 1. Thickness: 2-1/8" (ATP 2.1)

2. Size: As indicated on the drawings.
 3. Core: 6-7 lb./cu. ft. high-density PET
 4. Facing: 1/8" thick 14-16 lb./cu. ft. high-density PET
 5. Edge Construction: Chemically hardened with no frame.
 6. Edge Profile: Square
 7. Facing/Finish [FAB-1 & FAB-2]:
 - a. Fabric Facing:
 - 1) Panels shall be covered on front face and returned at the edges to the back of the panels with Carnegie, fabric color to be selected by Architect from manufacturer's full range.
 - 2) Finish material shall be seamless with a flat, wrinkle-free surface and tailored corners. Material returned on rear of panels shall be minimum of 2".
 - 3) Allow for 2 colors.
 8. Mounting:
 - a. Manufacturer's standard concealed mounting hardware consisting of panel, wall and leveling clips. Z-clips to be uniformly positioned and permanently attached to the rear of the panel during manufacturing. Wall brackets to be provided by manufacturer and attached to wall substrate per manufacturer's standard recommendations. Base support brackets, by manufacturer, are to be installed to help support the full weight of the panel and keep the bottom edges in alignment.
 9. Dimensional Tolerance:
 - a. Panel dimensions shall be as shown on drawings, and shall be pre-sized by manufacturer from field dimensions provided by installing contractor to a tolerance of +/- 1/16".
 10. Sound absorption data is based on testing with manufacturer's standard facing fabric.
 - a. NRC Sound Absorption (ASTM C423, Type A Mounting): ATP 2.1 – NRC of 1.10
- C. Basis of Design: AcousTech High Impact – Abuse Resistant Panels
1. Thickness: 1-5/8" (ATP 1.6)
 2. Size: As indicated on the drawings.
 3. Core: 6-7 lb./cu./ ft. fiberglass

4. Facing: 1/8" thick 14-16 lb./cu. Ft. high-density PET
5. Edge Construction: Chemically hardened with no frame.
6. Edge Profile: Square
7. Facing/Finish [FAB-3]:
 - a. Fabric Facing: Panels shall be covered on front face and returned at the edges to the back of the panel with Carnegie, fabric color to be selected by Architect from manufacturer's full range.
 - b. Finish material shall be seamless with a flat, wrinkle-free surface and tailored corners. Material returned on rear of panels shall be a minimum of 2".
8. Mounting:
 - a. Manufacturer's standard concealed mounting hardware consisting of panel, wall and leveling clips. Z-clips to be uniformly positioned and permanently attached to the rear of the panel during manufacturing. Wall brackets to be provided by manufacturer and attached to wall substrate per manufacturer's standard recommendations. Base support brackets, by manufacturer, are to be installed to help support the full weight of the panel and keep the bottom edges in alignment.
9. Dimensional Tolerance:
 - a. Panel dimensions shall be as shown on drawings, and shall be pre-sized by manufacturer from field dimensions provided by installing contractor to a tolerance of +/- 1/16".
10. Sound absorption data is based on testing with manufacturer's standard facing fabric.
 - a. NRC Sound Absorption (ASTM C423, Type A Mounting): ATP 1.6 – NRC of 1.05.

2.2 FABRICATION

- A. General: Treat fabric wrapped panels using heat shrink process to develop fully taut facing.
- B. High Impact Hardside Panels: Wrap panel edges and return facing fabric 1 - 2 inches (25.4 - 51 mm) on back of panel. Secure fabric with adhesive applied to edges and back of panel only.

2.3 FELT ACOUSTICAL WALL PANELS [FL-1]

- B. Provide products from the following Manufacturer:
 1. Acoufelt (Basis of Design)
 2. Turf Design, Armstrong World Industries
 3. Autex Acoustics

- C. Basis of Design: Solid Wall Panels – Premier Collection
- D. Material: FilaSorb polyester felt
- E. Thickness: 12 mm
- F. Weight: 0.49 lb./ft² (+/- 10%)
- G. Sizes: Full panels or as required for full coverage on custom slat wall. Field cut panels as required to achieve mountain silhouette profile shown on the drawings.
- H. Colors: To be selected by Architect from manufacturer's full range.
- I. Mounting Method: Construction adhesive per manufacturer's written instructions
- J. Technical Requirements:
 - 1. NRC Rating: 0.45 (12mm)
 - 2. Fire Test:
 - a. ASTM E84, Class A
 - b. Flame spread index: 15
 - c. Smoke developed index: 200
 - 3. Colorfastness: ISO 105-B02, 6-7
 - 4. VOC less than/equal to 0.5mg/m3
 - 5. Certifications:
 - a. Environmental Product Declaration Declare Certification – LBC Red List Free (third-party verified)
 - b. SCS Global Indoor Advantage Gold

2.4 THEATER BOARD

- A. Provide products from the following Manufacturer:
 - 1. AVL Systems (Basis of Design)
 - 2. Sound Quality by Sound Seal
 - 3. Acoustics America
- B. Basis of Design: TheaterBlack Black Acoustical Board
- C. Thickness: 1" (TheaterBlack 1.0)
- D. Size: Full panels – 48" x 120", field cut as required
- E. Core: 3 lb./cu. ft. black fiberglass
- F. Edge Construction: Natural Square
- G. Edge Profile: Square
- H. Facing/Finish:
 - 1. TheaterBlack: Flat Black Finish
- I. Mounting:
 - 1. Stick Pins in conjunction with contractor-supplied construction adhesive.
 - 2. Paint stick pins and washers to match face/finish of panel
 - 3. Comply with panel manufacturer's printed instructions for installation of acoustical units using the type of mounting accessories indicated.
- J. NRC Sound Absorption: TheaterBlack 1.0 – NRC of 0.70

PART 3 EXECUTION

1. EXAMINATION

- a. Examine fabric, fabricated units, substrates, areas, and conditions for compliance with requirements, installation tolerances, and other conditions affecting unit performance.

- b. Proceed with installation only after unsatisfactory conditions have been corrected.

2. INSTALLATION

- a. Install units in locations indicated. Unless otherwise indicated, install units with vertical surfaces and edges plumb, top edges level and in alignment with other units, faces flush, and scribed to fit adjoining work accurately at borders and at penetrations.
- b. Comply with manufacturer's written instructions for installation of units using type of mounting devices indicated. Mount units securely to supporting substrate.
- c. Install with consistent fabric direction and pattern.

3. INSTALLATION TOLERANCES

- a. Variation from Plumb and Level: Plus or minus **1/16 inch** in 48 inches, noncumulative.
- b. Variation of Joint Width: Not more than **1/16-inch** variation from reveal line in 48 inches, noncumulative.

4. CLEANING

- a. Clip loose threads; remove pills and extraneous materials.
- b. Clean panels on completion of installation to remove dust and other foreign materials according to manufacturer's written instructions.

END OF SECTION

SECTION 099000
PAINTING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and field application of paints, stains, varnishes, and other coatings.
- B. Work includes, but is not limited to:
 - 1. Painting and finishing of interior exposed items and surfaces including surface preparation and priming. Surface preparation, priming, and finish coats specified in this section are in addition to shop priming and surface treatment specified under other sections.
 - 2. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.
 - 3. Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas. If color or finish is not designated, Architect will select these from standard colors or finishes available.
 - 4. Paint exposed surfaces whether or not colors are designated in schedules, except where a surface or material is specifically indicated not to be painted or to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from standard colors or finishes available.
 - 5. Painting includes field painting exposed-to-view bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment except as specified.
 - 6. All existing painted items/ rooms to receive new paint in this project.

1.2 REFERENCES

- A. ASTM D16 - Terminology Relating to Paint, Varnish, Lacquer, and Related Products.
- B. ASTM D823-95 Standard Practices for Producing Films of Uniform Thickness of Paint, Varnish, and Related Products.
- C. ASTM D5150-92 (1997) e1 Standard Test Method for Hiding Power of Architectural Paints Applied by Roller.
- D. ASTM D3276-96 Standard Guide for Painting Inspectors- (metal substrates).

1.3 DEFINITIONS

- A. Conform to ASTM D16 for interpretation of terms used in this section.

1.4 SUBMITTALS

- A. Product Data: Submit data on all finishing products. Submit manufacturer's technical information including paint label analysis and application instructions for each material proposed for use.
- B. Samples: Provide a listing of material and application for each coat of each finish sample. Submit samples for Architect's review of color and texture only. Submit two paper chip samples, illustrating range of colors and textures available for each surface finishing product scheduled.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.6 QUALIFICATIONS

- A. Applicator: Company specializing in performing the work of this section with minimum five years documented experience.

1.7 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 (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Do not apply exterior coatings during rain, fog, mist, or snow when relative humidity is outside the humidity ranges, or moisture content of surfaces exceed those required by the paint product manufacturer.
- C. Minimum Application Temperature for Varnish: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.
- D. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 degrees F.
- E. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.
- F. Do not apply exterior coatings in snow, rain, fog, or mist.

PART 2 PRODUCTS

2.1 PAINTS AND COATINGS

- A. Provide materials as manufactured by Sherwin-Williams, PPG, Duron, Tnemec, or Benjamin Moore.
- B. The quality of paint shall be equal to Sherwin Williams or Tnemec product numbers as specified in the schedule below.

2.2 SCHEDULE

- A. Interior Plaster and Drywall (Walls):
 - 1. Prime Coat (New Walls): SW ProMar 200 Zero VOC Latex Primer, B28W2600, at 1.0 mils dry, per coat.
 - 2. Prime Coat (Existing Walls): SW Multipurpose Primer B51W00453
 - 3. Intermediate Coat: ProMar 200 (Zero VOC) Semi-Gloss B31-2600.
 - 4. Top Coat: ProMar 200 (Zero VOC) Semi-Gloss B31-2600.
- B. Interior Drywall (Ceilings and Soffits):
 - 1. Prime Coat: ProMar 200 Zero VOC Latex Primer, B28W2600.
 - 2. Intermediate Coat: ProMar 200 Zero VOC Interior Latex Flat, B30-2600 Series.
 - 3. Top Coat: ProMar 200 Zero VOC Interior Latex Flat, B30-2600 Series.

- C. Interior Concrete Masonry, Brick, and Concrete:
 - 1. First Coat: Series: 130 Envirofill high performance block filler.
 - 2. Second Coat: SW-DTM Acrylic semi gloss, B66W200 Series
 - 3. Third Coat: SW-DTM Acrylic semi gloss, B66W200 series
- D. Interior Ferrous Metal: (Other than AESS) Gloss Finish (Water Base)
 - 1. 1st Coat: S-W Pro-Cryl® Universal W/B Primer, B66-310 series (2-4 mils dry)
 - 2. 2nd Coat: S-W Water-based Industrial Enamel, B53-300 Series
 - 3. 3rd Coat: S-W Water-based Industrial Enamel, B53-300 Series
- E. Exposed Interior Steel: (AESS) (Use at all exposed steel including columns, trusses, etcetera)
 - 1. Primer by Steel Fabricator: Tnemec Series 90-97 Tnemec-Zinc 2.5-3.5 mils.
 - 2. First Coat: Tnemec Series 27 F.C. Typoxy Polyamide Epoxy at 3-5 mils. (Coordinate with metal fabrication item required to receive first coat applied in shop.)
 - 3. Second Coat: Tnemec Series 75 Endura – Shield Aliphatic Acrylic Urethane – Satin, 3-4 mils.
 - 4. Field touch up of welds to be primed w/Tnemec Series 90-97 Tnemec-Zinc 2.5-3.5 mils thick prior to receiving first and second coat.
- F. Interior Wood:
 - 1. Opaque Finish: 2 coats low luster alkyd enamel over primer and enamel undercoat.
 - 2. Transparent Finish: Stain Finish: 1 coat A48-200 oil stain; 2 coats A67 polyurethane varnish.
- G. Ferrous Metal with Latex Dry Fog Flat Finish: One finish coat over primed exposed steel roof construction. (Note: Coordinate with masking and painting accent color exposed ductwork as indicated.)
 - 1. Prime Coat: (Acrylic or recommended VOC compliant metal primer.) 2.0 mils DFT.
 - Duron: (As recommended)
 - ICI 1280 Spray-master Pro Uni-Grip-WB Aqua-acrylic Dryfall Flat
 - S-W: B66 W1 DTM Acrylic Primer/Finish

2. Top Coat: All exposed metal structure as scheduled. Acrylic Dry Fog 3.0 mils DFT.

Duron: Dura Clad Interior Latex Dry Fog Flat 95-108 (4/03/00)

ICI 1280 Spray-master Pro Uni-Grip-WB Aqua-acrylic Dryfall Flat

Moore: M53 Sweep-Up Spray Latex Flat (3/30/00)

H. Hollow Metal Doors and Frames

1. System Type: High Performance Finish- Semi-Gloss
2. Prime Coat: SW Pro Industrial Pro-Cryl Universal Metal Primer B66-310 Series (Use manufacturer's recommendation at existing doors and Frames.
3. Intermediate Coat: SW Pro Industrial Acrylic Coating B66-600 (Zero VOC)
4. Top Coat: SW Pro Industrial Acrylic Coating B66-600 (Zero VOC)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Applicator must examine areas and conditions under which painting work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Applicator. Starting of painting work will be construed as Applicator's acceptance of surfaces and conditions within any particular area.
- B. Test shop applied primer for compatibility with subsequent cover materials.
- C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below 8%.

3.2 PREPARATION

- A. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- B. Surfaces: Correct defects and clean surfaces that affect work of this section. Remove or repair existing coatings that exhibit surface defects.
- C. Asphalt, Creosote, or Bituminous Surfaces Scheduled for Paint Finish: Remove foreign particles to permit adhesion of finishing materials.

- D. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.
- E. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- F. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- G. Plaster Surfaces: Fill hairline cracks, small holes, and imperfections with latex patching plaster.
- H. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.
- I. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing. Sand lightly between coats and protect from dust while drying.
- J. Metal Doors Scheduled for Painting: All hollow metal frames shall receive one field prime coat, front and back, before erection (color to be medium gray); after erection, touch-up all abrasive marks; this prime coat is in addition to factory prime coat and to the two coats of finish painting specified under Paragraph 2.2. Protect from dust while drying.
- K. Apply a bead of sealant where hollow metal door frames abut adjacent wall surfaces.

3.3 APPLICATION

- A. Spray painting will be permitted wherever practical; however, excess thinning will not be permitted and complete surface coverage shall be equal to that of first class brush work. Do not spray paint concrete block unless it is immediately back-rolled.
- B. Do all touch-up and clean-up at the completion of this work to leave all surfaces in a finished condition.

- C. Where exposed, painting contractor shall paint all ducts, piping, conduit and mechanical and electrical equipment without factory finish, including those in mechanical and electrical rooms.
- D. Visible surfaces on interior of ducts behind louvers, diffusers, registers and grilles shall be primed and then painted with one coat of flat black metal enamel.
- E. Belt guards and other protective guards on equipment shall be painted with two coats of safety yellow metal enamel.
- F. Insulated pipes and ducts with paper or canvas jacket shall be painted with one coat of paint equal to Sherwin Williams SW-Preprite 200 Latex Wall Primary, and insulated surfaces with aluminum foil jacket shall be painted with one coat of Zinc Chromate Primer prior to two coats of finish paint. Armaflex type insulation on exposed pipes shall be painted with two coats of latex base paint equal to SW-PROMAR 200 Latex flat wall paint tinted to match background color.
- G. Mechanical equipment surfaces with asphalt or bitumen coating shall be sealed with an approved asphalt sealer and painted with two coats of SW-KemKromik universal/metal primer, B5ONZ6.
- H. The Architect shall have the right to select in addition to scheduled colors, deep, accent colors for one or more walls, bulkheads, columns, or other features in any of the spaces on the project, up to 2500 sq ft of area.
- I. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- J. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless specified otherwise.
- K. Sand wood and metal surfaces lightly between coats to achieve required finish.
- L. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior applying next coat.
- M. Paint front and back sides of access panels, and removable or hinged covers.
- N. Protect work of other trades, whether being coated or not, against damage from coating.

3.4 CLEANING

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

3.5 SCHEDULE - COLORS

- A. Color schemes will be prepared by the Architect after receipt of approved manufacturer's color samples. See Architectural Finish Schedule and Finish Plans for the number of paint colors used- 12 colors.

- B. Samples of work receiving natural or stained finish shall be submitted for Architect's review and selection.

END OF SECTION

SECTION 122200
CURTAINS AND DRAPES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Drapery tracks.
2. Drapes.
3. Drapery fabric.

1.2 ALLOWANCES

- A. See Section 012100 "Allowances" for description of allowances affecting items specified in this Section.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of specified product.

1. Include fiber content and textile treatments for fabrics.
2. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings:

1. Drapery Tracks: Indicate installation and anchorage details and locations of controls.
2. Drapes: Show sizes, locations, and details of installation.

- C. Samples for Initial Selection: Manufacturer's standard color samples, showing full range of available colors for each type of drape and drapery track.

- D. Samples for Verification: Actual sample of finished products for each type of drape and drapery track. Include drapery fabric from dye lot to be used for the Work with specified texture treatments applied. Include textile trims.

1. Size: Manufacturers' standard size.

- E. Product Schedule: For drapes – include fabric types, colors, and locations.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: For drapery track installation; reflected ceiling plans drawn to scale and coordinating track installation with openings and ceiling-mounted items.

Indicate the following items:

1. Suspended ceiling components.
2. Lighting components.
3. Structural components.

- B. Product Certificates: For each drapery fabric treated with flame retardant, signed by fabric supplier and indicating treatment durability and cleaning procedures required to maintain treatment effectiveness.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For drapes and drapery tracks.
- B. Warranty Documentation: Manufacturers' special warranties.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Extra Stock Material: Furnish extra materials to Owner that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Drapery-Track Carriers: For each size indicated, equal to 5 percent of quantity installed, but no fewer than 10 units of each size.
 2. Drape Fabrics: For each fabric, color, and pattern indicated, from the same product run, full-width lengths equal to 5 percent of quantity installed, but no fewer than 10 yards of each fabric, color, and pattern.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: For drapes and drapery tracks, fabricator of drapes.
- B. Preinstallation Conference: Prior to installation conduct a preinstallation conference at Project Site. Require attendance of Architect, Owner's Representative, General Contractor, Installer, Manufacturer's Representative, and Related trades affecting the Work.

1.8 FIELD CONDITIONS

- A. Field Measurements: Verify dimensions by field measurements before drape fabrication, and indicate measurements on Shop Drawings.
- B. Scheduling: Do not deliver or install drapes until after other finish work, including painting, is complete and spaces are otherwise ready for occupancy.

1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of products that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Defects in materials and workmanship excluding normal wear and tear.
 - b. Faulty operation of drapery track components.
 - 2. Warranty Period:
 - a. Drape Fabric: 3 years from date of Substantial Completion.
 - b. Manually Operated Track: 10 years from date of Substantial Completion .

PART 2 - PRODUCTS

2.1 DRAPERY TRACKS

- A. Manually Operated Track:
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Forest Drapery Hardware or comparable product by one of the following:
 - a. Kirsch
 - b. Blind Space
 - 2. Source Limitations: Obtain manually operated tracks from single source from single manufacturer.
 - 3. Safety Standard: WCMA A100.1.
 - 4. Construction: Extruded aluminum, slotted for mounting at interval of not more than 24 inches o.c.
 - a. Length and Configuration: As indicated on Drawings .
 - b. Support Capability: Weight of drape specified mounted on track length indicated.
 - c. Finish: Architect to select from manufacturer's full range of standard and premium options.
 - 1) Allow for 2 colors.
 - a) Color 1 @ surface mounted condition
 - b) Color 2 @ recessed condition
 - d. Mounting condition: Provide curtain track mounting condition as indicated on Drawings. Coordinate track type, brackets, recessed channel, ceiling pocket dimensions, and gypsum board construction with mounting type indicated.
 - 5. Cordless Operation: Baton attached to lead carrier .

- a. Draw: As indicated on Drawings .
- 6. Carriers: Coordinate with drapery headings specified .
 - a. Master Carriers: Overlap.
- 7. End Stops: Manufacturer's standard with track end cap .
- 8. Pulleys: Heavy duty.
- 9. Mounting Brackets and Recess Accessories: Manufacturer's standard brackets, clips, trim, and accessories required for installation indicated.
 - a. Surface Mounted Installation: Aluminum brackets suitable for fastening track directly to structure and designed to support weight of track assembly and drapery plus operational loads.
 - b. Recessed Installation: Manufacturer's standard recessed mounting system, plaster flange, trim, and accessories required for installation flush with gypsum board ceiling designed to support weight of track assembly and drapery plus operational loads.
 - c. Mounting types indicated on drawings.
- 10. Installation Fasteners: Sized to support track assembly and drape, and fabricated from metal compatible with track components and supporting construction. Provide additional blocking, support framing, and anchorage as required for mounting type indicated.

2.2 FABRICATION OF DRAPES AND CURTAINS

- A. Fabricate drapes and curtains in heading styles and fullnesses indicated. Fabricate headings to stand erect. If less than a full width of fabric is required to produce panel of specified fullness, use equal widths of not less than one-half width of fabric located at ends of panel.
 - 1. One-Way-Stacking Drapes: Add 5 inches to overall width for returns.
 - 2. Center-Opening Drapes: Add 10 inches to overall width for overlap.
- B. Seams: Sew vertical seams with twin-needle sewing machine with selvage trimmed and overlocked. Join widths so that patterns match and vertical seams lay flat and straight without puckering. Horizontal seams are unacceptable.
- C. Top Finishes: Provide webbing and hardware to attach to curtain track carriers – coordinate with curtain track carrier hardware. Architect to select color of webbing from manufacturer's full range. Architect to select finish of hardware from manufacturer's full range.
- D. Side Hems: Double-turned, 1-1/2-inch- wide hems consisting of three layers of fabric, and blindstitched so that stitches are invisible on face of drape/curtain.
- E. Bottom Hems: Double-turned, 4-inch- wide hems consisting of three layers of fabric, and weighted and blindstitched so that weights and stitches are invisible on face of drape/curtain.

1. Sew in square lead weights at each seam and at panel corners.
- F. Interlinings: None.
- G. Linings: Double-faced (Self-lined) - Equal to widths of drapery fabric and joined to drapery fabric at top by inside invisible seam, and hand stitched at side hems and shadowed with 1-1/2-inch return of face fabric.
1. Bottom Hem: Blindstitch to drapery fabric.
- H. Fabric
1. Vomitory Drapes [FAB-4 & FAB-5]:
 - a. Manufacturer: Rose Brand or approved equal.
 - b. Product: 22 oz. Encore Synthetic Velour, IFR
 - c. Color: To be determined by Architect from manufacturer's full range. Allow for 2 colors.
 2. Rear Traveler Curtain [FAB-6]:
 - a. Manufacturer: Rose Brand or approved equal.
 - b. Product: 22 oz. Encore Synthetic Velour, IFR
 - c. Color: To be determined by Architect from manufacturer's full range.
 3. Proscenium Curtain [FAB-7]:
 - a. Manufacturer: Rose Brand or approved equal.
 - b. Product: 25 oz. Prestige Velour, IFR
 - c. Color: To be determined by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 INSTALLATION OF DRAPERY TRACKS

- A. Install track systems in accordance with manufacturer's written instructions, level and plumb, and at height and location in relation to adjoining openings as indicated on Drawings.
- B. Isolate metal parts of tracks and brackets from concrete, masonry, and mortar to prevent galvanic action. Use tape or another method recommended in writing by track manufacturer.
- C. Coordinate recessed track installation with ceiling framing and gypsum board to provide a track that is flush with ceiling with uniform curtain slot alignment. Provide additional blocking and support as required. Verify dimensions of recessed opening and pockets prior to fabrication.

3.2 INSTALLATION OF DRAPES

- A. Where drapes extend to floor, install so that bottom hems clear finished floor by ½”.

3.3 ADJUSTING

- A. After installing drapes, test and adjust each drapery track to produce unencumbered, smooth operation.
- B. Steam and dress down drapes as required to produce crease- and wrinkle-free installation.
- C. Remove and replace drapes that are stained or soiled.

END OF SECTION

SECTION 126100
FIXED AUDIENCE SEATING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fixed, upholstered theater seating and seating accessories.
- B. Folding chairs.

1.2 RELATED SECTIONS

- A. See Electrical for connections to seating junction boxes for aisle lighting power.
- B. Coordination with Electrical Work: Coordinate installation of wiring to ensure that floor-mounted junction boxes are completely beneath seats and free of aisle spaces.

1.3 REFERENCES

- A. American Iron and Steel Institute (AISI) and Society of Automotive Engineers (SAE):
 - 1. AISI/SAE1008/1010/1015 - Steel and Alloys.
- B. American National Standards Institute (ANSI)/Business and Institutional Furniture Manufacturers Association (BIFMA):
 - 1. ANSI/BIFMA X5.4-2012 – Office Furnishings – Lounge Seating.
- C. ASTM International (ASTM):
 - 1. ASTM A36 - Standard Specification for Carbon Structural Steel.
 - 2. ASTM A48 - Standard Specification for Gray Iron Castings.
 - 3. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
 - 4. ASTM A789 - Standard Specification for Seamless and Welded Ferritic/Austenitic Stainless Steel Tubing for General Service.
 - 5. ASTM B26 - Standard Specification for Aluminum-Alloy Sand Castings.
 - 6. ASTM B108 - Standard Specification for Aluminum-Alloy Permanent Mold Castings.
 - 7. ASTM B179 - Standard Specification for Aluminum Alloys in Ingot and Molten Forms for Castings from All Casting Processes.
 - 8. ASTM D3597 - Standard Performance Specification for Woven Upholstery Fabrics - Plan, Tufted, or Flocked.
 - 9. ASTM F 851: Test Method for Self-Rising Seat Mechanisms.
- D. Code of Federal Regulations:
 - 1. 16 CFR 1610.61 – Clarification of Flammability Standard for Clothing Textiles (CS 191-53).
- E. National Electrical Manufacturers Association (NEMA):
 - 1. NEMA LD 3 – High Pressure Decorative Laminates.
- F. National Fire Protection Association:
 - 1. NFPA 70 – National Electrical Code (NEC).

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide product data for each chair model specified to include constructions details, materials, descriptions, finish options, and dimensions.

- C. Shop Drawings: Developed from the contract drawings that show aisle widths, chair spacing for each row, row-lettering and chair-numbering scheme, chair dimensions and back pitch. Layout drawings to also include locations for accessories, including left- and right-hand tablets, electrical devices, accessibility provisions and attachments to other work. Layout drawings also to include (if applicable):
 - 1. Develop sightline plan and sections through seating areas using sightlines program and sightline rules. Refer to Drawings.
 - 2. Show fabric selection.
 - 3. Additional options placement – donor plates and sim.
 - 4. Include electrical schematic for aisle lighting.
- D. Samples for Verification and Finish Selection to include:
 - 1. Initial finish selections to be made from manufacturer's full line of standard and premium color and finish guides.
 - 2. Final powder coat selection to be approved from manufacturers samples not less than 1" x 3".
 - 3. Final plastic color selection to be approved from manufacturers samples not less than 2" x 3".
 - 4. Final wood finish selection to be approved from manufacturers samples not less than 4" x 3".
 - 5. Final upholstery fabric selection to be approved from manufacturers samples not less than 4" x 4".
 - 6. Row lettering, seat numbering plaques, and donor plates: Provide full size plaques showing base material and lettering font.
- E. Closeout Submittals:
 - 1. Operation and Maintenance Data: For adjusting, repairing, and replacing components and accessories.
 - 2. Warranty: Submit manufacturer's sample warranty.
- F. Product Certificates: Provide manufacturer's certification of flame-retardant treatment (if required).
- G. Cleaning and Maintenance Information: Provide instructions for cleaning, adjusting, repairing, and replacing fixed audience seating.
- H. Warranty: Copy of manufacturer's warranty.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience in manufacture of similar products in use in similar environments, including project size, and complexity, and with the production capacity to meet the construction and installation schedule.
- B. Installer Qualifications: Manufacturer's authorized representative, trained and approved for installation of units required for this Project.
- C. Source Limitations:
 - 1. Obtain components and accessories, including mounting components, through one source from a single approved manufacturer.
 - 2. Obtain fabric of a single dye lot for each color and pattern of fabric required except when yardage requirement exceeds maximum dye lot. Multiple dye lots shall be color matched for quality assurance
 - 3. Major chair components (backs, seats, standards, armrests) must contain no less than 80% U.S. manufactured content with final assembly of components performed in the United States

- D. Fire-Test-Response Compliance:
 - 1. Fabric: Class 1 according to DOC CS 191 and 16 CFR 1610.61, tested according to California Technical Bulletin 117-2013.
 - 2. Cushioning: California Technical Bulletin 117-2013 compliant.
- E. Electrical Components: Listed and labeled per NFPA 70, Article 100 by a testing agency acceptable to authorities having jurisdiction.
- F. Testing of Seats: All qualifying seats must meet the minimum criteria of the following test procedures:
 - 1. Seat:
 - a. Self-Lifting Oscillating Test: Withstand 300,000 lifting cycles when tested in accordance with ASTM F851.
 - b. Vertical Static Load Test: Withstand vertical static load of 600 lb. 272 kg) without failure or permanent set greater than 5/8 inch (16 mm) .
 - c. Vertical Drop Impact Test: Withstand vertical drop impact of 40 lb. (18 kg) from 12 inches (305 mm), 25,000 times each at a rate of 18 cycles per minute for a total of 100,000 impacts without failure or permanent set greater than 3/4 inch (19 mm).
 - 2. Back:
 - a. Horizontal Static Load Back Test: Withstand front or rear static load of 450 lb. (205 kg).
 - b. Swinging Impact Back Test: Withstand swing impacts to each side of chair back with 40 lb. (18 kg) from 12 inches (305 mm), 25,000 times each distance at a rate of 20 cycles per minute for a total of 100,000 impacts without damage or failure.
 - c. Transverse Static Load Back Test: Withstand transverse static load of 200 lb. (91 kg) applied to the top of the back at a 45-degree angle to the row of seats.
 - 3. Armrests:
 - a. Horizontal Load to Arm Test: Withstand vertical and perpendicular static load of 200 lb. (91 kg) without failure or permanent set greater than 3/4 inch (19 mm).
- G. Regulatory Requirements: Where components are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities".
- H. Mockups:
 - 1. Build mockups to set standards for fabrication. Show fabric selection, wood and metal finishes selections and aesthetic effect.
 - 2. Configuration: A typical two-seat unit with aisle and row seat.
 - 3. Approved mockups will be returned to the manufacturer upon request and may become part of Project if in as-manufactured condition at time of Substantial Completion.
- I. Field Dimensioning: After approval of submittals but prior to fabrication, confirm dimensions of fixed audience seating space, including features that will affect installation. Confirm location of electrical rough-in.

1.6 PRE-INSTALLATION MEETINGS

- A. Convene at the Project site or conduct a virtual meeting a minimum four weeks prior to starting the Work of this Section.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original unopened containers with manufacturer's labels

attached.

- B. Handle fixed audience seating during installation to prevent damage. Replace any seating damaged during installation.
- C. Handle and install units to avoid damage.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install until spaces are enclosed and weather tight, wet work in spaces is complete and dry, work above ceilings is complete, and HVAC system is operating and maintaining ambient temperature at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Take field measurements to verify or supplement dimensions indicated on contract drawings prior to manufacturing. Verify field measurements as indicated on Shop Drawings. Where measurements are not possible, provide control dimensions and templates.
- C. Coordinate layout and installation of electrical wiring and devices with electrical contractor to ensure that floor junction boxes for electrical devices are accurately located for final connection to the building's power supply by the electrical contractor.
- D. Coordinate layout and installation of seating with HVAC contractor to ensure that vents are located in a manner that will not interfere with seating installation.
- E. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
- F. Coordinate substate requirements needed for proper installation.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's written warranty indicating manufacturer's intent to repair or replace components of audience seating that fail in materials or workmanship.
- B. Failures include, but are not limited to, the following:
 - 1. Fracturing or breaking of unit components which results from normal wear and tear and normal use other than vandalism.
 - 2. Delamination or other failures of glue bond of components.
 - 3. Warping of components not resulting from leaks, flooding, or other uncontrolled moisture or humidity.
- C. Damage from deliberate destruction and vandalism is excluded.
- D. Accessories that are of a consumable nature such as bulbs, aisle lights and transformers are excluded.
- E. Warranty Period:
 - 1. Structure (including back bracket, standard, metal base): 5 years.
 - 2. Operating mechanisms (including seat/back cushion, wood works (wood panels/armrest/ADA end arms), polypropylene parts (polypropylene shells, polypropylene armrest), tip-up seat mechanism, writing tablet (including writing tablet mechanism): 5 years.
 - 3. Plastic, Wood, and Painted Components: 5 years.
 - 4. Upholstery Fabric: 1 year
 - 5. Electrical Components: 1 year

PART 2 PRODUCTS

2.1 FIXED SEATING

- A. Manufacturers:
 - 1. Approved manufacturers subject to compliance with requirements outlined herin.
 - 2. Acceptable manufactures:
 - a. Irwin Seating Company (Basis of Design)
 - b. Hussey Seating Company
 - c. Ducharme Seating
 - d. Requests for substitutions will be considered in accordance with provisions in Section 01600.
- B. Description: Permanent arrangement of fixed audience seating as shown on seating layout drawings.
 - 1. Final quantity to be determined on seating layout shop drawing from seating manufacturer.
 - 2. Approved manufacturers subject to compliance with requirements outlined herein.
 - 3. Basis of Design - Upholstered Fixed Seating System: Irwin Seating Company model Allegro 27.17.66.17
- C. Chair support columns shall be a formed 1" x 3" 14 gauge (.0747") steel column with a welded back wing plate. Column shall extend in one piece from formed 14 gauge steel dovetail lug plate used for armrest attachment to the mounting foot. Sockets for seat attachment shall be 12 gauge (.105") steel that is protected with a formed steel cover plate secured to the socket. Floor attachment foot shall be formed from 14 gauge (.0747) steel to 8" x 2-3/4" in size. All steel components shall be MIG welded. Foot-to-column welds are to be concealed on the inside of the foot for a clean appearance. The standard shall be fabricated to be compatible with the floor incline, and to maintain proper seat and back height and angle.
- D. Aisle end panels shall be rectangular shaped with a rounded bottom edge, constructed of 45 lb. medium density fiberboard (MDF), 5/8" thick and surfaced with wood veneer stained with a clear lacquer finish. Panels shall be provided with a seat bracket recess for precise location and support of the panel. Panel is secured to a 14 gauge formed steel bracket bolted to the top of the support column and directly to the support column with the use of a spacer. Panel bracket assembly is concealed behind a steel shroud attached with a tamper resistant screw.
- E. Back:
 - 1. Chair back components shall be padded and upholstered on the face with a 4" border above the upholstery panel to reveal the rear "designer" panel surfaced with hardwood veneer. Rear panel is to be attached to the upholstery panel with concealed fasteners so there is no exposed hardware. The backs shall be tombstone shaped and fabricated with a lateral radius for comfort. Assembled chair shall have a nominal back height of 44". The back assembly shall be certified through routine testing to withstand a 250 lb. static load test applied approximately 16" above the seat assembly and a 100,000 cycle 40 lb. swing impact test.
 - 2. The upholstery panel shall be 5-ply, 7/16" thick hardwood plywood, and padded with 2" thick polyurethane foam cemented to the panel. A 1-piece fabric cover shall be securely fastened to the hardwood inner panel by means of upholstery staples to facilitate ease of reupholstering. Wings used for the attachment of the complete back assembly to the standards shall be not less than 14 gauge (.0747") steel. Wings shall be firmly secured to the inner panel through the use of threaded t-nuts fastened to the inner panel.
 - 3. The rear of the back shall be enclosed by a "designer" panel fabricated of 9-ply of 1/16" thick hardwood veneer, providing sufficient mass of the decorative panel and

providing an attractive, measured, even appearance of the exposed edges. Decorative rear panels shall be formed on the same radius as the upholstered panels, and shall be securely mounted to the upholstery panel using concealed fasteners. There shall be no exposed screws, mounting brackets or hardware on the rear of the back. The rear surface of the back shall be class A hardwood veneer of the species selected finished per specifications. The rear panel shall be of sufficient length to protect the chair seat from the rear, and the forward face of the minimally exposed lower portion of the rear panel shall be allowed to be interior grade veneer, stained the appropriate color and coated with a single coat of lacquer.

- F. Seat shall be upholstered on the top surface with a solid, sturdy, steel-based foundation and wood veneer decorative bottom surface. Seats shall quietly self-rise to a full, vertical fold when Seats shall self-rise to a uniform position when unoccupied. The mechanism shall be certified through routine ISO testing to exceed 300,000 cycles during ASTM Designation F851-87 Test Method for Self-Rising Seat Mechanism. In addition, the seat shall withstand as a 600 lb. static load test applied approximately 3" from the front edge of the seat assembly and a 50,000 cycle 125 lb. vertical drop impact test.
1. The seat cushion shall have a base structure of a 5/8" thick, 5-ply hardwood plywood panel acting in concert with steel seat-lift arms. Seats shall be padded with 2-1/4" to 3" variable thickness, high density, molded polyurethane foam cushions. A carefully tailored cover of the specified fabric shall be upholstered over the polyurethane foam pads and securely attached, utilizing staples, to the bottom of the structural wood panel.
 2. Support structure for the seats shall be initiated by heavy, 8 gauge (0.165") flanged steel support arms securely attached to the plywood upholstery panel, providing rigidity, stability, and superior strength for the seat component. The seat structure shall rotate on two, independent, 5/8" diameter, high strength, solid steel hinge rods securely locked to unobtrusive mounting sockets fixed to the chair standards, and shall allow for radius installation to a minimum of 25 ft. radius. Seat hinge location shall be carefully engineered so that the seat is properly balanced to provide stable support for a seated adult individual. Seat-lift shall be accomplished by a contoured cast iron counterweight recessed in the rear of the seat component. Seat operation shall be dampened at both hinges by neoprene cushioned up-stops and down-stops.
 3. The bottom surface of the seats shall be 11-ply, 11/16" thick hardwood plywood to provide an attractive wood decorative bottom, and to enhance chair acoustics. The decorative bottom shall be molded to conform to the shape of the inner structural panel, and attachment, via concealed fasteners, shall eliminate voids within the assembled component.
- G. Chair width shall vary, as shown on layout drawings, to accommodate sightlines and row lengths.
- H. Back height and pitch shall be fixed as shown on seating layout drawings.
- I. Aisle armrests shall be solid hardwood with comfort-curved shape. Armrests shall be furnished with two (2) keyhole slots in the bottom, and shall lock securely to dovetail lugs provided on the aisle standards. Armrests shall be provided with one (1) security screw inserted from the bottom side to discourage tampering. Aisle armrests shall be stained with a clear lacquer top coat.
- J. Row-lettering and chair-numbering shall be provided for identification of all chairs as shown on approved seating layout drawings. Number plates shall be 5/8" x 1-5/8" aluminum, architect to select finish and numeral font/color from manufactures' full range of standard and premium finish/font options. The seat pans shall be recessed at the center of the front edge for the number plates, and attached by two (2) pop rivets. Letter plates shall be selected from manufactures full range of standard and premium and attached in recess of aisle standard armrest by two (2) escutcheon pins. Attaching hardware shall have a finish

compatible to plates.

- K. Donor plates shall be provided for all chairs and shall be recessed near the front of the armrest. Donor plates shall be anodized aluminum 7/8" by 2-1/2" with an adhesive backing, architect to select finish from manufactures full range of standard and premium finishes. Donor plates shall be delivered for engraving and installation by the owner.
- L. Aisle lights shall be furnished for aisle standards designated on the approved seating layout drawings. Aisle lights shall be low voltage, non-hazardous 12 volt, D.C., system, utilizing a minimum of six miniature LED (light emitting diode) light elements concealed on the underside of aisle standard armrests, and providing white illumination for floor and/or steps adjacent to the aisle standards. The aisle light standards are to be provided pre-wired with approximately 18" of wiring extending beyond the base of the standards. Wiring shall be encased within a black, split-loom plastic conduit that exits the column just above the foot. Seating supplier shall furnish as part of the aisle light package a voltage reduction device suitable for conversion of 120 volt, A.C., facility power to 12 volt, D.C., for aisle lights requirement. The voltage reduction device shall be Underwriters' Laboratories listed as a Class II Power Unit for proper supply of power to the aisle lights. All wiring connections from the electric distribution system to the aisle light standards, as well as installation, proper safe mounting, and connection of the voltage reduction device, shall be the responsibility of the electrical contractor, including provision of suitable locking-style electrical disconnect device.
 - 1. All chairs within a row shall be connected with a formed aluminum raceway to conceal power and data wiring beneath the chairs. Raceways shall be sufficiently flexible to allow chairs to be installed on a radius. Aluminum raceways shall be provided with extruded polymer covers for easy access to the raceway. Each standard shall be provided with a molded polymer junction box used to hold a 120-volt receptacle with two 3-prong plugs.
 - 2. 120-volt, A.C., electrical power shall be provided throughout the row by means of a two-circuit, 4-wire power system capable of providing service to eight (8) chairs per circuit and sixteen chairs per stub-up. Power shall be provided to each intermediate chair stanchion with an industry-standard, modular, snap-together system of receptacles, connectors and flexible metal conduit "jumpers". Connection of the system to the building's power supply is the responsibility of the electrical contractor.
- M. Furnish extra materials from the same production run that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Furnish complete seat and back assemblies equal to 10 seats of amount installed for each type and size of chair seat and back.
 - 2. Furnish seat and back fabric covers equal to 3% of amount installed for each type and size of cushion.
 - 3. Furnish armrests equal to 3% of amount installed for each type of armrest.
 - 4. Furnish additional lighting components equal to 3% of amount for each type installed.
 - 5. Furnish additional aisle end panels equal to 3% of the amount installed, not less than 2.

2.2 MATERIALS

- A. Steel shall meet requirements for ASTM A 36/A 36M plates, shapes, and bars; ASTM A 513 mechanical tubing; ASTM A 1008/A 1008M cold-rolled sheet; and ASTM A 1011 hot-rolled sheet and strip.
- B. Cast Iron shall meet requirements for ASTM A 48/A 48M, Class 25, gray iron castings free of blow holes and hot checks with parting lines ground smooth.
- C. Cast Aluminum shall meet requirements for ASTM B 85 aluminum-alloy die castings.

- D. All exposed metal parts shall be powder coated with a hybrid thermosetting powder coat finish. The powder coat finish shall be applied by electrostatic means to a thickness of 2 - 5 mils, and shall provide a durable coating having a 2H Pencil hardness. Prior to powder coating, metal parts shall be treated with a three-stage non-acidic, bonderizing process for superior finish adhesion, and after coating shall be oven baked to cause proper flow of the epoxy powder to result in a smooth, durable finish.
 - 1. Color to be selected from manufacturer's standard color range.
- E. Medium-density fiberboard shall meet requirements for ANSI A208.2, Grade MD, made with binder containing no urea formaldehyde.
- F. Concealed plywood shall meet requirements for HPVA HP-1 hardwood plywood.
- G. Hardwood lumber and veneer faces shall be maple selected to be free of visible defects. Exposed wood shall be sanded smooth and stained to color selected with low-VOC water-based stain and top coat to provide with a high quality finish.
 - 1. Color to be India Teak on Maple.
- H. Upholstery fabric shall be woven upholstery fabric, Designtex, style W (3446) composed of cotton and polyester with a high-performance finish and acrylic backing. Fabric shall be finished with a soil and stain-resistant treatment. The fabric shall have a minimum weight of 16.8 oz. per linear yard (11.2 oz. per square yard). Fabric shall exhibit a minimum abrasion resistance of 100,000 double rubs in accordance with ASTM D4157 (Wyzenbeek) and a minimum Class 4 colorfastness to light in accordance with AATCC Test Method 16. Fabric shall meet the flammability requirements of California Technical Bulletin 117-2013, NFPA 260, and UFAC Class 1.
 - 1. Color to be Midnight 3446-802
- I. Upholstery padding shall be molded or slab polyurethane foam.
- J. Molded Plastics:
 - 1. Structural components shall be mar and dent resistant high density glass-filled polypropylene with UV stabilizers.
 - 2. Decorative components shall be mar and dent resistant high density polyethylene (HDPE) with UV stabilizers.
 - 3. Plastic components shall be chosen from manufacturer's standard offering.

2.3 FABRICATION

- A. Manufacture fabric-covered cushions with molded padding beneath fabric and with fabric covering free of welts, creases, stretch lines, and wrinkles. For each upholstered component, install pile and pattern run in a consistent direction.
- B. Fabricate floor attachment plates to conform to floor slope, if any, so that standards are plumb and chairs are maintained at same angular relationship to vertical throughout project.

2.4 FOLDING CHAIRS

- A. Manufacturer:
 - 1. Approved manufacturers subject to compliance with requirements outlined herin.
 - 2. Acceptable manufactures:
 - a. Irwin Seating Company (Basis of Design)
 - b. Wegner Corporation
 - c. Ducharme Seating
 - d. Requests for substitutions will be considered in accordance with provisions in Section 01600.

- B. Basis of Design: Irwin Gathr Essential Folding Chair
 - 1. Quantity: 20 chairs.
 - 2. Dimensions (in use position): 32"H x 18"W x 21"D x 19"H (seat height)
 - 3. Dimensions (in storage position): 37.5"H x 18"W x 4.25"D
- C. Frame Construction:
 - 1. Chair framed/rear brace formed from 1.5" x 0.5" x 18-gauge steel tubing robotic welded.
 - 2. Die-formed heavy-gauge steel seat support robotic welded to chair frame.
 - 3. Rear legs capped with glass-filled nylon stop to prevent metal-to-metal contact.
 - 4. Black TPU polymer non-marring feet
- D. Backrest Construction:
 - 1. Molded impact resistant polymer
 - 2. Upholstered pad
- E. Seat Construction:
 - 1. 16.5"W x 17"D
 - 2. Upholstered 3.5" thick molded foam seat
 - 3. Structural plywood seat foundation with t-nuts
 - 4. Manual fold seat pivots on heavy duty 5/8" solid steel frame rod robotic welded to frame
 - 5. HDPE plastic decorative cover
 - 6. Bottom cover with writing surface for numbering seats and air ventilation
 - 7. Seat bottom includes down-stop bumpers molded from glass-filled nylon and in same color as bottom cover
 - 8. Secured with black tamper resistant hardware
- F. Ganging Device:
 - 1. Formed from 1/4" solid steel rod robotic welded to frame\
 - a. Minimize chair movement and provides 18" center-to-center chair spacing
- G. Upholstery: Color to be selected by Architect from manufacturer's full range.
- H. Steel/Plastic: Color to be selected by Architect from manufacturer's full range.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Prior to layout and installation examine floors, risers, and other adjacent work and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the work including, but not limited to, plumb of riser faces and concrete conditions.
- B. Examine locations of electrical connections.
- C. Examine locations of HVAC supply ducts.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install seating in locations indicated and fastened securely to substrates according to manufacturer's written installation instructions.
- B. Use installation methods and fasteners that produce fixed audience seating assemblies with

individual chairs capable of supporting an evenly distributed 600-lb static load applied 3" from front edge of the seat without failure or other conditions that might impair the chair's usefulness.

- C. Install seating with chair end standards aligned from first to last row and with backs and seats varied in width and spacing to optimize sightlines.
- D. Install seating so moving components operate smoothly and quietly.
- E. Install wiring conductors and cables concealed in components of seating and accessible for servicing.

3.3 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Prepare test and inspection reports.

3.4 ADJUSTING

- A. Adjust chair backs so that they are properly aligned with each other.
- B. Adjust self-rising seat mechanisms so seats in each row are aligned when in upright position.
- C. Repair minor abrasions and imperfections in painted finishes with a coating that matches factory-applied finish; replace units that cannot be repaired to unblemished appearance.
- D. Replace upholstery fabric damaged or soiled during installation.
- E. Verify that all components and devices are operating properly.

END OF SECTION