

Project Manual

Owner's Project Number: MC27-03

Architect's Project Number: 25-036

PROJECT

A New Ticket Booth for:
Carroll High School
Monroe, Louisiana

ARCHITECT

**McElroy Architecture, PLLC/
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September 4, 2026

SECTION 00010 - TABLE OF CONTENTS

Division 00 – Procurement and Contracting Requirements

00001 – Project Title Page
00010 – Table of Contents
00100 – Advertisement for Bids
00200 – Instructions to Bidders
0200.1 – AIA A701 – 2018 DRAFT
00210 – Supplementary Instructions to Bidders
00400 – Proposal Form
00500 – Agreement Form
00500.1 – AIA A101 – 2017 DRAFT
00500.2 – AIA A101 – 2017 EXHIBIT A DRAFT
00600 – Bond Forms
00700 – General Conditions
00700.1 – AIA A201 – 2017 DRAFT
00800 – Supplementary Conditions
00900 – Insurance Requirements

Division 01 - General Requirements

01015 - Project Start Work Date
01020 – Allowances
01023 - Project Start Up
01100 - Summary of Work
01200 - Price and Payment Procedures
01300 - Administrative Requirements
01325 - Construction Progress Schedule
01400 - Quality Requirements
01410a-Testing Laboratory Services – Architectural
01500 – Temporary Facilities and Controls
01510 – Temporary Utilities



9/4/2026

Division 00 – Procurement and Contracting Requirements
00010 – Table of Contents

01525 – Field Office
01550 – Vehicular Access and Parking
01565 – Security Measures
01585 – Project Signs
01600 – Product Requirements
01700 – Execution Requirements
01710 – Cleaning
01720 – Project Record Documents
01732 – Waste Management
01734 – Indoor Air Quality
01780 – Closeout Submittals
01800 – Project Closeout
01820 – Demonstration and Training
01900 – Geotechnical Report

Division 02 – Site Construction

02225 – Selective Demolition
02936—Seeding and Sodding

Division 03 – Concrete

03050 – Basic Concrete Materials and Methods
03100—Concrete Formwork
03200—Concrete Reinforcement
03300—Cast-In-Place Concrete



9/4/2026

Division 04 – Masonry

(none in this work)

Division 05 – Metals

(none in this work)

Division 06 – Wood and Plastics

- 06050 – Basic Wood and Plastics Materials and Methods
- 06400 – Millwork
- 06651 – Solid Surface Fabrications

Division 07 – Thermal and Moisture Protection

- 07050 – Basic Thermal and Moisture Protection
- 07110 – Dampproofing
- 07260 – Vapor Retarders
- 07412 – Composite Metal Wall Panel System
- 07620 – Sheet Metal Flashing and Trim
- 07910 – Joint Sealers

Division 08 – Doors and Windows

- 08050 – Basic Door and Window Materials and Methods
- 08520 – Aluminum Windows
- 08330 – Overhead Coiling Counter Doors

Division 09 – Finishes

- 09050 – Basic Finish Materials and Methods
- 09510 – Suspended Acoustical Ceilings
- 09654 – Rubber Base and Accessories
- 09670 – Resinous Flooring
- 09900 – Paints and Coatings



9/4/2026

Division 10 – Specialties

- 10430 – Exterior Signage
- 10440 – Interior Signage
- 10530 – Extruded Aluminum Walkway Covers

Division 12 – Furnishings

(none in this work)

Division 15 – Mechanical Systems

(mechanical work identified on drawings)

Division 16 – Electrical Systems

(electrical work identified on drawings)

END OF SECTION 00010



9/4/2026

Division 00 – Procurement and Contracting Requirements
00100 – Advertisement for Bids

SECTION 00100 - ADVERTISEMENT FOR BIDS

**NOTICE OF BIDS
A NEW TICKET BOOTH FOR:
CARROLL HIGH SCHOOL
OWNER'S PROJECT NUMBER: MC27-03
ARCHITECT'S PROJECT NUMBER: 25-036**

Sealed, written formal bid proposals will be received by **MONROE CITY SCHOOLS**, at 2006 Tower Drive, Monroe, LA 71201, or electronically by online submission at www.bidexpress.com at **2:00 PM**. (Local Prevailing Time) on **October 6, 2026**, at which time and place they will be publicly opened and read aloud for **A NEW TICKET BOOTH FOR: CARROLL HIGH SCHOOL.**

Bid documents are being made available via electronic copy. Official Bid Documents can be downloaded after registering for an account at www.mc3lroyarchplans.com to view bid documents. Plan holders will be responsible for their own reproduction cost. Questions regarding website registration and online orders please contact Plan House Printing at (662) 407-0193. Electronic bids can be submitted at www.bidexpress.com, at the above stated date and time. Questions regarding plan clarifications or request for information should be directed to the architect as follows:

Mc3lroy Architecture PLLC/William L. McElroy AIA, NCARB
601-981-1227 – P
601-983-4444 – F
Attn: Kali Blakeney – Project Manager

Complete Bidding Documents for this project are available in electronic form and may be obtained from the Monroe City School Board website (<https://www.mcschools.net/purchasing-and-accounts-payable>), Architect, and Bid Express to all Bonafide Bidders. Bid documents may also be viewed at the office of Mc3lroy Architecture, PLLC/William L. McElroy AIA, NCARB

All Contractors who intend to submit “BIDS” are REQUIRED to attend the **MANDATORY PRE-BID CONFERENCE**, which will be held on September 24, 2026 at 11:00 AM at Carroll High School at 2939 Renwick Street, Monroe, Louisiana 71201. Bids shall be accepted only from Prime Bidders who attend the Mandatory Pre-bid Conference. Subcontractors are welcome to attend.

This project is classified as Building Construction. All bids must be accompanied by bid security equal to five percent (5%) of the sum of the base bid and all alternates, and must be in the form of a certified check, cashier's check or a Bid Bond written by a company licensed to do business in Louisiana.

The successful bidder will be allowed 180 calendar days from the date of issuance of Notice to Proceed to complete the project. Liquidated damages will be assessed at \$500.00 per day for each calendar day the work is not substantially complete.

Mc3lroy Architecture, PLLC
William L. McElroy, AIA, NCARB
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A New Ticket Booth for:
Carroll High School
Monroe, Louisiana

The successful bidder will be required to furnish a Performance and a Payment Bond written by a company licensed to do business in Louisiana, each in an amount equal to 100% of the contract amount.

The Owner, Monroe City Schools, reserves the right to reject any and all bids and to waive informalities, also to withhold the acceptance of any bid if approved. No Bid may be withdrawn for a period of thirty (30) days after receipt of bids except under the provisions of Act 111 of 1983.

**MONROE CITY SCHOOL BOARD
ATTEST:**

Superintendent - Mr. Sam Moore III

President - Brandon Johnson

Publish Dates:

September 10, 2026

September 17, 2026

September 24, 2026

SECTION 00200 - INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Identification of project instructions to Bidders
- B. Provisions for Document Modifications
- C. Definition of Contractor's Responsibility

1.02 IDENTIFICATION

- A. The Project "Instruction to Bidders" shall be the standard document of the American Institute of Architects known as "AIA Document A701, Instruction to Bidders, 2018 Edition."
- B. A copy of the Project Instructions to Bidders is on file at the Architect's office and copies are available for Contractor's examination.
- C. The AIA Document A701 is hereby incorporated by reference as though fully written herein.

1.03 DOCUMENT INCLUDES

- A. Invitation
 - 1. Bid Submission
 - 2. Work Identified in the Contract Documents
 - 3. Contract Time
- B. Bid Documents and Contract Documents
 - 1. Definitions
 - 2. Contract Documents Identification
 - 3. Availability
 - 4. Examination
 - 5. Inquiries/Addenda
 - 6. Product/Assembly/System Substitutions
- C. Site Assessment
 - 1. Site Examination
 - 2. Pre-bid Conference
- D. Qualifications
 - 1. Qualifications
 - 2. Subcontractors/Suppliers/Others
- E. Bid Submission
 - 1. Bid Ineligibility
 - 2. Submission Procedure
- F. Bid Enclosures/Requirements
 - 1. Security Deposit

Division 00 – Procurement and Contracting Requirements
00200 – Instructions to Bidders

2. Consent of Surety
 3. Performance Assurance
 4. Insurance
 5. Bid Form Requirements
 6. Fees for Changes in the Work
 7. Bid Form Signature
 8. Additional Bid Information
- G. Offer Acceptance/Rejection
1. Duration of Offer
 2. Acceptance of Offer

1.04 RELATED DOCUMENTS

- A. Document 00100 - Advertisement for Bids.
- B. Document 00210 – Supplementary Instructions to Bidders
- C. Document 00220 – Special Provisions and Regulations
- D. Document 00300 - Information Available To Bidders.
- E. Document 00410 - Proposal Form.
- F. Document 00430 - Supplements to Bid Form.
- G. Document 00500 – Agreement Forms
- H. Document 00600 – Bond Forms
- I. Document 00700 – General Conditions
- J. Document 00800 - Supplementary Conditions
- K. Document 00900 – Insurance Requirements

1.05 INVITATION

- A. BID SUBMISSION
1. Bids signed and under seal, executed, and dated will be received at the office of **Monroe City Schools at 2006 Tower Drive, Monroe, Louisiana 71201.**
 2. Offers submitted after the above time shall be returned to the bidder unopened.
 3. Submit required Supplements to Bid Forms with completed package.
 4. Offers will be opened on **October 6, 2026 at 2 PM.**
 5. Amendments to the submitted offer will be permitted if received in writing prior to bid closing and if endorsed by the same party or parties who signed and sealed the offer.
- B. WORK IDENTIFIED IN THE CONTRACT DOCUMENTS
1. Work of this proposed Contract comprises building construction, including general construction Work.

Division 00 – Procurement and Contracting Requirements
00200 – Instructions to Bidders

2. Location: **Carroll High School in Monroe, Louisiana**

C. **CONTRACT TIME**

1. Base Bid contract Time - Perform the Work in **180 (One Hundred Eighty Calendar Days)** calendar days.

1.06 **BID DOCUMENTS AND CONTRACT DOCUMENTS**

A. **DEFINITIONS**

1. Bid Documents: Contract Documents supplemented with Invitation to Bid, Instructions to Bidders, Information Available to Bidders, Bid Form Supplements To Bid Forms and Appendices identified.
2. Contract Documents: Defined in General Conditions including issued Addenda.
3. Bid, Offer, or Bidding: Act of submitting an offer under seal.
4. Bid Amount: Monetary sum identified by the Bidder in the Bid Form.

B. **CONTRACT DOCUMENTS IDENTIFICATION**

1. The Contract Documents are identified as: Owner's Project Number MC27-03 and Architect's Project Number 25-036, dated September 4, 2026 as prepared by McElroy Architecture, PLLC/William L. McElroy AIA, NCARB. who is located at 4880 McWillie Circle, Jackson, Mississippi 39206, and with contents as identified in the Table of Contents.

C. **AVAILABILITY**

1. Bid documents are being made available via original paper copy. Plan holders are required to register for an account at www.mc3lroyarchplans.com to view and order Bid Documents. All plan holders are required to have a valid email address for registration. Bid documents are refundable and must be returned in good condition for refund to be applied. The Architect reserves the right to determine the condition of the plans upon return. Questions regarding website registration and online orders please contact Plan House Printing at (662) 407-0193.
2. Documents can also be viewed at the office of the Architect, online via the Owner's website at <https://www.mcschools.net/purchasing-and-accounts-payable>, and online at www.bidexpress.com.
3. Bid Documents are made available only for the purpose of obtaining offers for this project. Their use does not grant a license for other purposes.

D. **EXAMINATION**

1. Bid Documents may be viewed at the office of McElroy Architecture, PLLC/William L. McElroy AIA, NCARB, located at 4880 McWillie Circle, Jackson, Mississippi 39206.
2. Bid Documents are on display at the offices of the following construction plan rooms:
 - a. ABC Planroom.

Division 00 – Procurement and Contracting Requirements
00200 – Instructions to Bidders

c. Dodge Planroom.

5. Upon receipt of Bid Documents verify that documents are complete. Notify Mc3lroy Architecture, PLLC should the documents be incomplete.
6. Immediately notify Mc3lroy Architecture, PLLC upon finding discrepancies or omissions in the Bid Documents.

E. INQUIRIES/ADDENDA

1. Direct questions to Kali Blakeney, telephone 601-981-1227, fax number 601-983-4444, email: kblakeney@m3aarch.com.
2. Addenda may be issued during the bidding period. All Addenda become part of the Contract Documents. Include resultant costs in the Bid Amount.
3. Verbal answers are not binding on any party.
4. Clarifications requested by bidders must be in writing not less than **SEVEN (7)** days before date set for receipt of bids. All request for clarifications received after the deadline are subject to a lack of response.
5. All replies will be in the form of an Addendum, a copy of which will be forwarded to known recipients and planrooms.

F. PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

1. Where the Bid Documents stipulate a particular product, substitutions will not be considered prior to bid opening. All bids must be based off the specified product or a listed approved equal.
2. See Section 01600 - Product Requirements for additional requirements.

1.07 SITE ASSESSMENT

A. SITE EXAMINATION

1. All bidders are encouraged to examine the project site before submitting a bid.
2. The bidder is required to contact the Architect in order to arrange a date and time to visit the project site.
3. The bidder shall not contact Noxubee County School District in order to arrange a date and time to visit the project site.

B. PREBID CONFERENCE

1. A bidder's conference has been scheduled for **September 24, 2026 at 11:00 AM at Carroll High School at 2939 Renwick Street, Monroe, Louisiana 71201.**
2. All bidders are **REQUIRED** to attend.
3. Attendance is **MANDATORY** to be eligible to submit a formal "**BID**".
4. Representatives of Mc3lroy Architecture will be in attendance.
5. Summarized minutes of this meeting will be circulated to attendees. These minutes will not form part of the Contract Documents.
6. Information relevant to the Bid Documents will be recorded in an Addendum, issued to Bid Document recipients.

Division 00 – Procurement and Contracting Requirements
00200 – Instructions to Bidders

1.08 QUALIFICATIONS

A. EVIDENCE OF QUALIFICATIONS

1. To demonstrate qualification for performing the Work of this Contract, bidders may be requested to submit written evidence of financial position, license to perform work in the State and Louisiana. Qualification Statement will be requested from selected low bidders and required to be submitted forty-eight (48) hours after bids are opened.

B. SUBCONTRACTORS/SUPPLIERS/OTHERS

1. The Owner reserves the right to reject a proposed subcontractor for reasonable cause.

1.09 BID SUBMISSION

A. SUBMISSION PROCEDURE – HARD COPY

1. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.
2. Submit ***ONE (1) ORIGINAL AND TWO (2) COPIES*** of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with bidder's name, contractor's license number, project name, Owner's Project Number, and Architect's Project Number, and Owner's name on the outside. Bidders have the option to submit their bids electronically through www.bidexpress.com. Electronic bids will only be accepted through this website and no other electronic bids will be opened.
4. Improperly completed information, irregularities in bid bond, shall be cause not to open the Bid Form envelope and declare the bid invalid or informal.
5. An abstract summary of submitted bids will be made available to all bidders following bid opening.

B. BID INELIGIBILITY

1. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, will at the discretion of Monroe City Schools to be declared unacceptable.
2. Bid Forms, Appendices, and enclosures that are improperly prepared will, at the discretion of Monroe City Schools, be declared unacceptable.
3. Failure to provide security deposit, bonding or insurance requirements will, at the discretion of Monroe City Schools, be waived.

1.10 BID ENCLOSURES/REQUIREMENTS

A. SECURITY DEPOSIT

1. Bids shall be accompanied by a security deposit as follows:
 - a. Bid Bond in the amount of five percent (5%) of base bid price on AIA A310 Bid Bond Form.
2. Endorse the Bid Bond in the name of Monroe City Schools as oblige,

Division 00 – Procurement and Contracting Requirements
00200 – Instructions to Bidders

signed, and sealed by the principal and surety.

3. The security deposit will be returned after delivery to Monroe City Schools of the required Performance and Payment Bond(s) by the accepted bidder.
4. Include the cost of bid security in the Bid Amount.
5. If no contract is awarded, all security deposits will be returned.

B. FEES FOR CHANGES IN THE WORK

1. The overhead and profit fees on own Work and Work by subcontractors, applicable for Changes in the Work, whether additions to or deductions from the Work on which the Bid Amount is based shall be as follows:
 - a. Fifteen Percent (15%) on own Work
 - b. Ten Percent (10%) on Subcontract Work

G. BID FORM SIGNATURE

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

1.11 OFFER ACCEPTANCE/REJECTION

A. DURATION OF OFFER

1. Bids shall remain open to acceptance and shall be irrevocable for a period of thirty (30) days after the bid closing date.

B. ACCEPTANCE OF OFFER

1. Monroe City Schools reserves the right to accept or reject any or all offers.
2. After acceptance by Monroe City Schools, McElroy Architecture, PLLC. on behalf of Monroe City Schools, will issue to the successful bidder, a written Bid Acceptance.

END OF SECTION 00200

SECTION 00210 – SUPPLEMENTARY INSTRUCTION TO BIDDERS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Identification of Project Supplementary Instructions to Bidders.
- B. General Provisions.
- C. Supplements.

1.02 IDENTIFICATION

- A. The "Supplements" included hereinafter modify the "Instructions to Bidders" (AIA Document A701, Instructions to Bidders, 1997 Edition) identified in Section 00200.

1.03 GENERAL REVISIONS

- A. Where a portion of the Instructions to Bidders is modified by these Supplementary Instructions to Bidders, the unaltered portions shall remain in effect.

1.04 SUPPLEMENTS

- A. To Article 1 - Definitions:

- 1. Add the following subparagraphs:

1.10 The Owner is Monroe City Schools.

- B. To Article 3 - Bidding Documents:

Amend to paragraph 3.1.1. to read

Contract Documents may be reviewed at the office of the Architect. Prospective bidders may obtain copies of all materials required for bidding purposes. There is a three-hundred-and-fifty-dollar refundable deposit required to obtain contract documents.

- 1. Delete paragraph 3.1.2.
- 2. Add to paragraph 3.2, subparagraph 3.2.4:

3.2.4 Should there be any discrepancy between the specifications and the drawings or between the larger and smaller scale drawings or between the figures and the scale, the specifications shall take precedence in all cases, the larger scale drawings shall be followed in preference to the smaller scale, the descriptive writing in preference to the material symbols and the figures rather than the scale. Any unusual conditions found to exist at the site or discrepancies found on the drawings shall be called to the attention of the Architect prior to submitting proposal and request interpretation. The Architect's Project Manager will send written instruction or interpretations to all plan holders-neither the Owner nor the Project Manager will be

Division 00 – Procurement and Contracting Requirements

00210 – Supplementary Instructions to Bidders

responsible for oral instructions. If the Contractor fails to make such request no excuse thereafter shall be entertained for failure to carry out work in satisfactory manner and no additional compensation shall be allowed for such discrepancies or unusual conditions.

3. Delete paragraph 3.3.2, 3.3.3 and 3.3.4

4. Substitute 3.3.2 to read:

“No substitution will be considered prior to receipt of bids. Substitutions will be considered as per Section 01600 as incorporated in the specifications.”

5. Substitute 3.3.3 to read:

“Meaning of "or equal", "as directed", "as approved", etc. or words of like effect signify approval by the Project Manager and/or Owner. The Project Manager's approval will not relieve the contractor of responsibility for materials, equipment or work later found to be defective not conforming to the contract documents or otherwise unsuitable for the work.”

D. To Article 7 - Performance Bond and Payment Bond:

1. Add to paragraphs 7.1.1, 7.1.2, 7.1.3, 7.2.1, and 7.2.2, the following:

Having satisfied all conditions of award as set forth elsewhere in these documents, the successful Bidder shall, **within ten (10) WORKING days of Contract award**, furnish a surety bond in a penal sum not less than the amount of the Contract as awarded as security for the faithful performance of the Contract (**Performance Bond**). In addition, the successful bidder shall within the period specified above furnish a surety bond in a penal sum not less than the amount of the contract as awarded, as security for the payment of all persons, firms, or corporations to whom Contractor may become legally indebted for labor, materials, tools, equipment, or services of any nature including utility and transportation services, employed or used by him in performing the work (**Payment Bond**). Such bonds shall be in the same form as those included in the Contract Documents and shall have the same date as or a date subsequent to that of the Agreement. The current power of attorney for the person who signs for any surety by a guaranty or surety company 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. Said power of attorney shall be provided on a stipulated AIA form or approved similar forms.

E. To Section 00200 - Instructions to Bidders, add the following Article 9 - Miscellaneous Provisions:

ARTICLE 9

MISCELLANEOUS PROVISIONS

9.1 STATEMENT OF BIDDER'S QUALIFICATIONS

Division 00 – Procurement and Contracting Requirements
00210 – Supplementary Instructions to Bidders

- 9.1.1. Each Bidder shall, upon request of the Owner, submit on the form specified for that purpose, his experience record in constructing the type of improvements embraced in the project, his organization and equipment available for the work contemplated and when specifically requested by the Owner, a detailed financial statement. The Owner shall have the right to take steps as it deems necessary to determine the ability of the Bidder to perform his obligations under the Contract and the Bidder shall furnish the Owner all such information and data for this purpose as it may request. The right is reserved to reject any Bid where an investigation of the available evidence of information does not satisfy the Owner that the Bidder is qualified to carry out properly the terms of the Contract.

9.2 OTHER CONTRACTS

- 9.2.1 The Owner may award or may have awarded other contracts for additional work and the Contractor shall operate fully with such other Contractors by scheduling his own work with that to be performed under other Contracts as may be directed by the Owner. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor as scheduled.

9.3 REVIEW BY OWNER

- 9.3.1 The Owner and its authorized representatives and agents shall at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract provided, however, that all instructions and approval with respect to the Work will be given the Contractor only by the Owner through its authorized representatives or agents.

9.4 RETAINAGE

- 9.4.1 Bidders are instructed to review the GENERAL CONDITIONS - ARTICLE 9, regarding Payments and Completion. The Owner shall consistently retain five percent (5%) of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the work and five percent (5%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site or if approved by the Owner at some other location agreed upon in writing.

9.5 EQUAL EMPLOYMENT OPPORTUNITY

- 9.5.1 Attention to Bidders is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their race, color, religion, sex, or national origin. (Title IV of the Civil Rights Act of 1964, 42USC2000d and Title 43, Part 17 CFR). The Bidder's attention is also called to the Federal Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246 entitled, "Equal Employment Opportunity" as amended by Executive Order 11375 and supplemented in Department of Labor Regulations 41 CFR Part 60).

9.6 CONTRACT TIME

Division 00 – Procurement and Contracting Requirements
00210 – Supplementary Instructions to Bidders

- 9.6.1 The selected Contractor shall substantially complete (95%) the herein described work within **ONE HUNDRED EIGHTY (180)** calendar days from the issuance of the “**Notice to Proceed**”.

9.7 AWARD OF CONTRACT

- 9.7.1 In determining the lowest responsible bid, the following will be considered:

1. Whether a Bidder:
 - a. Maintains a permanent place of business.
 - b. Has adequate equipment to do the work properly and expediently.
 - c. Has suitable financial status.
 - d. Has appropriate practical and technical experience.
 - e. Has met the requirements of the Ouachita Parish’s Equal Business Opportunity Policy as specified in the supplemental general conditions.
2. A Bidder must hold a valid Contractor’s License Number in accordance with statutory requirements. Any sub-contractor whose work exceeds \$50,000.00 will be required to have a valid Contractor’s License Number.

- 9.7.2 The contract, if awarded, will be awarded as promptly as possible after the opening of the bids as, in the discretion of the Owner, possible. The Owner reserves the right, in its discretion, to determine what are informalities in making, receiving, and opening the bids and the awarding of a contract thereon, and the further right to waive any such informality when such waiver is, in the discretion of the Owner, in the best interest of the Owner.

9.8 BOND FORMS

- 9.8.1 Performance Bond and Labor Material Payment Bond Standard Forms are included herewith. Bonds must be written and submitted on these forms only. **No other forms will be accepted.**

9.9 NONRESIDENT CONTRACTORS

- 9.9.1 When a non-resident contractor submits a bid for a Louisiana public project, he shall attach thereto a copy of his resident State’s current law pertaining to such State’s treatment of non-resident contractors.

9.10 PRE-BID CONFERENCE

- 9.10.1 A non-mandatory Pre-Bid Conference will be held. Location, time, and date will be set by the Project Manager. **ALL INTERESTED GENERAL CONTRACTORS, ARE NOT REQUIRED TO ATTEND. ALL SUB CONTRACTORS, SUPPLIERS ETC ARE ENCOURAGED TO ATTEND, BUT ARE NOT REQUIRED TO ATTEND.**

Division 00 – Procurement and Contracting Requirements

00210 – Supplementary Instructions to Bidders

- 9.10.2 All Bidders are expected to have familiarized themselves with conditions relating to The Work prior to the Pre-Bid Conference.

9.11 WITHDRAWAL OF BIDS

- 9.11.1 Any bid may be withdrawn prior to the scheduled time for opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. Bids may not be withdrawn until FORTY-FIVE (45) days after receipt of bids.

9.12 LAWS AND REGULATIONS

- 9.12.1 Bidders' attention is directed to the fact that all applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project apply to the contract.

9.13 LIQUIDATED DAMAGES

- 9.13.1 For Failure to Enter into Contract: The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within ten (10) days after he has received notice of acceptance of his bid, will forfeit to the Owner as liquidated damages the security deposited with his bid.

- 9.13.2 For Failure to Substantially Complete Project in Time Stipulated: Refer to Supplementary Conditions.

9.14 WARRANTIES

- 9.14.1 **As per state law** - Any wording to the effect of disallowing "WARRANTIES EITHER EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE" SHALL BE removed or deleted from the warranty.

9.15 BIDDING AND AWARD

- 9.15.1 All bids submitted for public projects where said bid is in excess of One Hundred Thousand Dollars (\$100,000.00) sealed bid envelope must bear the Contractor's Mississippi license number or bid may not even be opened by a public entity.

9.16 DISQUALIFICATION OF BIDDERS

- 9.16.1 Disqualification of bidders: Any one or more of the following causes may be considered as sufficient for the disqualification of the bidder and the rejection of his bid:

1. For failing to pay, or satisfactorily settle, all bills due all persons furnishing labor, equipment and supplies on former contracts.
2. For being in arrears on existing contracts.
3. Being in litigation with Noxubee County School District.
4. Having defaulted on a previous contract(s).
5. Failure to submit a completed and fully executed Bid Submission package as stated in Section 00200 – Instructions to Bidders may

Division 00 –Procurement and Contracting Requirements
00210 – Supplementary Instructions to Bidders
be considered as sufficient reason for disqualification of bidder and
rejection of the bid.

END OF SECTION 00210

DRAFT AIA® Document A701™ - 2018

Instructions to Bidders

for the following Project:

(Name, location, and detailed description)

«A New Ticket Booth for: Carroll High School»
«2939 Renwick St., Monroe, LA 71202»
«Renovation to Carroll High School to incorporate a new ticket booth.»

THE OWNER:

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

«Monroe City Schools»«», Other»
«2006 Tower Drive, Monroe, Louisiana 71201»
«Telephone Number: 318-325-0601»
«»

THE ARCHITECT:

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

«McElroy Architecture, PLLC / William L. McElroy, AIA,»«», Professional Corporation»
«4880 McWillie Circle
Jackson, MS 39206»
«Telephone Number: 601-981-1227»
«Fax Number: 601-983-4444»

TABLE OF ARTICLES

- 1 DEFINITIONS
- 2 BIDDER'S REPRESENTATIONS
- 3 BIDDING DOCUMENTS
- 4 BIDDING PROCEDURES
- 5 CONSIDERATION OF BIDS
- 6 POST-BID INFORMATION
- 7 PERFORMANCE BOND AND PAYMENT BOND
- 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

ADDITIONS AND DELETIONS:

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

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

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™-2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

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ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

« »

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper

documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

« »

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3 Substitutions

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

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

« »

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

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security:

(Insert the form and amount of bid security.)

« »

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning « » days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

« »

§ 4.3.2 Paper copies of the Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address, and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:

(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)

« »

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

« »

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.

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

« »

- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.

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

« »

- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.

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

« »

- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013.)

« »

- .5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages

.7 Addenda:

Number	Date	Pages

.8 Other Exhibits:

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

[☐ »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017.)

« ☐ »

[☐ »] The Sustainability Plan:

Title	Date	Pages

[☐ »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents listed below:

(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

« ☐ »

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO:
Monroe City Schools
2006 Tower Drive
Monroe, Louisiana 71201

BID FOR: Owner's Project Number MC27-03; Architect's
Project Number 25-036
A New Ticket Booth for: Carroll High School
Monroe City Schools
Monroe, Louisiana

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Mc3lroy Architecture PLLC/William L. McElroy AIA, NCARB and dated September 4, 2026:

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

Addendum #1 _____
Addendum #2 _____
Addendum #3 _____
Addendum #4 _____

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) All labor, materials, and equipment to complete the entire Scope of Work (Modified by Addenda as applicable) for A New Ticket Booth for: Carroll High School. Complete the work in One Hundred Eighty (180) Calendar Days for the sum of:
Dollars (\$) _____)

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

ALTERNATE NO. 1 (ADDITIVE): Renovation of additional existing storage room to expand ticket booth into a combined ticket booth and concession stand. Add Alternate shall include all work differing from Base Bid, as identified in the drawings (vinyl wall graphic is removed from scope for this alternate), for the lump sum of:

_____ Dollars (\$) _____)

NAME OF BIDDER: _____
ADDRESS OF BIDDER: _____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____
NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____
TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____
DATE: _____

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

** If someone other than a corporate officer signs for the Bidder/ Contractor, a copy of a corporate resolution or other signature authorization shall be required for submission of bid. Failure to include a copy of the appropriate signature authorization, if required, may result in the rejection of the bid unless bidder has complied with La. R.S. 38:2212(A)(1)(c) or RS 38:2212(O) .

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA RS 38:2218.A is attached to and made a part of this bid

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: _____

(Owner to provide name and address of owner)

BID FOR: _____

(Owner to provide name of project and other identifying information)

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

DESCRIPTION: ☐ Base Bid or ☐ Alt.# _____				
REF. NO. 1	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

DESCRIPTION: ☐ Base Bid or ☐ Alt.# _____				
REF. NO. 2	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

DESCRIPTION: ☐ Base Bid or ☐ Alt.# _____				
REF. NO. 3	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

DESCRIPTION: ☐ Base Bid or ☐ Alt.# _____				
REF. NO. 4	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

DESCRIPTION: ☐ Base Bid or ☐ Alt.# _____				
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

DESCRIPTION: ☐ Base Bid or ☐ Alt.# _____				
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

DESCRIPTION: ☐ Base Bid or ☐ Alt.# _____				
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REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

DESCRIPTION:	☐ Base Bid or ☐ Alt.# _____			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)

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

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

**BID BOND
FOR
MONROE CITY SCHOOLS**

Date:

KNOW ALL MEN BY THESE PRESENTS:

That _____ of _____, as Principal, and _____, as Surety, are held and firmly bound unto the **MONROE CITY SCHOOLS** (Obligee), in the full and just sum of five (5%) percent of the total amount of this proposal, including all alternates, lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater than the amount for which it obligates itself in this instrument or that it is a Louisiana domiciled insurance company with at least an A - rating in the latest printing of the A. M. Best's Key Rating Guide. If surety qualifies by virtue of its Best's listing, the Bond amount may not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

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

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

PRINCIPAL (BIDDER)

SURETY

BY: _____
AUTHORIZED OFFICER-OWNER-PARTNER

BY: _____
AGENT OR ATTORNEY-IN-FACT(SEAL)

DRAFT AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

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

«Monroe City Schools»«», Other»
«2006 Tower Drive, Monroe, Louisiana 71201»
«Telephone Number: 318-325-0601»
«»

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

« »« »
« »
« »
« »

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

«A New Ticket Booth for: Carroll High School»
«2939 Renwick St., Monroe, Louisiana 71202»
«Renovations to Carroll High School to incorporate a new ticket booth.»

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

«McElroy Architecture, PLLC / William L. McElroy, AIA,»«», Professional Corporation»
«4880 McWillie Circle
Jackson, MS 39206»
«Telephone Number: 601-981-1227»
«Fax Number: 601-983-4444»

The Owner and Contractor agree as follows.

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

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

The parties should complete A101®-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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TABLE OF ARTICLES

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

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

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

(Check one of the following boxes.)

☐ The date of this Agreement.

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

☐ Established as follows:

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

« »

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

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

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

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

[« »] Not later than « » (« ») calendar days from the date of commencement of the Work.

[« »] By the following date: « »

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be « » (\$ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

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

Item	Price

§ 4.4 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

« »

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

« »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the «15th» day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the «15th» day of the «following» month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than «sixty» («60») days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

«5% on all labor and materials »

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

«Not Applicable»

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

«Not Applicable»

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

«Not Applicable»

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

« »

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

«2.00» % «annual»

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« »

« »

<< >>
<< >>

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

☐ Arbitration pursuant to Section 15.4 of AIA Document A201–2017

☒ Litigation in a court of competent jurisdiction

☐ Other *(Specify)*

<< >>

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

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

<<None>>

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

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

<<Dr. Washington Cole, Superintendent>>
<<37 Gandy-Tindal Road, Macon, MS 39341>>

<>>

<>>

<>>

<>>

§ 8.3 The Contractor's representative:

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

<< >>

<< >>

<< >>

<< >>

<< >>

<< >>

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.7 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction

.5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages

.7 Addenda, if any:

Number	Date	Pages

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

.8 Other Exhibits:

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

[☐] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[☐] The Sustainability Plan:

Title	Date	Pages

[☐] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

- .9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

« »

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

OWNER *(Signature)*

«Albert Williams»«Noxubee County School
District Board of Education President»

(Printed name and title)

CONTRACTOR *(Signature)*

« »« »

(Printed name and title)

DRAFT AIA® Document A101® – 2017

Exhibit A

Insurance and Bonds

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

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

«A New Ticket Booth for: Carroll High School»
«2939 Renwick St., Monroe, Louisiana 71202»

THE OWNER:
(Name, legal status and address)

«Monroe City Schools»«», Other»
«2006 Tower Drive, Monroe, Louisiana 71201»

THE CONTRACTOR:
(Name, legal status and address)

« »« »
« »

TABLE OF ARTICLES

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

ARTICLE A.1 GENERAL

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

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

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

§ A.2.2 Liability Insurance

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

ADDITIONS AND DELETIONS:

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

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

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

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§ A.2.3 Required Property Insurance

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

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

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

Causes of Loss	Sub-Limit

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

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

Coverage	Sub-Limit

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

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

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

§ A.2.3.3 Insurance for Existing Structures

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

§ A.2.4 Optional Extended Property Insurance.

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

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

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

<< >>

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

<< >>

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

<< >>

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

<< >>

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

<< >>

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

<< >>

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

<< >>

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

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

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

« »

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

Coverage

Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

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

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

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

§ A.3.2 Contractor's Required Insurance Coverage

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

« »

§ A.3.2.2 Commercial General Liability

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

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and

.5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

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

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

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

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability with policy limits not less than « » (\$ « ») each accident, « » (\$ « ») each employee, and « » (\$ « ») policy limit.

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

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

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

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

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

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

§ A.3.3 Contractor's Other Insurance Coverage

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

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

« »

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

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

- [« »] § A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:
(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

« »

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

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

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

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

- [« »] § A.3.3.2.6 Other Insurance
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

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

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

(Specify type and penal sum of bonds.)

Type

Penal Sum (\$0.00)

Payment Bond

Performance Bond

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

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

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

<< >>

SECTION 01015 - PROJECT START WORK DATE

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Designation of Project Start Work Date.
- B. Example of Notice to Proceed

1.02 DESIGNATION OF PROJECT START WORK DATE

- A. The Project Start Work Date will be fixed in a Notice to Proceed to be issued after all contracting requirements have been agreed upon and completed in full. At such time that all contracting requirements are complete the Architect shall issue a Notice to Proceed directly to the Contractor. The Contractor shall man the Project within seven (7) days after the date of the Notice to Proceed is issued, and shall man the project to allow for the continuous progress of the Work of each Bid Package.
- B. The Contractor shall not perform any work pertaining to the Project before the Notice to Proceed has been issued. Access to the site will not be granted until a Project Start Work Date has been designated.
- C. Failure by the Contractor to “Man:” the Project site after the Project Start Work Date will result in a deduction of Project Calendar Days.

1.03 EXAMPLE OF NOTICE TO PROCEED

- A. Below is a draft example of the Notice to Proceed document that will be issued to designate the Project Start Work Date.

PROJECT: A New Ticket Booth for Carroll High School

PROJECT NO: Owner’s Project Number: MC27-03 25-036 ; Architect’s Project Number: 25-036

CONTRACTOR:

CONTRACT DATE:

OWNER: Monroe City Schools, Monroe, Louisiana

The undersigned certifies that on the following date: _____, I/ we have manned the project with an adequate work force to carry out the work for the above project.

Submitted by:

NAME: (TYPE OR PRINT) _____

TITLE: (TYPE OR PRINT) _____

SIGNATURE: _____

NOTE:

The contractor shall man the project within **seven (7) days** after a NOTICE TO PROCEED is issued. The difference after the seven (7) days and the **PROJECT START WORK DATE** will be deducted from any extension(s) of time requested by the Contractor. An adjustment of time for weather or unforeseen circumstances will be determined by the project architect.

NOTARIZED SEAL:

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01015

SECTION 01020 - ALLOWANCES**PART 1 – GENERAL****1.01 SUMMARY**

- A. Types of allowances required include the following: Lump sum and unit price allowances. **INCLUDE SPECIFIED ALLOWANCES IN THE BASE BID INDICATED ON THE PROPOSAL FORM.**

1.02 SELECTION AND PURCHASE

- A. Purchase products and systems as selected by the Architect from the designated supplier.
- B. The designated allowance is to be used only for the net purchase price of the denominated item. Any adjunct or related costs to be incurred by the contractor should be anticipated and included in the contract sum, not as part of the allowance monies.
- C. The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities against which the Contractor makes reasonable objection.
- D. Unless otherwise provided in the Contract Documents:
 - 1. Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
 - 2. Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum and not in the allowances;
 - 3. Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect
 - a. The difference between actual costs and the allowances
 - b. Changes in Contractor's costs

1.03 SUBMITTALS

- A. Submit proposals in the form specified for Change Orders with invoices or delivery slips to indicate actual quantities of materials delivered to the site for use in fulfillment of each allowance.

PART 2 – PRODUCTS**2.01 SCHEDULE OF ALLOWANCES**

- | |
|---|
| <ul style="list-style-type: none"> A. Allowances are Lump Sum and include purchase, delivery and installation unless noted otherwise. <ul style="list-style-type: none"> 1. Contingency Allowance - Please provide \$25,000 contingency allowance for |
|---|

unforeseen work that may arise as a consequence of construction.

- B. Allowances are to be listed as separate line items on approved Schedule of Values.

PART 3 – EXECUTION

3.01 INSPECTION/PREPARATION

- A. Inspect products covered by an allowance promptly upon delivery for damage or defects. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related construction activities.

3.02 ALLOWANCE COST ADJUSTMENT

- A. At contract closeout, all monies remaining (or due) in the Allowances shall be adjusted by Change Order.

END OF SECTION 01020

SECTION 01023 - PROJECT START-UP

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section shall include activities and requirements following the receipt of bids thru issuing the Notice-to-Proceed.

1.02 BID TABULATION

- A. The Architect shall prepare and certify a tabulation of the bids received. A copy shall be mailed or faxed to all interested parties.

1.03 NOTICE OF AWARD

- A. The Owner shall consider the received bids and the Architect's recommendation(s) and determine the parameters of Award, if any. If the Owner elects to proceed, the Architect shall prepare a Notice of Award for the Contractor's acceptance conforming to his bid and bid bond.
- B. The Architect shall furnish the Contractor the Construction Contract (see Section 00500 - Contract) for his review along with three (3) signature pages execution. A ten (10) day time period will be allowed for the return of the executed items as follows:
- | | | |
|----|---|----------------------|
| 1. | AIA A101 - Owner/Contractor Agreement | 3 Signature pages |
| 2. | Performance Bond incl Power of Attorney | 1 Original, 2 copies |
| 3. | Payment Bond incl Power of Attorney | 1 Original, 2 copies |
| 4. | Certificate of Insurance | 1 Original, 2 copies |
- C. The following may also be submitted with the above.
- | | |
|----|--|
| 1. | Schedule of Values |
| 2. | List of subcontractors |
| 3. | Contractor's Construction Schedule (preliminary if not final). |
| 4. | Estimated amounts of monthly Applications for Payment (Draws). |
- D. Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule. Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case later than 7 days before the date scheduled for submittal of the initial Application for Payment. Format and Content: See Section 01027 - Applications for Payment.

1.04 NOTICE TO PROCEED

Division 01 – General Requirements
01023 – Project Start Up

- A. Upon the receipt of the above and all appears to be in order; the Architect shall issue a Notice-to-Proceed to the Contractor for the initiation of the Work.

PART 2 - PRODUCTS (NOT APPLICABLE)
PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION 01023

SECTION 01100 – SUMMARY OF WORK**PART 1 – GENERAL****1.01 PROJECT AND THE WORK**

- A. Project Name: A NEW TICKET BOOTH FOR: CARROLL HIGH SCHOOL
- B. Owner's Name: Monroe City Schools
- C. Architect's Name: McElroy Architecture, PLLC.
- D. The Project consists of the construction of the Work defined as:
“The Construction of the Project as required by the Contract Documents.”
The Work shall include all labor, materials, equipment, services, and related activities and procedures necessary to produce the completed construction as shown on the Drawings and required by the Specifications.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: The Work will be constructed by an Owner selected Contractor from qualified respondents. The Work shall be completed under a single “lump sum” contracts.

1.03 OWNER OCCUPANCY

- A. Monroe City Schools intends to occupy the Project upon Substantial Completion.
- B. Cooperate with Monroe City Schools to minimize conflict and to facilitate business operations.
- C. Schedule the Work to accommodate Monroe City Schools occupancy.

1.04 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Arrange use of site and premises to allow:
 - 1. Work by Others.
 - 2. Work by Monroe City Schools.
- C. Provide access to and from site as required by law and by Monroe City Schools:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Time Restrictions:
 - 1. Limit conduct of especially noisy exterior work to the hours of 7:00 a.m. – 5:00 p.m.
 - 2. Limit conduct of especially noisy interior work to the hours of 7:00

a.m. – 5:00 p.m.

- E. Utility Outages and Shutdown:
 - 1. Limit shutdown of utility services to 7:00 a.m. – 5:00 p.m. hours at a time, arranged at least 24 hours in advance with Monroe City Schools.
 - 2. Prevent accidental disruption of utility services to other facilities.

1.05 WORK SEQUENCE

- A. Coordinate construction schedule and operations with Monroe City Schools.
- B. Coordinate construction schedule and operations with McElroy Architecture, PLLC.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01100

SECTION 01200 - PRICE AND PAYMENT PROCEDURES

PART 1 – GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED SECTIONS

- A. Document 00500 - Agreement: Contract Sum, retainages, payment period, monetary values of unit prices.
- B. Document 00700 - General Conditions and Document 00800 - Supplementary Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- C. Document 00800 - Supplementary Conditions: Percentage allowances for overhead and profit.

1.03 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Mc3Iroy Architecture, PLLC. for approval.
- B. Forms filled out by hand will not be accepted.
- C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization. Include with breakdown separate line items for materials and labor.
- D. Include separately from each line item, a direct proportional amount of overhead and profit.
- E. Revise schedule to list approved Change Orders, with each Application for Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Mc3Iroy Architecture, PLLC. for approval.

Division 01 – General Requirements
01200 – Price and Payment Procedures

- C. Forms filled out by hand will not be accepted.
- D. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.
- E. Execute certification by signature of authorized officer.
- F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.
- H. Submit three (3) copies of each Application for Payment.
- I. Include the following with the application:
 - 1. Transmittal letter as specified for Submittals in Section 01300.
 - 2. Construction progress schedule, revised and current as specified in Section 01300.
 - 3. Current construction photographs specified in Section 01300.
 - 4. Partial release of liens from major Subcontractors and vendors.
 - 5. Affidavits attesting to off-site stored products.
- J. When Mc3lroy Architecture, PLLC. requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Mc3lroy Architecture, PLLC. will issue instructions directly to the Contractor.
- B. For other required changes, Mc3lroy Architecture, PLLC. will issue a document signed by the Owner instructing to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.

Division 01 – General Requirements
01200 – Price and Payment Procedures

- C. For changes for which advance pricing is desired, McElroy Architecture, PLLC. will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. The Contractor shall prepare and submit a fixed price quotation within fourteen (14) days.
- D. The Contractor may propose a change by submitting a request for change to McElroy Architecture, PLLC., describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01600.
- E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. For a change requested by McElroy Architecture, PLLC. for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by the Contractor, the amount will be based on the Contractor's request for a Change Order as approved by McElroy Architecture, PLLC.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
 - 4. For changes ordered by McElroy Architecture, PLLC. without a quotation from the Contractor, the amount will be determined by McElroy Architecture, PLLC. based on the Contractor's substantiation of costs as specified for Time and Material work.
- F. Substantiation of Costs: Provide full information required for evaluation.
 - 1. On request, provide following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 - 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 - 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits

Division 01 – General Requirements
01200 – Price and Payment Procedures

indicated in the Conditions of the Contract.

- G. Execution of Change Orders: McElroy Architecture, PLLC. will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- H. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- I. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- J. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01800.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01200

SECTION 01300 - ADMINISTRATIVE REQUIREMENTS**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Preconstruction meeting.
- B. Site mobilization meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Progress photographs.
- F. Coordination drawings.
- G. Submittals for review, information, and project closeout.
- H. Number of copies of submittals.
- I. Submittal procedures.
- J. Project Closeout Conference

1.02 RELATED SECTIONS

- A. Document 00700 - General Conditions: Dates for applications for payment.
- B. Section 01325 - Construction Progress Schedule: Form, content, and administration of schedules.
- C. Section 01700 - Execution Requirements: Additional coordination requirements.
- D. Section 01780 - Closeout Submittals: Project record documents.

1.03 PROJECT COORDINATION

- A. Project Coordinator: defined as an Owner employed Construction Administrator
- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for vehicular access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.

Division 01 - General Requirements
01300 – Administrative Requirements

- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to Mc3lroy Architecture, PLLC.
 - 1. Requests for interpretation.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Manufacturer's instructions and field reports.
 - 6. Applications for payment and change order requests.
 - 7. Progress schedules.
 - 8. Coordination drawings.
 - 9. Closeout submittals.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Mc3lroy Architecture, PLLC. will schedule a meeting after Notice of Award.
- B. Attendance Required:
 - 1. Monroe City Schools - Owner
 - 2. Mc3lroy Architecture, PLLC. – Project Architect
 - 3. All Project Contractors and Sub Contractors.
- C. Agenda:
 - 1. Execution of Monroe City Schools Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing the parties to Contract and Mc3lroy Architecture, PLLC..
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 7. Scheduling.
- D. Mc3lroy Architecture will record minutes and distribute copies within two days after meeting to participants, with copies to Monroe City Schools, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

- A. General Contractor will schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. General Contractor will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

Division 01 - General Requirements
01300 – Administrative Requirements

- C. Attendance Required:
1. Job superintendent, major Subcontractors and suppliers,
 2. Monroe City Schools - Owner
 3. Mc3lroy Architecture, PLLC. – Project Architect
 3. All Project Contractors and Sub Contractors.
- D. Agenda:
1. Review minutes of previous meetings.
 2. Review of Work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems that impede, or will impede, planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Review of off-site fabrication and delivery schedules.
 7. Maintenance of progress schedule.
 8. Corrective measures to regain projected schedules.
 9. Planned progress during succeeding work period.
 10. Coordination of projected progress.
 11. Maintenance of quality and work standards.
 12. Effect of proposed changes on progress schedule and coordination.
 13. Other business relating to Work.
- E. General Contractor will record minutes and distribute copies within two days after meeting to participants, with copies to Noxubee County School District, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

3.04 PROGRESS PHOTOGRAPHS

- A. General Contractor shall be responsible for photo documentation of entire Project.

3.05 COORDINATION DRAWINGS

Division 01 - General Requirements
01300 – Administrative Requirements

- A. Provide information required by Trade Contractors for preparation of coordination drawings.
- B. Review drawings prior to submission to McElroy Architecture, PLLC.
- C. Coordination drawing cost shall be by individual trade contractors.

3.06 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Submit to McElroy Architecture, PLLC. for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed only for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01780 - CLOSEOUT SUBMITTALS.

3.07 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for McElroy Architecture, PLLC.'s knowledge as contract administrator or for Monroe City Schools. No action will be taken.

3.08 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- B. Submit for Monroe City Schools's benefit during and after project completion.

3.09 NUMBER OF COPIES OF SUBMITTALS

- A. Documents for Review:
 - 1. Small Size Sheets, Not Larger than 8-1/2 x 11 inches: Submit the number of copies required, plus two copies that will be retained by McElroy Architecture, PLLC.
- B. Documents for Information: Submit the number of copies required, plus two copies that will be retained by McElroy Architecture, PLLC.
- C. Documents for Project Closeout: Make one reproduction of submittal originally reviewed. Submit one extra of submittals for information.
- D. Samples: Submit the number specified in individual specification sections; one of which will be retained by McElroy Architecture, PLLC..
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to unless specifically so stated.
- E. Minimum number of submittals required shall be three(3).

3.10 SUBMITTAL PROCEDURES

- A. Transmit each submittal with AIA Form G810.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Deliver submittals to McElroy Architecture PLLC.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 15 days excluding delivery time to and from the professionals.
- H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- I. Provide space for Consulting Engineers and McElroy Architecture, PLLC. review stamps.
- J. When revised for resubmission, identify all changes made since previous submission.
- K. Distribute copies of reviewed submittals as appropriate. Instruct parties

Division 01 - General Requirements
01300 – Administrative Requirements

to promptly report any inability to comply with requirements.

- L. Submittals not requested will not be recognized or processed.

3.11 PROJECT CLOSEOUT CONFERENCE

- A. McElroy Architecture, PLLC. Will schedule and administer a Project Closeout Conference once Final Acceptance has been achieved.
- B. Attendance Required:
 - 1. Monroe City Schools - Owner
 - 2. McElroy Architecture, PLLC. – Project Architect
 - 3. All Project Contractors and Sub Contractors.
- C. Agenda:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
 - 6. Coordination of Owner Training
- D. McElroy Architecture will record minutes and distribute copies within two days after meeting to participants, with copies to Monroe City Schools, participants, and those affected by decisions made.

END OF SECTION 01300

SECTION 01325 - CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED SECTIONS

- A. Section 01100 - Summary: Work sequence.

1.03 REFERENCES

- A. AGC (CPSM) - Construction Planning and Scheduling Manual; Associated General Contractors of America; 2004.
- B. M-H (CPM) - CPM in Construction Management - Project Management with CPM, O'Brien, McGraw-Hill Book Company; 2006.

1.04 SUBMITTALS

- A. Within 10 days after date of Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.
- F. Submit the number of opaque reproductions that requires, plus two copies that will be retained by Mc3lroy Architecture, PLLC..

1.05 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with one years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.
- B. Contractor's Administrative Personnel: Five (5) years minimum experience in using and monitoring CPM schedules on comparable projects.

1.06 SCHEDULE FORMAT

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

PART 2 – PRODUCTS (NOT APPLICABLE)**PART 3 – EXECUTION****3.01 PRELIMINARY SCHEDULE**

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

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work identified in Section 01100.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Include conferences and meetings in schedule.
- G. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- H. Coordinate content with schedule of values specified in Section 01200.
- I. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

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

3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with Mc3lroy Architecture, PLLC at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 10 days.

3.05 UPDATING SCHEDULE

Division 01 - General Requirements
01325 – Construction Progress Schedule

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

3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to Subcontractors, suppliers, McElroy Architecture, PLLC, Monroe City Schools, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

END OF SECTION 01325

SECTION 01400 - QUALITY REQUIREMENTS**PART 1 - GENERAL****1.01 SECTION INCLUDES**

- A. References and standards.
- B. Quality assurance submittals.
- C. Mock-ups.
- D. Control of installation.
- E. Tolerances.
- F. Testing and inspection services.
- G. Manufacturers' field services.

1.02 RELATED SECTIONS

- A. Document 00300 - Information Available to Bidders: Soil investigation data.
- B. Document 00700 - General Conditions: Inspections and approvals required by public authorities.
- C. Section 01300 - Administrative Requirements: Submittal procedures.
- D. Section 01422 - Definitions.
- E. Section 01600 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCES

- A. ASTM C 1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2001.
- B. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2006a.
- C. ASTM C 1093 - Standard Practice for Accreditation of Testing Agencies for Unit Masonry; 2006.
- D. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2004a.
- E. ASTM E 329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing; 2007.
- F. ASTM E 543 - Standard Specification for Agencies Performing Nondestructive Testing; 2006.

1.04 SUBMITTALS

Division 01 - General Requirements
01400 – Quality Requirements

- A. **Certificates:** When specified in individual specification sections, submit certification by the manufacturer and or installation/application subcontractor to Mc3Iroy Architecture, PLLC., in quantities specified for Product Data.
 - 1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 - 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Mc3Iroy Architecture, PLLC..
- B. **Manufacturer's Instructions:** When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- C. **Manufacturer's Field Reports:** Submit reports for Mc3Iroy Architecture, PLLC.'s benefit as contract administrator.
 - 1. Submit report in duplicate within 30 days of observation to Mc3Iroy Architecture, PLLC. for information.
 - 2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- D. **Erection Drawings:** Submit drawings for Mc3Iroy Architecture, PLLC.'s benefit as contract administrator.
 - 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
 - 2. Data indicating inappropriate or unacceptable Work may be subject to action by Mc3Iroy Architecture, PLLC. or Owner.

1.05 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

Division 01 - General Requirements
01400 - Quality Requirements

- E. Should specified reference standards conflict with Contract Documents, request clarification from McElroy Architecture, PLLC. before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of McElroy Architecture, PLLC. shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 CONTROL OF INSTALLATION

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

3.02 MOCK-UPS

- A. Tests will be performed under provisions identified in this section and identified in the respective product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by McElroy Architecture, PLLC. and is specified in product specification sections to be removed, remove mock-up and clear area when directed to do so.

3.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

Division 01 - General Requirements
01400 – Quality Requirements

- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from McElroy Architecture, PLLC. before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 MANUFACTURERS' FIELD SERVICES

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

3.05 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not conforming to specified requirements.
- B. If, in the opinion of McElroy Architecture, PLLC. it is not practical to remove and replace the Work, McElroy Architecture, PLLC. will direct an appropriate remedy or adjust payment.

END OF SECTION 01400

SECTION 01410a - TESTING LABORATORY SERVICES - ARCHITECTURAL**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- Laboratory.
- A. Procedures and responsibilities for providing and using Testing

1.02 REFERENCES

- A. ANSI/ASTM E329 - Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.

1.03 SELECTION AND PAYMENT

- A. The Owner shall employ and pay for services of an independent Testing Laboratory to perform specified inspections and/or sampling and testing. Employment of Testing Laboratory shall in no way relieve Contractor of obligation to perform work in accordance with requirements of Contract Documents.
- B. Owner will be responsible for basic testing requirements as specified in the Project Manual. Payment for additional testing required due to defective work, failed initial testing, or testing lab fees for site visit when work to be tested is not ready to be tested shall be incurred by the Contractor.

1.04 QUALITY ASSURANCE

- A. Meet "Recommended Requirements for Independent Laboratory Qualifications", published by American Council of Independent Laboratories.
- B. Comply with requirements of ANSI/ASTM E329 and ANSI/ASTM D3740.
- C. Laboratory: Legally authorized to operate in the State of Mississippi.
- D. Laboratory Staff: Thoroughly trained and experienced in the types of testing required for the Project and with a full-time registered Engineer on staff to monitor and review services, analyze and interpret tests.
- E. Testing Equipment: Calibrated at reasonable intervals with devices of accuracy traceable to either National Bureau of Standards (NBS) or accepted values of natural physical constants.

1.05 OWNER SUBMITTALS

- A. Prior to start of Work, Owner shall submit testing laboratory name, address, and telephone number, and names of full-time registered Engineer and responsible officer.

Division 01 – General Requirements

01410a – Testing Laboratory Services - Architectural

- B. Submit qualifications of technicians, inspections and engineers to perform services for Project. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards (NBS) during most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.06 COORDINATION

- A. Coordinate work under provisions of Sections 01400.

1.07 LABORATORY RESPONSIBILITIES

- A. Provide qualified personnel (with minimum two years experience with selected testing agency) at site. Cooperate with Architect and Contractor in performance of services.
- B. Perform specified inspection, sampling, and testing of Products and design mixes in accordance with specified standards. Refer to individual Specifications Sections for required standards, types and frequency of Field Testing.
- C. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 1. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or Products.
 - 2. Perform additional inspections and tests required by Architect.
 - 3. Attend preconstruction conferences and progress meetings (which occur during periods of work requiring testing).

1.08 LABORATORY REPORTS

- A. After each inspection and test, promptly submit two (2) copies of laboratory report to Owner, Architect, Engineer and Contractor.
- B. Laboratory reports shall include the following:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Name of inspector.
 - 4. Date and time of sampling or inspection.
 - 5. Identification of product and Specifications Section.
 - 6. Location in the Project.
 - 7. Type of inspection or test.
 - 8. Date of test.
 - 9. Results of tests.
 - 10. Conformance with Contract Documents.
- C. When requested by Architect, provide interpretation of test results.

1.09 LIMITS ON TESTING LABORATORY AUTHORITY

Division 01 – General Requirements

01410a – Testing Laboratory Services - Architectural

- A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Laboratory may not approve or accept any portion of the Work.
- C. Laboratory may not assume any duties of Contractor.
- D. Laboratory has no authority to stop the Work.

1.10 CONTRACTOR RESPONSIBILITIES

- A. Coordinate delivery by testing lab, to laboratory at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
- B. Cooperate with laboratory personnel, and provide access to the Work and to manufacturer's facilities.
- C. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, storage and curing of test samples.
- D. Notify Architect/Engineer and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.
- E. Perform no work which requires laboratory inspection services unless laboratory representative is on site observing work.

1.11 SCHEDULE OF INSPECTIONS AND TESTS

- A. Refer to individual Specifications Sections.
- B. To be determined jointly by Architect and Contractor with respect to the requirements of the governing agencies.

PART 2 - PRODUCTS (NOT APPLICABLE)**PART 3 - EXECUTION (NOT APPLICABLE)****END OF SECTION 01410**

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary sanitary facilities.
- D. Temporary Controls: Barriers, enclosures, and fencing.
- E. Security requirements.
- F. Vehicular access and parking.
- G. Waste removal facilities and services.
- H. Project identification sign.
- I. Field offices.

1.02 RELATED SECTIONS

- A. Section 01510 - Temporary Utilities.
- B. Section 01525 - Field Offices.
- C. Section 01550 - Vehicular Access and Parking.
- D. Section 01565 - Security Measures.
- E. Section 01585 - Project Signs.

1.03 TEMPORARY UTILITIES - See Section 01510

- A. Contractor to provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
- B. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.04 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.
- B. Telecommunications services shall include:
 - 1. Telephone Land Lines: One line, minimum; one handset per line.

1.05 TEMPORARY SANITARY FACILITIES

- A. Contractor to provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Contractor to maintain in clean and sanitary condition.

1.06 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to

Division 01 - General Requirements
01500 – Temporary Facilities and Controls

allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Provide protection for plants designated to remain. Replace damaged plants.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.07 EXTERIOR ENCLOSURES

- A. Contractor to provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.08 INTERIOR ENCLOSURES

- A. Contractor to provide temporary partitions and ceilings as indicated to separate work areas, to prevent penetration of dust and moisture, and to prevent damage to installed materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:
 - 1. Insulated to R 19.
 - 2. STC rating of 35 in accordance with ASTM E 90.
 - 3. Maximum flame spread rating of 75 in accordance with ASTM E 84.

1.09 SECURITY - See Section 01565

- A. Contractor to provide security and facilities to protect Work, and Jackson Redevelopment Authority operations from unauthorized entry, vandalism, or theft.

1.10 VEHICULAR ACCESS AND PARKING - See Section 01550

- A. Coordinate access and haul routes with governing authorities.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Provide temporary parking areas to accommodate construction personnel as directed by Architect. When site space is not adequate, provide additional off-site parking.

Division 01 - General Requirements
01500 – Temporary Facilities and Controls

1.11 WASTE REMOVAL

- A. See Section 01732 - Waste Management, for additional requirements.
- B. Contractor to provide waste removal facilities and services as required maintaining the site in clean and orderly condition.
- C. Provide containers with lids. Remove trash from site periodically.
- D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.12 PROJECT IDENTIFICATION

- A. Contractor to provide project identification sign of design and construction indicated by McElroy Architecture, PLLC.
- B. Erect on site at location established by McElroy Architecture, PLLC.
- C. No other signs are allowed without Owner/Architect permission except those required by law.

1.13 FIELD OFFICES - See Section 01525

- A. Contractor Office: Weather tight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.
- B. Locate offices a minimum distance of 30 feet from existing and new structures.

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Contractor to remove temporary utilities, equipment, facilities, materials, after Final Acceptance inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore new permanent facilities used during construction to specified condition.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01500

SECTION 01510 - TEMPORARY UTILITIES**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Temporary Utilities: Electricity, lighting, heat, ventilation, and water.

1.02 RELATED SECTIONS

- A. Section 01500 - Temporary Facilities and Controls:
 - 1. Temporary telecommunications services for administrative purposes.
 - 2. Temporary sanitary facilities required by law.

1.03 TEMPORARY ELECTRICITY

- A. Cost: By Contractor
- B. Provided By: Contractor
- C. Provide power service required from utility source.
- D. Provide power outlets for construction operations, with branch wiring and distribution boxes located at each floor. Provide flexible power cords as required.
- E. Provide main service disconnect and over-current protection at convenient location and meter.
- F. Permanent convenience receptacles may be utilized during construction.
- G. Provide adequate distribution equipment, wiring, and outlets to provide single phase branch circuits for power and lighting.
 - 1. Provide 20 ampere duplex outlets, single phase circuits for power tools
 - 2. Provide 20 ampere, single phase branch circuits for lighting.

1.04 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Contractor to provide and maintain incandescent lighting for construction operations to achieve a minimum lighting level of 2 watt/sq ft.
- B. Provide and maintain 1 watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.
- C. Provide and maintain 0.25 watt/sq ft H.I.D. lighting to interior work areas after dark for security purposes.
- D. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- E. Maintain lighting and provide routine repairs.
- F. Permanent building lighting may be utilized during construction.

1.05 TEMPORARY HEATING

Division 01 - General Requirements
01510 – Temporary Utilities

- A. Cost of Energy: By Contractor
- B. Provided by: Contractor
- C. Provide heating devices and heat as needed to maintain specified conditions for construction operations.
- D. Maintain minimum ambient temperature of 50 degrees F in areas where construction is in progress, unless indicated otherwise in specifications.
- E. Prior to operation of permanent equipment for temporary heating purposes, verify that installation is approved for operation, equipment is lubricated and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts.

1.06 TEMPORARY COOLING

- A. Cost of Energy: By Contractor
- B. Provided by: Contractor
- C. Provide cooling devices and cooling as needed to maintain specified conditions for construction operations.
- D. Maintain maximum ambient temperature of 80 degrees F in areas where construction is in progress, unless indicated otherwise in specifications.
- E. Prior to operation of permanent equipment for temporary cooling purposes, verify that installation is approved for operation, equipment is lubricated and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts.

1.07 TEMPORARY WATER SERVICE

- A. Cost of Water Used: By Contractor
- B. Provided by: Contractor
- C. Provide and maintain suitable quality water service for construction operations at time of project mobilization.
- D. Extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01510

SECTION 01525 - FIELD OFFICES**PART 1 - GENERAL****1.01 SECTION INCLUDES**

- A. Temporary field offices for use of Contractor.
- B. Maintenance and removal.

1.02 USE OF PERMANENT FACILITIES

- A. Permanent facilities shall not be used for field offices.

PART 2 - PRODUCTS**2.01 MATERIALS, EQUIPMENT, FURNISHINGS**

- A. Materials, Equipment, and Furnishings: Serviceable, new or used, adequate for required purpose.

2.02 CONSTRUCTION

- A. Portable or mobile buildings, or buildings constructed with floors raised above ground, securely fixed to foundations, with steps and landings at entrance doors.
- B. Construction: Structurally sound, secure, weather tight enclosures for office. Maintain during progress of Work; remove when no longer needed.
- C. Temperature Transmission Resistance of Floors, Walls, and Ceilings: Compatible with occupancy requirements.
- D. Exterior Materials: Weather resistant, finished in one color.
- E. Interior Materials in Offices: Sheet type materials for walls and ceilings, pre-finished or painted; resilient floors and bases.
- F. Lighting for Offices: 50 fc at desk top height, exterior lighting at entrance doors.
- G. Fire Extinguishers: Appropriate type fire extinguisher at each office.

2.03 ENVIRONMENTAL CONTROL

- A. Heating, Cooling, and Ventilating: Automatic equipment to maintain comfort conditions.

2.04 OFFICE AND FACILITIES

- A. Size: As needed for Contractor needs and to provide space for project meetings.
- B. Telephone: As specified in Section 01500.
- C. Furnishings in Meeting Area: Conference table and chairs to seat at least six (6) persons; racks and files for Contract Documents, submittals, and

project record documents.

- D. Other Furnishings: Contractor's option.
- E. Equipment: Six adjustable band protective helmets for visitors, one 10 inch outdoor weather thermometer and adequate rain gauge.
- F. All other Contractors to supply field offices as per their needs.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Fill and grade sites for temporary structures to provide drainage away from buildings.

3.02 INSTALLATION

- A. Install office spaces ready for occupancy 15 days after date fixed in Notice to Proceed.

3.03 MAINTENANCE AND CLEANING

- A. Weekly janitorial services for offices; periodic cleaning and maintenance for offices.
- B. Maintain approach walks free of mud, water, and snow.

3.04 REMOVAL

- A. At completion of Work remove buildings, foundations, utility services, and debris. Restore areas.

END OF SECTION 01525

SECTION 01550 - VEHICULAR ACCESS AND PARKING**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Access roads.
- B. Parking.
- C. Permanent pavements and parking facilities.
- D. Construction parking controls.
- E. Flag persons.
- F. Flares and lights.
- G. Haul routes.
- H. Traffic signs and signals.
- I. Maintenance.
- J. Removal, repair.
- K. Mud from site vehicles.

1.02 RELATED SECTIONS

- A. Section 01100 – Summary of Work: access to site, work sequence, and occupancy.
- B. Section 02310 – Earthwork and Site Grading: Specifications for earthwork and paving bases.

PART 2 – PRODUCTS**2.01 MATERIALS**

- A. Temporary Construction: By Contractor.
- B. Materials for Permanent Construction: As specified in product specification sections, including earthwork, paving base, and topping.

2.02 SIGNS, SIGNALS, AND DEVICES

- A. Post Mounted and Wall Mounted Traffic Control and Informational Signs: Specified in Section 01585.
- B. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.
- C. Flag Person Equipment: As required by local jurisdictions.

PART 3 – EXECUTION**3.01 PREPARATION**

- A. Clear areas, provide surface and storm drainage of road, parking, area

premises, and adjacent areas.

3.02 ACCESS ROADS

- A. Use of designated existing on-site streets and driveways for construction traffic is permitted.
- B. Tracked vehicles not allowed on paved areas.
- C. Construct new temporary all-weather access roads from public thoroughfares to serve construction area, of a width and load bearing capacity to provide unimpeded traffic for construction purposes.
- D. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
- E. Extend and relocate as Work progress requires, provide detours as necessary for unimpeded traffic flow.
- F. Provide unimpeded access for emergency vehicles. Maintain 20 foot width driveways with turning space between and around combustible materials.
- G. Provide and maintain access to fire hydrants free of obstructions.

3.03 PARKING

- A. Use of new parking facilities by construction personnel is not permitted.
- B. Do not allow heavy vehicles or construction equipment in parking areas.
- C. Arrange for temporary parking areas to accommodate use of construction personnel.
- D. When site space is not adequate, provide additional off-site parking.

3.04 NEW PERMANENT PAVEMENTS

- A. Prior to Substantial Completion the base for permanent roads and parking areas may be used for construction traffic.
- B. Avoid traffic loading beyond paving design capacity. Tracked vehicles not allowed.

3.05 CONSTRUCTION PARKING CONTROL (GRAVEL PARKING AREA)

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations.
- B. Monitor parking of construction personnel's vehicles in existing facilities. Maintain vehicular access to and through parking areas.
- C. Prevent parking on or adjacent to access roads or in non-designated areas.

3.06 FLAG PERSONS

- A. Provide trained and equipped flag persons to regulate traffic when

construction operations or traffic encroach on public traffic lanes.

3.07 FLARES AND LIGHTS

- A. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.08 HAUL ROUTES

- A. Consult with authority having jurisdiction, establish public thoroughfares to be used for haul routes and site access.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

3.09 TRAFFIC SIGNS AND SIGNALS

- A. At approaches to site and on site, install at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.

3.10 MAINTENANCE

- A. Maintain traffic and parking areas in a sound condition free of excavated material, construction equipment, Products, mud, snow, and ice.
- B. Maintain existing paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

3.11 REMOVAL, REPAIR

- A. Remove temporary roads when permanent paving is usable.
- B. Remove underground work and compacted materials to a depth of 2 feet; fill and grade site as specified.
- C. Repair existing facilities damaged by use, to original condition.
- D. Remove equipment and devices when no longer required.
- E. Repair damage caused by installation.
- F. Remove post settings to a depth of 2 feet.

3.12 MUD FROM SITE VEHICLES

- A. Provide means of removing mud from vehicle wheels before entering streets.

END OF SECTION 01550

SECTION 01565 - SECURITY MEASURES

PART 1 – GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED SECTIONS

- A. Section 01100 – Summary of Work: use of premises and occupancy.
- B. Section 01500 - Temporary Facilities and Controls: Temporary lighting.

1.03 SECURITY PROGRAM

- A. Protect Work and Owner's operations from theft, vandalism, and unauthorized entry.
- B. Initiate program at project mobilization.
- C. Maintain program throughout construction period until Owner occupancy.

1.04 ENTRY CONTROL

- A. Restrict entrance of persons and vehicles into Project site.
- B. Allow entrance only to authorized persons with proper identification.
- C. Maintain log of workers and visitors, make available to Owner/Architect on request.

1.05 RESTRICTIONS

- A. Do not allow cameras on site or photographs taken except by written approval of Owner/Architect.
- B. Do no work on Sundays.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01565

SECTION 01585 - PROJECT SIGNS**PART 1 - GENERAL****1.01 SECTION INCLUDES**

- A. Project signs provided by General Contractor.

1.02 RELATED SECTIONS

- A. Section 01100 - Summary of Work: Responsibility to provide signs.

1.03 REFERENCES

- A. FHWA (SHS) - Standard Highway Signs; Federal Highway Administration, U.S. Department of Transportation; 2004.

1.04 QUALITY ASSURANCE

- A. Design sign and structure to withstand 50 miles/hr wind velocity.
- B. Sign Painter: Experienced as a professional sign painter for minimum three years.
- C. Finishes, Painting: Adequate to withstand weathering, fading, and chipping for duration of construction.

1.05 SUBMITTALS

- A. See Section 01300 - Administrative Requirements for submittal procedures.
- B. Shop Drawing: Show content, layout, lettering, color, foundation, structure, sizes and grades of members.

PART 2 - PRODUCTS**2.01 SIGN MATERIALS**

- A. Structure and Framing: New, wood, structurally adequate.
- B. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4 inch thick, standard large sizes to minimize joints.
- C. Rough Hardware: Galvanized.
- D. Paint and Primers: Exterior quality, two coats; sign background of color as chosen by Mc3lroy Architecture, PLLC.
- E. Lettering: Exterior quality paint, contrasting colors.

2.02 PROJECT IDENTIFICATION SIGN

- A. Two project signs, 32 sq ft area, and bottom four (4) feet above ground.
- B. Content:
 - 1. Project number, title, logo and name of Owner as indicated on Contract Documents.

2. Names and titles of authorities.
 3. Names and titles of Professionals.
 4. Name of Prime and major Subcontractors.
- C. Graphic Design, Colors, Style of Lettering: Designated by McElroy Architecture, PLLC.
- D. Lettering: Designated by McElroy Architecture, PLLC.

2.03 PROJECT INFORMATIONAL SIGNS

- A. Painted informational signs of same colors and lettering as Project Identification sign, or standard products; size lettering to provide legibility at 100 foot distance.
- B. Provide at each field office, storage shed, and directional signs to direct traffic into and within site. Relocate as Work progress requires.
- C. Provide municipal traffic agency directional traffic signs to and within site.

PART 3 - EXECUTION

3.01 INSTALLATION

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

3.02 MAINTENANCE

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

3.03 REMOVAL

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

END OF SECTION 01585

SECTION 01600 - PRODUCT REQUIREMENTS**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Spare parts and maintenance materials.

1.02 RELATED SECTIONS

- A. Document 00200 - Instructions to Bidders: Product options and substitution procedures prior to bid date.
- B. Section 01100 – Summary of Work: Lists of products to be removed from existing building.
- C. Section 01400 - Quality Requirements: Product quality monitoring.
- D. Section 01732 - Waste Management: Waste disposal requirements potentially affecting packaging and substitutions.

1.03 REFERENCES

- A. 16 CFR 260 - Guides for the Use of Environmental Marketing Claims; Federal Trade Commission; current edition.
- B. CAN/CSA Z809 - National Standard for Sustainable Forest Management; CSA International Inc.; 2002.
- C. GreenSeal GS-36 - Commercial Adhesives; Green Seal, Inc.; 2000.
- D. NFPA 70 - National Electrical Code; National Fire Protection Association; 2008.
- E. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

1.04 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
 - 1. Submit within 15 days after date of Agreement.
 - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide

information specific to this Project.

- C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 - PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. Do not use products having any of the following characteristics:
 - 1. Made outside the United States, its territories, Canada, or Mexico.
 - 2. Made using or containing CFC's or HCFC's.
- C. Where all other criteria are met, shall give preference to products that:
 - 1. Are extracted, harvested, and/or manufactured closer to the location of the project.
 - 2. Have longer documented life span under normal use.
 - 3. Result in less construction waste.
 - 4. Are made of vegetable materials that are rapidly renewable.
- D. Sustainably Harvested Wood:
 - 1. Definition: Wood-based materials include but are not limited to structural framing, dimension lumber, flooring, wood doors, finishes, and furnishings that are permanently installed in the project. Wood and wood-based products not permanently installed in the project are not included in the definition.
 - 2. Specific Wood-Based Fabrications: Fabricate of sustainably harvested wood when so specified elsewhere.
 - 3. Certification: Provide wood certified or labeled by an organization accredited by one of the following:
 - a. The Forest Stewardship Council, The Principles for Natural Forest Management; for Canada visit <http://www.fsccanada.org>, for the USA visit <http://www.fscus.org>.
- E. Urea-Formaldehyde Prohibition:
 - 1. Overall Project Requirement: Provide composite wood and agrifiber products having no added urea-formaldehyde resins.

Division 01 - General Requirements
01600 – Product Requirements

- a. Require each installer to certify compliance and submit product data showing product content.
 - 2. Specific Product Categories: Comply with limitations specified elsewhere.
- F. Adhesives and Joint Sealants:
 - 1. Definition: This provision applies to gunnable, trowelable, and liquid-applied adhesives, sealants, and sealant primers used anywhere on the interior of the building inside the weather barrier, including duct sealers.
 - 2. Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No.1168.
 - a. Require each installer to certify compliance and submit product data showing product content.
 - 3. Specific Product Categories: Comply with limitations specified elsewhere.
- G. Aerosol Adhesives:
 - 1. Provide only products having lower volatile organic compound (VOC) content than required by GreenSeal GS-36.
 - a. Require each installer to certify compliance and submit product data showing product content.
 - 2. Specific Product Categories: Comply with limitations specified elsewhere.
- H. Provide interchangeable components of the same manufacture for components being replaced.
- I. Motors: Refer to Section 15065, NEMA MG 1 Type. Specific motor type is specified in individual specification sections.
- J. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to NFPA 70, include lugs for terminal box.
- K. Cord and Plug: Provide minimum 6 foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, Submit a request for substitution for any manufacturer not named after award of contract.

2.03 SPARE PARTS AND MAINTENANCE PRODUCTS

Division 01 - General Requirements
01600 – Product Requirements

- A. Provide spare parts, maintenance, and extra products of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 – EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Substitution of products is permitted during the bidding process. If products are not directly specified bidders may submit request for clarification. All product substitution must occur before award of contract. Comply with requirements specified in this section.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- E. Substitution Submittal Procedure:
 - 1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 3. The Mc3lroy Architecture, PLLC. will notify in writing of decision to accept or reject request.

3.02 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product

and littering of surrounding areas.

- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- H. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION 01600

SECTION 01700 - EXECUTION REQUIREMENTS**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Pre-installation meetings.
- C. Cutting and patching.
- D. Surveying for laying out the work.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of Owner personnel.
- H. Closeout procedures, except payment procedures.

1.02 RELATED SECTIONS

- A. Section 01100 – Summary of Work: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01300 - Administrative Requirements: Submittals procedures.
- C. Section 01400 - Quality Requirements: Testing and inspection procedures.
- D. Section 01500 - Temporary Facilities and Controls: Temporary exterior enclosures.
- E. Section 01500 - Temporary Facilities and Controls: Temporary interior partitions.
- F. Section 01510 - Temporary Utilities: Temporary heating, cooling, and ventilating facilities.
- G. Section 01575 - Temporary Erosion and Sedimentation Control: Additional erosion and sedimentation control requirements.
- H. Section 01732 - Waste Management: Additional procedures for trash/waste removal, recycling, salvage, and reuse.
- I. Section 01780 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.
- J. Section 07840 - Firestopping.
- K. Individual Product Specification Sections:
 - 1. Advance notification to other sections of openings required in work of those sections.

1.03 SUBMITTALS

Division 01 - General Requirements
01700 – Execution Requirements

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.
 - 3. Submit surveys and survey logs for the project record.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.
 - 6. Include in request:
 - a. Identification of Project.
 - b. Location and description of affected work.
 - c. Necessity for cutting or alteration.
 - d. Description of proposed work and products to be used.
 - e. Alternatives to cutting and patching.
 - f. Effect on work of Owner or separate Contractor.
 - g. Written permission of affected separate Contractor.
 - h. Date and time work will be executed.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 QUALIFICATIONS

- A. For survey work, employ a land surveyor registered in Mississippi and acceptable to McElroy Architecture, PLLC. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

1.05 PROJECT CONDITIONS

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- D. Dust Control: Execute work by methods to minimize raising dust from

construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

- E. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
 - 1. Minimize amount of bare soil exposed at one time.
 - 2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
 - 3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
 - 4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
- G. Pest Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- H. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.
- I. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.06 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

Division 01 - General Requirements
01700 – Execution Requirements

- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 – PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01600.

PART 3 – EXECUTION

3.01 EXAMINATION

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

3.02 PREPARATION

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

3.03 PREINSTALLATION MEETINGS

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

3.04 LAYING OUT THE WORK

- A. Verify locations of survey control points as initially established by Owner prior to starting work.
- B. Promptly notify McElroy Architecture, PLLC. of any discrepancies discovered.
- C. Control datum for survey is that indicated on Drawings.
- D. Protect survey control points prior to starting site work; preserve permanent reference points during construction. All trades to maintain and replace if disturbed.
- E. Promptly report to McElroy Architecture, PLLC. the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- F. All trades are to replace dislocated survey control points based on original survey control. Make no changes without prior written notice to McElroy Architecture, PLLC..
- G. Utilize recognized engineering survey practices.
- H. Owner will establish a minimum of two permanent benchmarks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.
- I. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, and ground floor

elevations.

- J. Periodically verify layouts by same means.
- K. Maintain a complete and accurate log of control and survey work as it progresses.
- L. On completion of foundation walls and major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 GENERAL CUTTING AND PATCHING

- A. Execute cutting and patching including excavation and fill to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.
- B. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- C. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- E. Restore work with new products in accordance with requirements of Contract Documents.
- F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

Division 01 - General Requirements
01700 – Execution Requirements

- G. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07840, to full thickness of the penetrated element.
- H. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- I. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.
- J. Patch or replace surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. Repair substrate prior to patching finish. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.07 PROGRESS CLEANING

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

3.08 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Prohibit traffic from landscaped areas.

Division 01 - General Requirements
01700 – Execution Requirements

- H. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.09 SYSTEMS STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify McElroy Architecture, PLLC. and Owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable personnel and manufacturer's representative in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.10 DEMONSTRATION AND INSTRUCTION

- A. See Section 01820 - Demonstration and Training.

3.11 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.
- B. Testing, adjusting, and balancing HVAC systems: See Section 15950.

3.12 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean filters of operating equipment.

Division 01 - General Requirements
01700 – Execution Requirements

- F. Clean debris from roofs, gutters, downspouts, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.13 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
 - 1. Provide copies to McElroy Architecture, PLLC. and Owner.
- B. Accompany Architect on preliminary inspection to determine items to be listed for completion or correction in Contractor's Notice of Substantial Completion.
- C. Notify McElroy Architecture, PLLC. when work is considered ready for Substantial Completion.
- D. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for McElroy Architecture, PLLC.'s review.
- E. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
- F. Accompany Architect on preliminary final inspection.
- G. Notify McElroy Architecture, PLLC. when work is considered finally complete.
- H. Complete items of work determined by McElroy Architecture, PLLC.'s final inspection.

3.14 MAINTENANCE SERVICE

- A. Furnish service and maintenance of components indicated in specification sections for one (1) year from date of Substantial Completion.
- B. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- D. Maintenance service shall not be assigned or transferred to any agent or Subcontractor without prior written consent of the Owner.

END OF SECTION 01700

SECTION 01710 – CLEANING**PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Work included shown on Drawings and specified below.

1.02 CLEANING DURING CONSTRUCTION

- A. **ALL CONTRACTORS** execute cleaning to ensure that building, grounds and public properties are maintained free from accumulating of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. At reasonable intervals during progress of Work, clean site and public properties and dispose of waste materials, debris and rubbish.
- D. Contractor to provide on-site containers for collection of waste materials, debris and rubbish.
- E. Handle materials in a controlled manner with as few handlings as possible. Do not drop or throw materials from heights.
- F. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly painted surfaces.

1.03 FINAL CLEANING

- A. Contractor to employ experienced workmen or professional cleaners for final cleaning.
- B. In preparation for substantial completion or occupancy conduct final inspection of site exposed exterior surfaces.
- C. Remove grease, dust, dirt, stains, labels, finger-prints, and other foreign materials from sight exposed interior finished surfaces; polish surfaces so designated to shine finish.
- D. Repair, patch and touch up marred surfaces to specified finish to match adjacent surfaces.
- E. Owner will assume responsibility for cleaning upon Final Acceptance.

PART 2 – PRODUCTS (NOT APPLICABLE)**PART 3 – EXECUTION (NOT APPLICABLE)****END OF SECTION 01710**

SECTION 01720 - PROJECT RECORD DOCUMENTS**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Work Included: Maintaining and keeping up-to-date submission procedures and requirements for project record documents.
- B. Refer to related Work:
 - 1. Section 01600 – Product Requirements
 - 2. Section 01700 - Project Closeout

1.02 MAINTENANCE OF DOCUMENTS

- A. Maintain at job site two (2) copies of all:
 - 1. Contract Drawings
 - 2. Project Manual
 - 3. Addenda
 - 4. Change Orders
 - 5. Reviewed Shop Drawings
 - 6. Reviewed Submittals
 - 7. Field and Laboratory Test Records
 - 8. Other modifications to Contract
- B. Store record documents apart from documents used for construction. Provide files and racks for storage of documents. File documents in accordance with Project Filing Format of Uniform Construction Index.
- C. Maintain documents in clean, dry, legible condition. Do not use Record Documents for construction purposes.
- D. Provide availability of Record Documents at all times for inspection by Architect and Owner.

1.03 RECORDING

- Record** A. Label each document "Project Record" in 2" high printed letters. Keep Documents current. Do not permanently conceal any work until required information has been recorded.
- B. Contract Drawings: Legibly mark to record actual construction:
 - 1. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - 2. Field changes of dimensions and details.
 - 3. Changes made by Change Order or Field Order.
 - 4. Details not on original Contract Drawings.
- C. Project Manual and Addenda: Legibly mark up each Section to record:
 - 1. Manufacturer, trade name, catalog number and suppliers of each product and item of equipment actually installed.
 - 2. Changes made by Change Order or Field Order.

3. Other matters not originally specified.
- D. Shop Drawings: Maintain as Record Documents legibly marked drawings to record changes made after review.

1.05 SUBMITTAL

- A. At completion of project deliver record documents to Architect. Accompany submittal with transmittal letter in duplicate containing:
 1. Date
 2. Project Title and Number
 3. Contractor's Name and Address
 4. Title and number of each Record Document
 5. Certification that each document as submitted is complete and accurate.
 6. Signature of Contractor or his authorized representative.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01720

SECTION 01732 - WASTE MANAGEMENT

PART 1 - GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Owner may decide to pay for additional recycling, salvage, and/or reuse based on Landfill Alternatives Proposal specified below.
- E. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.
- F. Contractor shall develop and follow a Waste Management Plan designed to implement these requirements.
- G. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
 - 5. Incineration, either on- or off-site.
- H. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, State and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 RELATED SECTIONS

- A. Section 01100 - Summary: List of items to be salvaged from the existing building for relocation in project or for Owner.
- B. Section 01300 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- C. Section 01500 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- D. Section 01600 - Product Requirements: Waste prevention requirements

related to delivery, storage, and handling.

- E. Section 01700 - Execution Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.
- F. Section 02230 - Site Clearing: Handling and disposal of land clearing debris.

1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; All materials not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Non-hazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of

exposure.

- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

PART 2 - PRODUCTS

2.01 PRODUCT SUBSTITUTIONS

- A. See Section 01600 - Product Requirements for substitution submission procedures.
- B. For each proposed product substitution, submit the following information in addition to requirements specified in Section 01600:
 - 1. Relative amount of waste produced, compared to specified product.
 - 2. Cost savings on waste disposal, compared to specified product, to be deducted from the Contract Sum.
 - 3. Proposed disposal method for waste product.
 - 4. Markets for recycled waste product.

PART 3 - EXECUTION

3.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 01300 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 01500 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 01600 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 01700 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

3.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.

Division 01 - General Requirements
01732 - Waste Management

- E. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- F. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION 01732

SECTION 01734 - INDOOR AIR QUALITY

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Construction procedures to promote adequate indoor air quality after construction.
- B. Building flush-out after construction and before occupancy.

1.02 PROJECT GOALS

- A. Dust and Airborne Particulates: Prevent deposition of dust and other particulates in HVAC ducts and equipment.
 - 1. Cleaning of ductwork is not contemplated under this Contract.
 - 2. Contractor shall bear the cost of cleaning required due to failure to protect ducts and equipment from construction dust.
- B. Airborne Contaminants: Procedures and products have been specified to minimize indoor air pollutants.
 - 1. Furnish products meeting the specifications.
 - 2. Avoid construction practices that could result in contamination of installed products leading to indoor air pollution.

1.03 RELATED SECTIONS

- A. Section 01400 - Quality Requirements: Testing and inspection services.
- B. Section 15861 - Air Filters: HVAC filters.
- C. Section 15990 - Testing, Adjusting, and Balancing: Testing HVAC systems for proper air flow rates, adjustment of dampers and registers, and settings for equipment.

1.04 REFERENCES

- A. ASHRAE Std 52.2 - Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size; 2007.
- B. ASHRAE Std 62.1 - Ventilation For Acceptable Indoor Air Quality; 2007.
- C. ASHRAE Std 129 - Measuring Air-Change Effectiveness; 1997 (Reaffirmed 2002).
- D. ASTM E 779 - Standard Test Method for Determining Air Leakage Rate by Fan Pressurization; 2003.
- E. CA (EESR) - 2005 California Energy Efficiency Standards Residential Alternative Calculation Method (ACM) Approval Manual, Chapter 7; www.energy.ca.gov/title24/2005standards/residential_acm.
- F. SMACNA (OCC) - IAQ Guideline for Occupied Buildings Under Construction; 1995.

1.05 DEFINITIONS

- A. Adsorptive Materials: Gypsum board, acoustical ceiling tile and panels, carpet and carpet tile, fabrics, fibrous insulation, and other similar products.
- B. Contaminants: Gases, vapors, regulated pollutants, airborne mold and mildew, and the like, as specified.
- C. Particulates: Dust, dirt, and other airborne solid matter.
- D. Wet Work: Concrete, plaster, coatings, and other products that emit water vapor or volatile organic compounds during installation, drying, or curing.

PART 2 - PRODUCTS**2.01 MATERIALS**

- A. Low VOC Materials: See other sections for specific requirements for materials with low VOC content.

PART 3 - EXECUTION**3.01 CONSTRUCTION PROCEDURES**

- A. Prevent the absorption of moisture and humidity by adsorptive materials by:
 - 1. Sequencing the delivery of such materials so that they are not present in the building until wet work is completed and dry.
 - 2. Delivery and storage of such materials in fully sealed moisture-impermeable packaging.
 - 3. Provide sufficient ventilation for drying within reasonable time frame.
- B. Begin construction ventilation when building is substantially enclosed.
- C. If extremely dusty or dirty work must be conducted inside the building, shut down HVAC systems for the duration; remove dust and dirt completely before restarting systems.
- D. HVAC equipment and ductwork may NOT be used for ventilation during construction without obtaining written permission from Mechanical Engineer:
 - 1. Provide temporary ventilation equivalent to 1.5 air changes per hour, minimum.
 - 2. Exhaust directly to outside.
 - 3. Seal HVAC air inlets and outlets immediately after duct installation.
 - 4. Individual trade contractors shall be responsible for providing temporary heating and ventilation as needed to perform required work.
- E. Do not store construction materials or waste in mechanical or electrical

rooms.

- F. Prior to use of return air ductwork without intake filters clean up and remove dust and debris generated by construction activities.
 - 1. Inspect duct intakes, return air grilles, and terminal units for dust.
 - 2. Clean plenum spaces, including top sides of lay-in ceilings, outsides of ducts, tops of pipes and conduit.
 - 3. Clean tops of doors and frames.
 - 4. Clean mechanical and electrical rooms, including tops of pipes, ducts, and conduit, equipment, and supports.
 - 5. Clean return plenums of air handling units.
 - 6. Remove intake filters last, after cleaning is complete.
- G. Do not perform dusty or dirty work after starting use of return air ducts without intake filters.
- H. Use other relevant recommendations of SMACNA IAQ Guideline for Occupied Buildings Under Construction for avoiding unnecessary contamination due to construction procedures.
- I. Use of permanent building HVAC equipment may be acceptable under the agreement to purchase extended warranty for said equipment and under the approval of the Mechanical Engineer. Consult with Mechanical Engineer before activating units before Substantial Completion.

3.02 BUILDING FLUSH-OUT

- A. Full continuous flush-out is required.
- B. Perform building flush-out before occupancy.
- C. Do not start flush-out until:
 - 1. All construction is complete.
 - 2. HVAC systems have been tested, adjusted, and balanced for proper operation.
 - 3. Inspection of inside of return air ducts and terminal units confirms that cleaning is not necessary.
 - 4. New HVAC filtration media have been installed.
- D. Building Flush-Out: Operate all ventilation systems at normal flow rates with 100 percent outside air until a total air volume of 14,000 cubic feet per square foot of floor area has been supplied.
 - 1. Obtain Owner's concurrence that construction is complete enough before beginning flush-out.
 - 2. Maintain interior temperature of at least 60 degrees F and interior relative humidity no higher than 60 percent.
 - 3. If additional construction involving materials that produce particulates or any of the specified contaminants is conducted during flush-out, start flush-out over.
 - 4. If interior spaces must be occupied prior to completion of the flush-out, supply a minimum of 25 percent of the total air volume

Division 01 - General Requirements
01734 - Indoor Air Quality

prior to occupancy, and:

- a. Begin ventilation at least three hours prior to daily occupancy.
 - b. Continue ventilation during all occupied periods.
 - c. Provide minimum outside air volume of 0.30 cfm per square foot or design minimum outside air rate, whichever is greater.
- E. Install new HVAC filtration media after completion of flush-out and before occupancy or further testing.

END OF SECTION 01734

SECTION 01780 - CLOSEOUT SUBMITTALS**PART 1 - GENERAL****1.01 SECTION INCLUDES**

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

1.02 RELATED SECTIONS

- A. Section 00700 - General Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01300 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01700 - Execution Requirements: Contract closeout procedures.
- D. Individual Product Sections: Specific requirements for operation and maintenance data.
- E. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to M3A Architecture, PLLC. prior to claim for Substantial Completion Inspection.
- B. Operation and Maintenance Data:
 - 1. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 2. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with McElroy Architecture, PLLC. comments. Revise content of all document sets as required prior to final submission.
 - 3. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 - PRODUCTS (NOT APPLICABLE)**PART 3 - EXECUTION****3.01 PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish first floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

Division 01 - General Requirements
01780 - Closeout Submittals

- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 - 1. Product data, with catalog number, size, composition, and color and texture designations.
 - 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 - 1. Description of unit or system, and component parts.
 - 2. Identify function, normal operating characteristics, and limiting conditions.
 - 3. Include performance curves, with engineering data and tests.
 - 4. Complete nomenclature and model number of replaceable parts.
- B. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- C. Include color coded wiring diagrams as installed.
- D. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- E. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and

checking instructions.

- F. Provide servicing and lubrication schedule, and list of lubricants required.
- G. Include manufacturer's printed operation and maintenance instructions.
- H. Include sequence of operation by controls manufacturer.
- I. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Provide control diagrams by controls manufacturer as installed.
- K. Provide coordination drawings, with color coded piping diagrams as installed.
- L. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- M. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- N. Include test and balancing reports.
- O. Additional Requirements: As specified in individual product specification sections.

3.05 OPERATION AND MAINTENANCE MANUALS

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.
- B. Prepare data in the form of an instructional manual.
- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.
- G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- H. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.
- I. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:

Division 01 - General Requirements
01780 – Closeout Submittals

1. Part 1: Directory, listing names, addresses, and telephone numbers of Mc3lroy Architecture, PLLC., Subcontractors, and major equipment suppliers.
 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Photocopies of warranties and bonds.
- J. Provide a listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.
- K. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of Mc3lroy Architecture, PLLC., Consultants, and with name of responsible parties; schedule of products and systems, indexed to content of the volume.

3.06 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of and equipment supplier; and name of responsible company principal.

Division 01 - General Requirements
01780 - Closeout Submittals

- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

3.07 EXTRA MATERIALS

- A. Extra Materials: Deliver to the Owner items required by individual specifications sections, including but not to: spare parts, special tools, extra stock, and other similar items.
- B. Attic Stock: Deliver to the Owner a minimum of five (5%) percent extra attic stock of all installed finish materials.
- C. Maintenance Materials: Deliver to Owner a minimum of one (1) years amount of maintenance materials for all installed finishes requiring routine maintenance.

END OF SECTION 01780

SECTION 01800 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Related Sections:
1. Section 01300 - Administrative Requirements. Closeout Conference.
 2. Section 01500 - Temporary Facilities and Controls: Temporary facilities and use of permanent systems prior to Substantial Completion.
 3. Section 01780 - Closeout Submittals: Requirements for submittals at closeout.
 4. Section 01720 - Project Record Documents.
 5. Section 01820 - Demonstration and Training: Starting of systems, testing and balancing, demonstrations, and instruction of Owner's personnel.
 6. Section 01710 - Cleaning

1.02 PREREQUISITES TO SUBSTANTIAL COMPLETION

- A. Complete items in following paragraphs before requesting Certification of Substantial Completion, either for entire Work or for portions of Work.
- B. Submit maintenance manuals, project record documents, negatives of construction photographs, and other similar final record data in compliance with Section 01780.
- C. Complete facility startup, testing, adjusting, and balancing of systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified in Section 01820.
- D. Conduct inspection to substantiate basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to be completed or corrected, value of incomplete or non-conforming work, reason for being incomplete, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
- E. Submit statement showing accounting of changes to Contract Sum.
- F. Advise Owner of pending insurance change-over requirements at final payment.

Division 01 - General Requirements
01800 – Project Closeout

- G. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
- H. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
- I. Make final change-over of locks eliminating construction master key system and transmit keys directly to Owner. Advise Owner's personnel of change-over in security provisions.
- J. Comply with requirements of Section 01500 for restoring permanent systems operated prior to Substantial Completion.
- K. Discontinue or change over and remove temporary facilities and services from Project site, along with construction tools, mock-ups, and similar elements.
- L. Perform final cleaning in accordance with Section 01710.
- M. Touch-up and otherwise repair and restore marred exposed finishes.

1.03 SUBSTANTIAL COMPLETION INSPECTION

- A. When Contractor considers Work to be substantially complete, submit to Architect:
 - 1. Written notice that Work, or designated portion, is substantially complete.
 - 2. List of items to be completed or corrected (initial punch list).
- B. Within ten (10) days after receipt of request for Substantial Completion, Architect will make inspection to determine whether Work or designated portion is substantially complete following procedures indicated in Conditions of the Contract.
- C. Should Architect determine that Work is not substantially complete:
 - 1. Architect will promptly notify Contractor in writing, stating reasons for its opinion.
 - 2. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Architect.
 - 3. Architect will reinspect Work.
- D. When Architect finds that Work is substantially complete, Architect will:
 - 1. Prepare Certificate of Substantial Completion and amended by Architect and Owner (final punch list).

Division 01 - General Requirements
01800 – Project Closeout

2. Submit Certificate to Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate.
- E. After Work is substantially complete, Contractor shall:
 1. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
 2. Complete work listed for completion or correction within time period stipulated.

1. 04 PREREQUISITES FOR FINAL COMPLETION

- A. Complete items in following paragraphs before requesting final acceptance and final payment. List known exceptions, if any, in request.
- B. When Contractor considers Work to be complete, submit written certification that:
 1. Contract Documents have been reviewed.
 2. Work has been examined for compliance with Contract Documents.
 3. Work has been completed in accordance with Contract Documents.
 4. Work is completed and ready for final inspection.
- C. Submittals: Submit following:
 1. Final punch list indicating all items have been completed or corrected.
 2. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 3. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
 4. Updated accounting statement for final changes to Contract Sum.
 5. Consent of surety to final payment.
- D. Perform final cleaning for Contractor soiled areas in accordance with Section 01710.

1.05 FINAL COMPLETION INSPECTION

- A. Within ten (10) days after receipt of request for final inspection, Architect will make inspection to determine whether Work or designated portion is complete following procedures indicated in Conditions of the Contract.
- B. In the event Architect considers Work to be incomplete or defective:

Division 01 - General Requirements
01800 – Project Closeout

1. Architect will promptly notify Contractor, in writing, listing incomplete or defective work.
2. Contractor shall take immediate steps to remedy stated deficiencies and send second written request to Architect that Work is complete.
3. Architect will reinspect Work.

1.06 REINSPECTIONS

- A. Should Architect have to perform reinspections due to failure of Work to comply with claims of completion made by Contractor, Owner will reimburse Architect for such additional services and will deduct amount of compensation from final payment to Contractor.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION 01800

SECTION 01820 - DEMONSTRATION AND TRAINING**PART 1 – GENERAL****1.01 SUMMARY**

- A. Demonstration of products and systems where indicated in specific specification sections.
- B. Training of Owner personnel in operation and maintenance is required for:
 - 1. All software-operated systems.
 - 2. HVAC systems and equipment.
 - 3. Plumbing equipment.
 - 4. Electrical systems and equipment.
 - 5. Security systems and equipment.
 - 6. Items specified in individual product Sections.
- C. Training of Owner personnel in care, cleaning, maintenance, and repair is required for:
 - 1. Roofing, waterproofing, and other weather-exposed or moisture protection products.
 - 2. Finishes, including flooring, wall finishes, ceiling finishes.
 - 3. Fixtures and fittings.
 - 4. Items specified in individual product Sections.

1.02 RELATED SECTIONS

- A. Section 01780 - Closeout Submittals: Operation and maintenance manuals.
- B. Other Specification Sections: Additional requirements for demonstration and training.

1.03 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Training Plan: Owner will designate personnel to be trained; tailor training to needs and skill-level of attendees.
 - 1. Submit to M3A Architecture, PLLC. for transmittal to Owner.
 - 2. Submit not less than four weeks prior to start of training.
 - 3. Revise and resubmit until acceptable.
 - 4. Provide an overall schedule showing all training sessions.
 - 5. Include at least the following for each training session:
 - a. Identification, date, time, and duration.
 - b. Description of products and/or systems to be covered.
 - c. Name of firm and person conducting training; include qualifications.
 - d. Intended audience, such as job description.
 - e. Objectives of training and suggested methods of ensuring adequate training.

Division 01 - General Requirements
01820 – Demonstration and Training

- f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
 - g. Media to be used, such as slides, hand-outs, etc.
 - h. Training equipment required, such as projector, projection screen, etc., to be provided by.
- C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
 - 1. Include applicable portion of O&M manuals.
 - 2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
 - 3. Provide one extra copy of each training manual to be included with operation and maintenance data.
- D. Video Recordings: Submit digital video recording of each demonstration and training session for Owner's subsequent use.
 - 1. Format: DVD Disc.
 - 2. Label each disc and container with session identification and date.

1.04 QUALITY ASSURANCE

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
 - 1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
 - 2. Where a single person is not familiar with all aspects, provide specialists with the necessary qualifications.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.01 DEMONSTRATION - GENERAL

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.
- B. Demonstration may be combined with Owner personnel training if applicable.
- C. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.
 - 1. Perform demonstrations not less than two weeks prior to Substantial Completion.
 - 2. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

Division 01 - General Requirements
01820 – Demonstration and Training

- D. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.
 - 1. Perform demonstrations not less than two weeks prior to Substantial Completion.

3.02 TRAINING - GENERAL

- A. Conduct training on-site unless otherwise indicated.
- B. Owner will provide classroom and seating at no cost to owner.
- C. Provide training in minimum two hour segments.
- D. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to conduct sessions according to schedule will be cause for Owner to charge for personnel "show-up" time.
- E. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
 - 1. The location of the O&M manuals and procedures for use and preservation; backup copies.
 - 2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
 - 3. Typical uses of the O&M manuals.
- F. Product- and System-Specific Training:
 - 1. Review the applicable O&M manuals.
 - 2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
 - 3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
 - 4. Provide hands-on training on all operational modes possible and preventive maintenance.
 - 5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
 - 6. Discuss common troubleshooting problems and solutions.
 - 7. Discuss any peculiarities of equipment installation or operation.
 - 8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
 - 9. Review recommended tools and spare parts inventory suggestions of manufacturers.
 - 10. Review spare parts and tools required to be furnished by.
 - 11. Review spare parts suppliers and sources and procurement procedures.

Division 01 - General Requirements
01820 – Demonstration and Training

- G. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

END OF SECTION 01820

SECTION 02225 - SELECTIVE DEMOLITION**PART 1 – GENERAL****1.01 DESCRIPTION**

- A. This Section requires the selective removal and subsequent offsite disposal of the following:
 - 1. Portions of existing building indicated on drawings and as required to accommodate new construction.
- B. Related work specified elsewhere:
 - 1. Remodeling construction work and patching are included within the respective sections of specifications, including materials for reuse and incorporation into remodeling or new construction.
 - 2. Relocation of pipes, conduits, ducts, and other mechanical and electrical work is specified in other Divisions.

1.02 SUBMITTALS

- A. Schedule indicating proposed sequence of operations for selective demolition work to Architect for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.
- B. Photographs of existing conditions of structure surfaces, equipment, and adjacent improvements that might be misconstrued as damage related to removal operations. File with Architect prior to start of work.

1.03 JOB CONDITIONS

- A. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
- B. Partial Demolition and Removal: Items indicated to be removed but of salvageable value to Contractor may be removed from structure as work progresses.
- C. Protections: Provide temporary barricades and other forms of protection to protect Owner's personnel and general public from injury due to selective demolition work.
 - 1. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure that no water leakage or damage occurs to structure or interior areas of existing building.
- D. Damages: Promptly repair damages caused to adjacent facilities by demolition work.
- E. Traffic: Conduct selective demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

Division 02 – Site Construction
Section 02225 – Selective Demolition

- F. Do not close, block, or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- G. Flame Cutting: Do not use cutting torches for removal until work area is cleared of flammable materials. At concealed spaces, such as interior of ducts and pipe spaces, verify condition of hidden space before starting flame-cutting operations. Maintain portable fire suppression devices during flame-cutting operations.
- H. Utility Services: Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.
- I. Maintain fire protection services during selective demolition operations.
- J. Environmental Controls: Use water sprinkling, temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.
- K. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 PREPARATION

- A. Cease operations and notify Architect immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
- B. Provide weatherproof closures for exterior openings resulting from demolition work.
- C. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.

3.02 DEMOLITION

- A. General: Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
- B. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Architect in written, accurate detail. Pending receipt of directive from Architect, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.

3.03 SALVAGED MATERIALS

- A. All materials removed from the building, in good or fair condition, may be required to be salvaged and stored at the discretion of the owner.

3.04 DISPOSAL OF DEMOLISHED MATERIALS

- A. Place trash DUMPSTER as directed by the Owner. Container shall be removed from Site and replaced as necessary. Trash shall not be stacked above top of side walls of the dumpster.
- B. Remove from building site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose off site. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.
- C. Burning of removed materials is not permitted on project site.

3.05 CLEANUP AND REPAIR

- A. General: Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.
- B. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start operations. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION 02225

SECTION 02936 – SEEDING AND SODDING**PART 1 – GENERAL****1.01 SCOPE OF WORK**

- A. Furnish all labor, materials, equipment and incidentals required and prepare lawn bed and seed, fertilize, and mulch those areas shown on the Drawings and as specified herein.
- B. Areas to be seeded shall be as designated on the Drawings and the following:
 - 1. All areas within the landscape limits shown on the Drawings but which do not receive sod. Landscape limits if not explicitly shown shall be equal to the limits of the property.

1.02 SUBMITTALS

- A. Submit to the Engineer, identification labels and certifications that all seed complies with the seed law of the State of Mississippi and current regulations.

PART 2 – PRODUCTS**2.01 SEED**

- A. Species to be established by seeding procedures:
 - 1. Common Bermudagrass
 - 2. Pensacola Bahia
 - 3. Kentucky 31 Fescue
 - 4. Crimson Clover
- B. The Contractor shall sow grass seed on all unpaved areas disturbed during construction which do not require sod. All seeding shall be completed in conformance with MDOT Specifications. The grassed areas shall be mulched and fertilized in accordance with MDOT Specifications.

2.02 TOPSOIL

- A. Topsoil stockpiled during excavation may be used. If additional topsoil is required to replace topsoil removed during excavation, it shall be obtained off-site and provided by the Contractor. Topsoil shall be fertile, natural surface soil, capable of providing an adequate growing medium for all trees, plants, and grassing specified herein.
- B. Quality:

1. Friable loam, type of cultivated topsoils locally, containing at least 2% decayed organic matter.
2. Shall not contain toxic materials, and shall be free of stones, clods, sticks, roots and other objectionable or extraneous materials or debris.

2.03 WATER

- A. Water used shall be free from injurious quantities of oil, acid, alkali, or vegetable matter; shall be reasonably clear, and shall not be brackish.
- B. It shall be the Contractor's responsibility to supply all water to the site, as required during seeding operations and through the maintenance period and until the work is accepted. The Contractor will make whatever arrangements may be necessary to ensure an adequate supply of water to meet the needs of his work. He shall also furnish all necessary hose, equipment, attachments and accessories for the adequate irrigation of lawns and planted areas as may be required.

2.04 MULCH

- A. Vegetative straw material, either clean wheat, oat, rye or rice straw, free from weeds or debris. Use on areas to be seeded.
- B. Hydromulching: Wood cellulose fibers or paper chips may be utilized in place of the mulch/bituminous material method. Process may simultaneously apply seed and fertilizer along with the mulch; however application methods and rates shall be approved by the Architect/Engineer.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Prior to planting seeds, topsoil (if specified), ground preparation, and fertilizing shall have been satisfactorily performed and the area approved by the Engineer.
- B. Seeding may be required for temporary protection of for establishment of permanent ground cover.
- C. The rates of application, kinds, and planting dates of seeds shall be as set out in the following vegetation schedule:

<u>Species</u>	<u>Seasonal Applications</u>	
	<u>Spring/Summer</u>	<u>Fall/Winter</u>
Bermuda	15 lbs./ac.	15 lbs./ac.
Bahiagrass	30 lbs./ac.	30 lbs./ac.
Tall Fescue	—	25 lbs./ac.
Crimson Clover	—	20 lbs./ac.

- D. Seeding shall not be done during windy weather or when the ground is frozen, extremely wet, or in an untillable condition.
- E. All seeds shall be covered lightly with soil by raking, rolling or other approved methods, and the area compacted.

3.02 FERTILIZING

- A. Fertilizer shall be applied in accordance with MDOT Specifications and mixed to the depth of preparation as soon as applied. It shall be applied mechanically or, if so authorized in writing by the Engineer, applied by approved hydraulic equipment.
- B. Fertilizer and agricultural limestone shall be applied separately but may be incorporated together.

3.03 MULCHING

- A. Mulching shall be placed uniformly on designated areas within 24 hours following seeding unless weather prohibits mulching operations.
- B. Mulch shall be placed loosely enough to allow air to circulate but compact enough to partially shade the ground and reduce erosion.
- C. In general, application methods shall be accordance with Section 215 of the MDOT Specifications.

3.04 WATERING

- A. When necessary, additional water shall be applied to seeded areas, including locations where trees, shrubs, and other vegetative plantings have been replanted or replaced, to supplement natural rainfall.
- B. Water shall be applied with approved sprinkling equipment that will spread water evenly and in a manner that will not cause erosion of the soil surface.

Division 02 – Site Construction
02936 – Seeding and Sodding

- C. Application of water shall be suspended during any period when temperatures are expected to drop below 35°F and shall be resumed when the weather moderates.

3.05 MAINTENANCE

- A. Soil should be kept continuously moist, but not too wet, until seed has germinated and become well established.

3.06 CLEANING

- A. Immediately clean spilled soil and planting materials from paved and finished surface areas.
- B. Remove debris and excess materials from project site.
- C. Any existing landscape items on adjacent property damaged or altered during construction by the Contractor shall be restored or replaced as directed by the Engineer.

END OF SECTION 02936

SECTION 03050 – BASIC CONCRETE MATERIALS AND METHODS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Basic Concrete Reinforcement materials and procedures
- B. Basic Cast-in-place Concrete Materials and procedures
- C. Basic Concrete Finishing and Curing Methods

1.02 RELATED SECTIONS

- A. Section 03100 - Concrete Formwork.
- B. Section 03200 – Concrete Reinforcement
- C. Section 03300 - Cast-in-Place Concrete.
- D. Section 03350 – Concrete Floor Finishing
- E. Section 03360 – Exposed Concrete Surface Finishing

1.03 REFERENCES

- A. ACI 301 - Specifications for Structural Concrete for Buildings; American Concrete Institute International; 2005.
- B. ACI 303R - Guide to Cast-in-Place Architectural Concrete Practice; American Concrete Institute International; 2004.
- C. ACI 308R - Guide to Curing Concrete; American Concrete Institute International; 2001.
- D. ASTM C 150 - Standard Specification for Portland Cement; 2005.

1.04 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings:
 - 1. Showing pertinent dimensioning
 - 2. Form materials
 - 3. Arrangement of joints and ties
 - 4. Location of bracing and temporary supports
 - 5. Schedule of erections and stripping
 - 6. Indicate reinforcement sizes and spacing.
- C. Product Data:
 - 1. Indicate Admixtures
- D. Design Data
 - 1. Submit Mix designs in accordance with Section 03300

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301 and ACI 303R.
 - 1. Maintain one copy of each document on project site.

1.06 PRE-INSTALLATION MEETING

- A. Convene one week before starting work of any related section.

PART 2 – PRODUCTS**2.01 FORM MATERIALS AND ACCESSORIES**

- A. Form Materials: At discretion of Project Structural Engineer.

2.02 REINFORCEMENT MATERIALS

- A. Welded Steel Wire Fabric:
 - 1. Welded Steel Wire Fabric conforming to ASTM A185-79
- B. Reinforcing Steel Bars:
 - 1. Hard grade steel bars conforming to ASTM A615, Grade 60, as scheduled on drawings
- C. Reinforcement Accessories:
 - 1. Tie Wire: Minimum 16 gage annealed type
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
 - 3. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather Exposed Concrete Surfaces: Epoxy coated steel type, or stainless steel type, sized and shaped for adequate support of reinforcement during concrete placement.

2.03 REINFORCEMENT PLACEMENT

- A. Place Reinforcement, supported and secured against displacement
- B. Ensure reinforcing is clean, free of loose scale, dirt, or other foreign coatings.

2.04 PLACING CONCRETE

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent.
- B. Place concrete continuously between predetermined expansion, control and construction joints. Do not break or interrupt successive pours creating cold joints.

2.05 SEPARATE FLOOR TOPPINGS

- A. Place concrete floor toppings to required lines and levels.
- B. Prior to placing, remove deleterious material. Broom and vacuum clean.
- C. Place required dividers and other items to be cast in place.

2.06 FLOOR FINISHING

- A. Uniformly spread, screed and float concrete.
- B. Steel trowel surface remaining exposed to view in finished concrete.
- C. Maintain surface flatness, with a maximum variation of 1/8 inch per linear foot.

2.07 CURING

- A. Immediately after placement, protect concrete from premature drying.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete for not less than seven (7) days.

2.08 FIELD QUALITY CONTROL

- A. An independent testing agency shall perform field quality control test, as specified in Section 01410
- B. Provide free access to concrete operations at project site and cooperate with testing agency
- C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
- D. Tests of concrete and concrete materials may be performed at any time to ensure conformance with specified requirements.
- E. Compressive Strength Tests: ASTM C 39/C 39M. For each test, mold and cure four (4) concrete test cylinders. Obtain test samples for every 100 cu yd or less of each class of concrete placed each day. Cylinders to be tested as follows:
 - 1. One (1) cylinder at three (3) days of curing
 - 2. One (1) cylinder at seven (7) days of curing
 - 3. Three (2) cylinders at twenty eight (28) days of curing
- F. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- G. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C 143/C 143M.

2.09 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to M3A Architecture, PLLC. and within 24 hours of test.
- B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements shall be modified as directed by M3A Architecture, PLLC. and/or project Structural Engineer.
- C. Repair or replacement of defective concrete will be determined by the

Division 03 - Concrete

03050 – Basic Concrete Materials and Methods

M3A Architecture, PLLC. and/or project Structural Engineer. The cost of additional testing shall be borne by Contractor when defective concrete is identified.

- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of M3A Architecture, PLLC. and/or project Structural Engineer for each individual area.

PART 3 – EXECUTION (NOT APPLICABLE)**END OF SECTION 03050**

SECTION 03100 - CONCRETE FORMWORK

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Concrete formwork shall be in accordance with "Recommended Practice for Concrete Formwork" (ACI 347).
- B. Furnish and install all concrete formwork as required to perform work indicated on the drawings and as specified herein.

1.02 RELATED WORK

- A. Patching concrete after form removal, Section 03301 - Cast-in-Place concrete.

PART 2 - PRODUCTS

2.01 FORMS

- A. Concrete forms shall conform to the shapes, lines and dimensions of the members called for on the drawings. All forms shall be true to line, plumb, level and with joints tight. They shall be properly braced and of sufficient strength to carry the load as a liquid, together with the movements of men and equipment, without appreciable deflection and with absolute safety. Forms shall be designed so that they may be removed in proper sequence. Forms shall be provided for all holes through the floor slabs which may be shown on the structural, mechanical or general drawings.
- B. For concrete not exposed to the exterior view but exposed on the interior of the building and below finished grade, use a 3/4" break-off type snap tie with a minimum of 3/4" break-back point.
- C. Forms of exposed concrete on the interior of the building may be Class I or II, B-B Plyform exterior Douglas Fir. Forms may be re-used in areas that will be left exposed, but if they are to be re-used in these areas, they will have to be sound and the joints will all have to be tight.
- D. Forms for unexposed concrete shall be sound lumber, plywood or steel.

2.02 MISCELLANEOUS MATERIALS

- A. Form coating shall be Creteban 30 form coating as manufactured by Chem-Masters Corporation or equal.
- B. Anchor slot shall be felt or cardboard filled dovetailed slot constructed of

24-gauge galvanized sheet metal, as manufactured by Gateway Engineering Company, Chicago, Illinois, or equal.

- C. Reglet shall be formed of 26-gauge fiber-filled galvanized sheet metal of such design as not to extend into concrete more than 3/4 inch.

PART 3 - EXECUTION

3.01 FORMWORK

- A. Design of formwork shall include consideration of the following factors:
1. Rate and Method of Placing Concrete.
 2. Loads, including live, dead, lateral and impact.
 3. Selection of materials and stresses.
 4. Deflection, Camber, Eccentricity, and Uplift.
 5. Horizontal and Diagonal Shore Bracing.
 6. Shore Splices.
 7. Cross Grain Compression.
 8. Loads on Ground or on Previously-Placed Structure.
- B. Forms shall be swept clean before reinforcing is placed. In warm weather, wet down with water before placing concrete.
- C. After cleaning forms, coat forms for exposed concrete with form coating in accordance with the coating manufacturer's instructions.
- D. Form surfaces shall be smooth and free from irregularities, dents, sags or holes when used for permanently exposed faces.
- E. Bolts and rods used for internal ties shall be so arranged that, when the forms are removed, all steel shall be not less than one inch from the concrete surface.
- F. Whenever bracing of wall forms is removed, temporary or permanent bracing shall be provided at both top and bottom of all walls to avoid lateral movement.
- G. Use a keyway in all cold joints in grade beams. Cold joints shall be mid span between columns.

3.02 MISCELLANEOUS MATERIALS

- A. Install dovetailed anchor slots in all concrete areas which are to have masonry attached.
- B. Build-in all anchors, bolts, masonry anchors, reglets, inserts, chases and waterstops indicated or required.

- C. Location of construction and expansion joints shall be at such points and of such dimensions as are shown on the drawings or required by the Architect. The method of construction and materials used shall be subject to the approval of the Architect.

3.03 REMOVAL OF FORMS

- A. No construction loads exceeding the structural design loads shall be supported upon any unshored portion of the structure under construction. No construction load shall be supported upon, nor any shoring removed from, any part of the structure under construction until that portion of the structure has attained sufficient strength to support safely its weight and the loads placed thereon. This strength may be demonstrated by job-cured test specimens and by a structural analysis considering the proposed loads in relation to these test strengths. Submit such analyses and test data to the Architect.
- B. Remove forms in such manner as to insure the complete safety of the structure.
- C. The forms for foundation walls may be removed after 24 hours, provided that the concrete is sufficiently strong not to be injured thereby.

END OF SECTION 03100

SECTION 03200 - CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Furnish all concrete reinforcement in accordance with ACI Standard 318.
- B. Furnish and install all concrete reinforcement as indicated on the drawings and as specified herein.

1.02 SUBMITTALS

- A. Submit shop drawings of bending diagrams and erection plans showing placing for all concrete reinforcement i to the Architect for approval. Bar lists submitted without erection plans will be returned without checking.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Reinforcing steel shall conform to ASTM A615, Grade 60, for hard-grade steel bars, and shall be as scheduled on the drawings.
- B. Wire mesh reinforcing shall be welded steel wire fabric conforming to ASTM A185-79.
- C. Accessories: All accessories in slabs and beams such as chairs, screed bases, and slab bolsters shall have upturned legs, either plastic coated or stainless steel.
- D. Cut reinforcing steel to lengths and bends as shown on the drawings and as scheduled.
- E. Bundles of reinforcing steel shall be identified on stamped metal tags wired to steel.

PART 3 - EXECUTION

3.01 ERECTION

- A. Deliver all bars bent to conform accurately to details and approved shop drawings. Do not bend bars in a manner that will injure the material. Bend bars cold. Do not use bars with kinks or bends not shown on the drawings.
- B. Clean forms of any foreign matter before placing of reinforcing.

- C. Before placing, thoroughly clean reinforcing of mill and rust scale and of coatings that will destroy or reduce the bond. Replace any reinforcement appreciably reduced in section.
- D. Accurately place reinforcement in accordance with the approved shop drawings and hold securely in place during placement of concrete by wires, spacers and chairs. Supports shall be sufficient in numbers and size to comply with requirements of Concrete Reinforcement Steel Institute.
- E. Reinforcement protection and clearance shall be in accordance with the latest ACI code unless otherwise shown on drawings.
- F. All welding of inserts and reinforcement shall be in accordance with Recommended Practices of the American Welding Society, Inc.

END OF SECTION 03200

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. Furnish and install all cast-in-place concrete as indicated on the drawings and as specified herein.
- B. "Building Code Requirements for Reinforced Concrete" (ACI 318) and "Specifications for Structural Concrete for Buildings" (ACI 301) is hereby made a part of this section of the specifications except as modified and supplemented herein.

1.02 TESTING

- A. A testing laboratory employed by the Contractor shall perform all testing.
- B. Prepare three test cylinders for each 100 cu. yd. or fraction thereof, of each mix design of concrete placed each day in accordance with the procedures outlined in ASTM C31.
- C. Conduct a slump test on the first load of each class of concrete delivered each day and at any other time during the progress of the work when requested by the Architect.
- D. Slump exceeding the specified maximum, in two consecutive tests on different portions of the sample, will be cause for rejection of the load.
- E. Conduct air meter tests on regular weight concrete in accordance with the procedures outlined in ASTM C231 or in ASTM 173.
- F. Test the first load delivered in the morning and in the afternoon for each segment of the project, when any change in consistency or appearance of the concrete indicates that a test should be made, and at any other time during the progress of the work when requested by the Architect.
- G. A testing laboratory as outlined in Section 01400, Testing Laboratory Services, shall conduct the following laboratory test.
- H. Test each set of concrete cylinders for compressive strength in accordance with the procedures outlined in ASTM C-39 and for unit weight. Test One (1) cylinder at three (3) days. Test one (1) cylinder at seven (7) days. If cylinder shows evidence of improper sampling,

Division 03 – Concrete
03300 – Cast In Place Concrete

molding, or testing, discard and test an additional cylinder. Test one (1) cylinder at twenty eight (28) days. If seven-day test did not require use of an additional cylinder, any cylinder at 28 days shows evidence of improper sampling, molding or testing, test the remaining cylinder. If more than one cylinder in a test shows any of these defects, discard the entire test and investigate the conditions leading to such defects.

- I. Submit copies of the test reports to the Architect, Engineer, and Contractor for review. Copies shall be sent within 2 days after testing is performed. Submittal of test results to Engineer may be by mail, fax, or e-mail.

1.03 EVALUATION OF CONCRETE STRENGTH

- A. If an inadequate number of tests are conducted, the strength of the concrete in place shall be considered questionable and shall be subject to further testing at the expense of the Contractor. If cylinder breaks indicate low concrete strengths, the strength of the concrete shall be considered questionable and shall be subject to further testing at the expense of the Contractor. If ongoing cylinder breaks indicate low concrete strengths, the strength of the concrete shall be considered questionable and further testing as deemed necessary by the Architect may be required and will be at the expense of the Contractor.
- B. An independent testing laboratory approved by the Architect shall conduct these additional tests of questionable concrete. Tests shall be conducted in accordance with ASTM C-42 (when concrete cores may be obtained in the field) or by load tests conducted and results evaluated in accordance with Chapter 2 of ACI 318.
- D. Test results obtained by use of an impact hammer or Sonoscope (unless correlated with other test data) will not be considered conclusive in evaluating strengths of concrete.

1.04 TOLERANCES

- A. Reinforcement:
 1. Bars shall meet following requirements for fabricating tolerances:
 - a. Sheared length: Plus or minus one inch.
 - b. Depth of truss bars: Plus 0, minus 1/2- inch.
 - c. Overall dimension of stirrups, ties, and spirals: Plus or minus 1/2-inch.
 - d. Other bends: Plus or minus one inch.

Division 03 – Concrete
03300 – Cast In Place Concrete

2. Bars shall be placed to following tolerances:
 - a. Concrete cover to formed surfaces: Plus or minus 1/4-inch.
 - b. Minimum spacing between bars: Minus 1/4 inch.
 - c. Top bars in slabs and beams:
 - 1) Members eight inches deep or less: Plus or minus 1/4-inch.
 - 2) Members more than eight inches but not over two feet deep: Plus or minus 1/2-inch.
 - 3) Members more than two feet deep: Plus or minus one inch.
 - d. Crosswise members: Spaced evenly within two inches.
 - e. Lengthwise of members: Plus or minus two inches.
3. Bars may be moved as necessary to avoid interference with other reinforcing steel, conduits or embedded items. If bars are moved more than one bar diameter or enough to exceed above tolerances, resulting arrangement of bars is subject to approval of the structural Engineer.

B. Concrete:

1. Float and broom finish: Plane within 1/4-inch in 10-feet as determined by a 10-foot straightedge. .
2. Steel trowel finish: Plane within 1/8-inch in 10-feet.
3. Smooth hardened finish: For all rooms with sealed concrete floors.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cement: Portland cement shall conform to ASTM C- 150, Type I or II. Pozzolan conforming to ASTM C- 595 may be blended with the Portland Cement in an amount not exceeding 20% of the combined volume.
- B. Concrete Aggregates: Shall conform to "Specifications for Concrete Aggregates" (ASTM C- 33), with a maximum size aggregate of one-inch.
- C. Fine aggregate that conforms to Section 703 of the Miss. State Highway Dept. and is in general use in the area may be considered satisfactory. The determination of the satisfactory service record of any substituted aggregates shall be at the sole discretion of the Architect. See general notes on plans for further restrictions on aggregate size.

- D. Water: from City water main.
- E. Air-Entraining Agent: The air-entraining admixture shall be Adz-Air as manufactured by Chem-Masters Corporation, or equal.
- F. Retardant: Pozzoloth retardant as manufactured by Master Builders, or equal.
- G. Expansion Joint Filler: Premoulded, closed-cell polyethylene, equal to Sonoflex F. Thickness as shown.
- H. Storage of Materials: Cement and aggregate shall be stored in such a manner as to prevent their deterioration and the intrusion of foreign matter. Any material which has deteriorated or which has been contaminated will not be used for concrete work.

2.02 PROPORTIONING

- A. Proportioning shall be by laboratory trial batches or on the basis of previous field experience for the selection of concrete proportions.
- B. The Contractor shall establish a design mix to provide concrete of the strengths called for in the plans and specifications.
- C. The proportion mix is to be submitted to the Architect for review and approval prior to use on the job.
- D. Laboratory cylinders are to be made in accordance with ASTM C-192 and compression tests in accordance with ASTM C-39, using representative materials supplied by the Contractor's ready-mix concrete company.
- E. Control of mixes is to be maintained at the ready-mix plant and on the job and will be reviewed and checked by the above-mentioned testing laboratory.
- F. Mixes shall be controlled as follows:
 - 1. The slump on all concretes will not exceed 4 inches, unless noted otherwise on the drawings. If the Contractor wishes to use a mix with more than 4" slump, additional slump must come from the use of a water reducing admixture, with no additional cost to the Owner.
 - 2. Ready-mix concrete shall be used and shall be mixed and delivered according to the requirements of ASTM C-94. Proportions shall be made by weight and shall be uniformly and accurately controlled by the concrete supplier.

Division 03 – Concrete
03300 – Cast In Place Concrete

3. Concrete of the correct slump shall be delivered to job site. The delivery ticket shall indicate the allowable amount of water that can be added without exceeding water/cement ratios previously established. If water must be added to a load of concrete, it shall only be added by the contractor or the concrete supplier, each of who assumes responsibility for the load of concrete.
-
- G. After the Architect has approved a design mix, there shall be no change made without consent of the Architect in either the cement manufacturer, aggregate supplied, or any admixtures.
 - H. The proportions of aggregate to cement for any concrete mix shall be such as to produce a mixture which will work readily into corners and angles of the forms and around reinforcement with the method of placing employed on the work, but without permitting the materials to segregate or excess free water to collect on the surface.
 - I. Concrete of the strength and slump as called for on the plans and in the specifications shall be proportioned according to the American Concrete Institute's Recommended Practice 613, using normal Type I cement supplemented with air-entraining admixtures and set-controlling admixtures.
 - J. In determining water content for all mixes of concrete, as set forth in the plans, the surface water contained in the aggregates must be included as part of the mixing water in computing the water content. Any and all admixtures shall be proportioned with this factor accounted for in computing mixing water.
 - K. Rate of Hardening of Concretes: For the climatic conditions and types of construction indicated below, separate mixes shall be designed to produce the required rate of hardening.
Required Rate
Type of Construction Climatic Conditions of Hardening

Structural Concrete over 90 degrees F. Retarded
 - L. Where controlled setting time and/or rate of hardening are required, the admixture shall be formulated to provide this control without increase in water/cement ratio or loss in strength when compared with normal setting formulation.
 - M. No other admixtures will be permitted unless specifically approved by the Architect.

- N. Calcium chloride or admixtures containing calcium chloride shall not be used.

PART 3 - EXECUTION

3.01 CONSTRUCTION JOINTS

- A. Make construction joints as detailed on the Drawings and required by construction. Construction joints in slabs shall be keyed.
- B. When stoppage of concreting operation occurs for any reason, place construction joints either horizontally or vertically as needed and as approved by the Architect. All construction joints will be adequately keyed so as to provide a firm tie between the adjacent concrete pour.
- C. Construction joints in grade beams, free standing beams and slabs shall be located midway between the footings and shall have 2 levels of horizontal shear keys.
- D. Concrete shall be allowed to set for 24 hours before an adjoining pour is started.
- E. Slabs across the joints shall be level and surfaces shall not be feathered.

3.02 MIXING

- A. Delivery tickets shall show class of concrete, batch number, mix by number or sack content with maximum size aggregates, admixtures, air content, slump, and time of loading.
- B. Each batch shall be mixed for at least one minute for the first cubic yard and an additional 15 seconds for each additional yard. After all ingredients are in the mixer, then the entire content of the mixing drum shall be discharged before recharging.
- C. Addition of water to mix at project site must be noted by testing laboratory, and delivery ticket shall be noted with amount of water, and signed by the party adding the water.
- C. Retempering or remixing of concrete, which has partially set, will not be permitted.
- E. Batch mixing on site will not be permitted except with written permission of the Architect.

Division 03 – Concrete
03300 – Cast In Place Concrete

- F. Temperature of mixing water shall be a maximum of 55 degrees F. for cold weather concreting and a maximum of 90 degrees F. for concrete placed in hot weather. Refer to paragraph 3.12 of this section.

3.03 CONCRETE PLACMENT

- A. Non-agitating type transportation equipment for delivery to the site shall not be used.
- B. Carts or buggies may be used in conjunction with temporary runways if runways do not bear on reinforcing or fresh concrete.
- C. Concrete shall be discharged at the job within 1-1/2 hours after water has been added to the cement and aggregates, or cement batched with the aggregates, unless the Architect specifically authorizes a longer time. During hot weather and under other conditions contributing to quick stiffening of concrete, or when high early-strength cement is being used, Architect may require a reduction in this elapsed time.
- D. Deposit in uniform horizontal layers maximum 12 inches deep. Do not drop from conveyor or buggy a distance greater than 5 feet to a point of deposit. For greater heights use chutes.
- E. Keep complete record at job of every concrete pour, itemizing date, location, and quantity of pour, weather data, and number of test cylinders.
- F. Place no concrete before embedded items are in place, nor before forms, reinforcing and affected work of other trades have been examined. Notify all trades affected as to when concrete will be placed, and allow adequate time for installation of all necessary parts. Notify Architect and Engineer 36 hours in advance of pouring concrete, to allow for inspection of reinforcing before placing concrete. Do not place concrete unless Architect or Engineer has inspected the work.
- G. Concrete shall be thoroughly compacted by means of a mechanical vibrator as approved by the Architect, to provide a dense concrete free of honeycombing, of the dimension and shape as shown on the plans.
- H. All concrete footings, slabs, walks, walls, etc. shall be mechanically vibrated. Vibrator will be selected according to the size of the forms and the spacing between the reinforcing steel.
- I. Take care to see that all reinforcing steel and all formwork is kept a minimum of 3/4" clear of any form, either bottom or side.
- J. No concrete shall be deposited when temperature is below 40 degrees F.

Division 03 – Concrete
03300 – Cast In Place Concrete

or when the temperature is forecast to go below 30 degrees F. within the next 12 hours after placing. Whenever the temperature of surrounding areas is below 40 degrees or likely to drop, adequate equipment to provide for heating of concrete materials and for protecting concrete is required. All concrete and cement finishes, when placed, to have a temperature of between 40 degrees and 90 degrees F. and shall be maintained for at least 72 hours, or for as much time as may be necessary to insure proper rate of curing. No antifreeze chemicals will be permitted.

- K. Placing of concrete shall not be started until necessary preparations have been completed and the Architect's approval given. Preparation to consist of completing all formwork, placing of all reinforcing steel, pipes, conduit, hangers, sleeves, anchors, fastening devices, outlets, openings, and such other work that is to be built in and provided for in the section to be poured.
- L. It shall be the responsibility of the General Contractor, or concrete sub-contractor, to notify concerned sub-contractors, including the mechanical, electrical, elevator, and pre-cast sub-contractors, of his intention to pour concrete in the areas involved in sufficient time to allow for the concerned contractors to place necessary and required equipment and/or items of work. He should also notify them when he is going to actually place the concrete, and they shall have representatives on the job as needed to protect their items and accessories.

3.04 EMBEDDED ITEMS

- A. Sleeves, conduit and other pipes passing through the floors, walls or beams shall be of such size and in such locations as not to impair significantly the strength of construction. All pipes, sleeves shall be at least equal to Standard Schedule 40 steel pipe and shall be spaced not less than 3 diameters on center.

3.05 FLATWORK

- A. Structural slab floors inside the building walls shall receive a hard trowel finish. Start troweling when the water has disappeared from the surface to first level the surface. Start final troweling when the concrete has set up to a point where it no longer shows indentations from finger pressure. Trowel to a hard, smooth surface free of marks. Dusting of the slab with cement shall not be permitted. Surfaces may vary from a true plane by not more than 1/4" when tested with a 12' straight edge. Either grind or fill surfaces as required to produce a 1/4" tolerance.
- B. Slope floors to drains, where shown.

- C. Outside Slabs: Shall be broom finished.

3.06 CURING AND PROTECTION

- A. All concrete and cement finishes are to be maintained in a moist condition for at least the first seven days after placing. This may be accomplished by the application of:
1. Plastic sheeting and daily watering,
 2. Burlap mats and daily watering, or
 3. A curing compound compatible with finish flooring products to be used.
- B. For concreting in hot weather due precautions are to be taken to prevent plastic cracking and premature set. The Contractor shall provide adequate wind brakes and additional curing water. When the temperature reaches 75 degrees F. and the relative humidity falls below 50%, additional water should be supplied to the fresh concrete by fogging or ponding. Wind brakes should be erected during the curing time to prevent excessive evaporation due to blowing winds. Normal curing means such as protective paper and/or additional heater should be maintained for a minimum period of five days after casting. Adequate forms may be assumed to constitute curing if watertight. Surface curing compounds and finishes are covered in other sections of this specification. Provisions shall be made by the Contractor for maintaining the concrete in a moist condition for at least five days after placement. All procedures used in hot weather concreting shall be in conformance with ACI Standard "Recommended Practice for Hot Weather Concreting", ACI 605-59.

3.07 PATCHING AFTER REMOVAL OF FORMS

- A. After removal of forms, all concrete surfaces shall be inspected, and pressed joints, voids, stone pockets, and holes shall be at once patched before concrete is thoroughly dry.
- B. Honeycombed and spalled areas shall be cut out to a depth at which sound concrete is exposed, with edges overcut.
- C. Areas to be patched and surrounding concrete for at least 6" shall be wetted.
- D. Patching material shall have the same material and proportions as the concrete to be patched, if exposed to the exterior.
- E. Patching material for all interiors concrete shall be Embeco Non-Shrink Grout.

Division 03 – Concrete
03300 – Cast In Place Concrete

- F. Patching materials shall use no coarse aggregates unless the patch is of a substantial nature.
- G. A minimum amount of water to be used in patching mix.
- I. Mortar for patching is to be mixed and allowed to stand and then re-mixed without adding water, and will be worked during the interval to prevent setting. Patching mixture will then be compacted into place. Interior tie holes shall be filled entirely. Patches shall be allowed to shrink for 1 to 2 hours and then finished to match surrounding areas. Patches shall be kept wet for at least 7 days or shall be covered with a prepared curing compound as approved by the Architect.

END OF SECTION 03300

SECTION 06050 – BASIC WOOD AND PLASTICS MATERIALS AND METHODS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. General provisions for all labor, material, and equipment necessary to furnish and install all rough carpentry, finish carpentry, and plastics as shown on Drawings and as herein specified.
- B. Work and components include"
 - 1. All rough carpentry, as shown, indicated, or noted on the Drawings
 - 2. Wood grounds and blocking
 - 3. All framing hardware, anchors, clips, etc., required to erect, fasten, and hold all rough hardware.
 - 4. All drilling, tapping, or other means of fastening woodwork to metal or masonry.
 - 5. All finish carpentry as shown, indicated, or noted on the Drawings.
 - 6. All solid surface plastic composites as shown, indicated or noted on the Drawings.

1.02 RELATED SECTIONS

- A. Section 06066 – Plastic Laminate Clad Countertops
- B. Section 06100 – Rough Carpentry
- C. Section 06110 – Wood Sheathing
- D. Section 06200 – Finish Carpentry
- E. Section 06400 – Millwork
- F. Section 09910 – Paints and Coatings

1.03 QUALITY STANDARDS

- A. The grades of materials used shall be defined by the rules of the recognized associations of lumber manufacturers producing the materials specified herein and used in the Work. Where grades of lumber are specified, it shall mean that the best quality of that particular grade shall be required.
- B. "Grade Mark", "Trade Mark", or "Mill Identification Mark", of the Associations having jurisdiction shall appear on each piece of standard yard dimension lumber (not boards), except that shipments may be accompanied by a certificate of inspection identifying the shipment and certifying compliance with the requirements of the specification. This certificate of inspection shall be issued by an agency authorized to grade by the manufacturers' association as responsible for the grading rules of the species involved.
- C. Grading and general requirements of the lumber shall conform to American Lumber Standards "Simplified Practice Recommendation R-16" and Federal Specifications MM-751HJ for lumber Softwood. The grading rules of the following

Division 06 - Wood and Plastics
06050 – Basic Wood and Plastics Materials and Methods

shall govern:

1. Southern Pine – Southern Forest Products Association
2. Plywood – American Plywood Association
3. Treated Wood – American Wood Preservers Association
4. Hardwoods, Particle Board – National Forest Products Association
5. Softwood Lumber – American Lumber Standards Committee

- D. The fasteners for carpentry work shall conform to the following standards as defined by the association:
 1. Wood Screws, Inch Series – American National Standards Institute, ANSI B18.6.1
 2. Square and Hex Bolts and Screws, Inch Series – American National Standards Institute, ANSI B18.2.1
 3. Nails, Brads, Staples and Spikes, Wire Cate and Wrought – FS FF-N-105B
 4. Wood Construction Design – National Forest Products Association and Building Officials and Code Administration.
- E. When applicable, fabricate site made finish carpentry items in compliance with recommendations of Quality Standards of Architectural Institute (AWI).
- F. Solid Surfacing Material to be fabricated complying with the product manufacturer's most recent appropriate techniques for fabrication, installation and maintenance.
- G. Solid surface material (SSM) shall consist of reacted monomers and resins, mineral fillers and pigments manufactured in sheets of specific thicknesses. SSM shall be solid, non-porous, homogeneous, hygienic, renewable, and, when applicable, may feature inconspicuous hygienic seams. SSM shall be free from conspicuous internal strengthening fibers. SSM is typically fabricated using ½" (13 mm) nominal thickness sheets that may be supported by wood or steel members. SSM must meet or exceed performance standards set forth in ISSFA -2-01.
- H. Fabricator Qualifications: certified solid surface fabricator/installer.
- I. Installer Qualifications: Firm experienced in installation or application of systems similar in complexity to those required for this Project, including specific requirements indicated.
 - a. Acceptable to or licensed by manufacturer.
- J. Source Limitations: Obtain materials and products from single source.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. General: Store wood products to protect against moisture inside and under cover. Support stacked products to prevent deformation and to allow air circulation.
- B. Store lumber and plywood on sleepers, on edge or on end to prevent warpage.

- C. Allow damp or wet lumber to dry to ambient humidity, prior to erection or installation.
- D. All construction lumber shall be air dried to a moisture content not to exceed 19%.
- E. All finish lumber shall be air dried to a moisture content not to exceed 9%.

PART 2 – PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. General products and materials required by this Section shall comply with requirements of applicable specifications.
- B. Custom Casework:
 - 1. Plastic Laminate work shall be A.W.I. “Economy” Grade.
 - 2. Fine woodwork and special plastic laminate work shall be A.W.I. “Economy” Grade.
 - 3. The use of particle board in the construction of casework, or in millwork to be located in wet areas, is prohibited.
- C. Counter Tops:
 - 1. High-Pressure Decorative Laminate Countertops are preferred.
 - 2. Plastic Laminate made of melamine-impregnated decorative surface papers combined with phenolic-treated kraft paper saturated with resin. Sheets are to be bonded to a substrate of 45# density particleboard
 - 3. Brand name and edge treatment shall be optional with fabricator; desired colors selected from the manufacturer’s standard, nonpremium priced line with standard matte finish; minimum 3/4" thick; with minimum of 4" high back and/or side splash above the deck surface.
- D. Cabinet and Drawer Hardware:
 - 1. Cabinet hardware shall comply with ANSI A156.9 “American National Standards for Cabinet Hardware” and verify compliance in shop submittals and by inspection of installations.
 - 2. Drawer slides shall be side mounted type rated for intended use but in no case carrying less than a 100 lb. load rating. File drawer slides shall carry a minimum 150 lb. load rating.
 - 3. Cabinet hinges shall be flush overlay, concealed self closing, all metal, 165 degree opening.
 - 4. All cabinets and drawers to be lockable. Keying to be determined by Owner.
- E. Rough Carpentry:
 - 1. Wood framing for interior wall partitions is not acceptable, with the exception of the following:
 - a. Blocking for installation of cabinets, shelving, and wall hung equipment.
 - 2. Wood framing is prohibited in all Exterior Wall applications, with the exception of the following:

Division 06 - Wood and Plastics

06050 – Basic Wood and Plastics Materials and Methods

- a. Wood framing shall be acceptable as part of a low slope roof membrane system. All wood blocking, nailers, and cant strips shall be pressure treated and certified (with the appropriate stamp) or use in roofing applications.
- b. All pressure treated wood shall be certified Arsenic Free.

PART 3 – EXECUTION**3.01 PREPARATION**

- A. Perform the Work required in this section in Compliance with Section 01400.
- B. Prior to commencement of work related to this Section inspect the job site to determine suitability of field conditions. Report all substandard conditions to the Architect in writing for correction prior to commencing Work. Commencement of Work of this section is construed as acceptance of existing field conditions.
- C. Verify controlling dimensions by field measurement prior to commencing work.

3.02 INSTALLATION - GENERAL

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

3.03 TOLERANCES

- A. Framing Members: 1/4 inch from true position, maximum.
- B. Surface Flatness of Floor: 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.
- C. Variation from Plane (Other than Floors): 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

3.04 CLEANING

- A. Waste Disposal: Comply with the requirements of Section 01732.
 - 1. Comply with applicable regulations.
 - 2. Do not burn scrap on project site.
 - 3. Do not burn scraps that have been pressure treated.
 - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or “waste-to-energy” facilities.
- B. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION 06050

SECTION 06400 - MILLWORK**PART 1 – GENERAL****1.01 DESCRIPTION**

- A. Millwork items are indicated or required by Drawings and specified herein.
- B. Millwork shall be described as counters, wall and base cabinets, hardware same, plastic laminate tops, and any other items of finished millwork not specifically shown as Division 11 - Equipment.
- for

1.02 RELATED WORK

- A. Section 09900 – Painting
- B. Section 09930 – Stains and Transparent Finishes

1.03 QUALITY STANDARDS

- A. References
1. Architectural Woodworking Institute (AWI), "Quality Standards".
 2. American Plywood Association (APA).
 3. Western Wood Products Association (WWPA).
 4. National Electrical Manufacturer's Association, High Pressure Decorative Laminate, 1985 - NEMA LD3.
 5. ANSI A208.1 - Wood Particleboard, 1989.
 6. ANSI/BM | HMA A156.9 - Cabinet Hardware, 1982.
- B. Manufacturer's Qualifications: Shall have the proper equipment and be regularly engaged in the manufacturer of modular millwork cabinets.

1.04 SUBMITTALS

- A. Shop Drawings: Submit shop drawings showing location of each item, dimensioned plans and elevations, large scale details, attachment devices and other components.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

Protect millwork during transit, delivery, storage and handling to prevent damage, soiling and deterioration. Store off floor on blocking skids in such a manner to allow ventilation of surfaces. Maintain temperatures above 50° and relative humidity less than 60%.

PART 2 – PRODUCTS**2.01 GENERAL**

- A. Style: Flush overlay. Grade: Custom.
- B. Sub-base: Cabinet sub-base shall be separate and continuous (no cabinet body side-to-floor), water resistant exterior grade plywood (or solid pine) with concealed fastening to cabinet bottom. Ladder-type construction consisting of front, back, and intermediates, to form a secure and level platform to attach cabinets.

2.02 MATERIALS

- A. Cabinet Core Components: Materials to receive plastic laminate shall be medium density fibercore board.
- B. Door, Drawer, and Shelf Edging: Edge all exposed edges of doors, drawers, caseparts, and front edge of shelves with hardwood edging.
- C. Face Material: Countertops, nosing, and splashes shall be laminated on exposed surfaces with 1/16 inch (0.0625) thick high-pressure plastic laminate in color and pattern as selected by Architect from manufacturers standard.

2.03 HARDWARE

- A. Pulls: 4 in o.c. bronze copper.
- B. Hinges: Cabinet hinges shall be flush overlay, concealed self closing, all metal, 165 degree opening.
- C. Drawer Slides: Drawer slides shall be side mounted type rated for intended use but in no case carrying less than a 100 lb. load rating. File drawer slides shall carry a minimum 150 lb. load rating.
- D. Door Locks: Pin tumbler type. Keyed as per Owner.
- E. Adjustable shelving: Metal pins, holes @ 1.25 inch oc vert

2.04 MINIMUM PANEL THICKNESS

- A. Cabinet doors, drawer fronts, body parts: 3/4 in.
- B. Drawer bottoms: 5/8 in.
- C. Drawer sides and back: 5/8 in.
- D. Cabinet backs: 1/4 in. (Let into all four sides and hot melt glued in a continuous bead at all four sides to add unit body strength and develop moisture and vermin seal)
- E. Shelves: 3/4 or 1 1/8 in. exceeding 4 feet unsupported length.

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Work shall be cut and assembled at mill and delivered ready for erection. When necessary to cut portions on the job, material shall be ordered with ample cutting allowance. Defects, bruises, and stains shall be worked out in the cutting. All millwork shall be based on measurements taken at the job site. Exposed surfaces shall be machine sanded unless otherwise noted. Mill assemblies shall be joined in accordance with standard practice as recommended by AWI. The best grade glue shall be used. Nails and screws shall be either concealed or countersunk. Intersecting molding at corners shall be neatly mitered.
- B. Finished work shall be plumb, erect, and true and shall be blind nailed whenever possible. Surface nails shall be steel set. All woodwork shall be securely nailed to nailing blocks, grounds, and furring.
- C. Anchor all cabinet work and shelving securely, plumb, true, and level, without distortion. Accurately scribe and closely fit face plates, fillers, and trim strips to adjacent surfaces. Wood blocking will be provided within stud cavities as specified in Section 06100.
- D. All fasteners and fasteners connection components, nails, screws, nuts/bolts/washers. Etc. shall be non-corrosive and shall be appropriate to the materials secured.
- E. All painted trim work shall be caulked into adjacent surfaces (walls, ceilings, etc.) with paintable siliconized acrylic sealant tooled to a maximum 1/8" bead.

END OF SECTION 06400

SECTION 06651 - SOLID SURFACE FABRICATIONS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following horizontal and trim solid surface product types:
 - 1. Countertops with sinks
 - 2. Lavatory tops with undermount bowls
 - 3. Lavatory tops with integral bowls
 - 4. Reception areas/nurses stations
 - 5. Vanity tops
 - 7. Cove backsplashes
- B. Related Sections include the following:
 - 1. Section 06050 – Basic Wood and Plastic Materials and Methods
 - 2. Section 06100 – Rough Carpentry
 - 3. Section 06210 – Finish Carpentry
 - 4. Section 06400 - Millwork

1.03 DEFINITION

- A. Solid surface is defined as nonporous, homogeneous material maintaining the same composition throughout the part with a composition of acrylic polymer, aluminum trihydrate filler and pigment.

1.04 SUBMITTALS

- A. Product data:
 - 1. For each type of product indicated.
- B. Shop drawings:
 - 1. Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices and other components.

Division 06 – Woods and Plastics
06651 – Solid Surface Fabrications

- a. Show full-size details, edge details, thermoforming requirements, attachments, etc.
 - b. Show locations and sizes of furring, blocking, including concealed blocking and reinforcement specified in other Sections.
 - c. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, waste receptacle and other items installed in solid surface.
- C. Samples:
- 1. For each type of product indicated.
 - a. Submit minimum 6-inch by 6-inch sample in specified gloss.
 - b. Cut sample and seam together for representation of inconspicuous seam.
 - c. Indicate full range of color and pattern variation.
 - 2. Approved samples will be retained as a standard for work.
- D. Product data:
- 1. Indicate product description, fabrication information and compliance with specified performance requirements.
- E. Product certificates:
- 1. For each type of product, signed by product manufacturer.
- F. Fabricator/installer qualifications:
- 1. Provide copy of certification number.
- H. Manufacturer certificates:
- 1. Signed by manufacturers certifying that they comply with requirements.
- J. Maintenance data:
- 1. Submit manufacturer's care and maintenance data, including repair and cleaning instructions.
 - a. Maintenance kit for finishes shall be submitted.
 - 2. Include in project closeout documents.

1.05 QUALITY ASSURANCE

- A. Qualifications:
- 1. Shop that employs skilled workers who custom fabricate products similar to those required for this project and whose products have a record of successful in-service performance.
- B. Fabricator/installer qualifications:

Division 06 – Woods and Plastics
06651 – Solid Surface Fabrications

1. Work of this section shall be by a certified fabricator/installer, certified in writing by the manufacturer.
- C. Applicable standards:
1. Standards of the following, as referenced herein:
 - a. American National Standards Institute (ANSI)
 - b. American Society for Testing and Materials (ASTM)
 - c. National Electrical Manufacturers Association (NEMA)
 2. Fire test response characteristics:
 - a. Provide with the following Class A (Class I) surface burning characteristics as determined by testing identical products per UL 723 (ASTM E84) or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1) Flame Spread Index: 25 or less.
 - 2) Smoke Developed Index: 450 or less.
- D. Coordination drawings:
1. Shall be prepared indicating:
 - a. Plumbing work.
 - b. Electrical work.
 - c. Miscellaneous steel for the general work.
 - d. Indicate location of all walls (rated and non-rated), blocking locations and recessed wall items, etc.
 2. Content:
 - a. Project-specific information, drawn accurately to scale.
 - b. Do not base coordination drawings on reproductions of the contract documents or standard printed data.
 - c. Indicate dimensions shown on the contract drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements.
 - d. Provide alternate sketches to designer for resolution of such conflicts.
 - 1) Minor dimension changes and difficult installations will not be considered changes to the contract.
- E. Drawings shall:
1. Be produced in 1/2-inch scale for all fabricated items.
- F. Drawings must be complete and submitted to the architect within 60 days after award of contract for record only.
1. No review or approval will be forthcoming.
 2. Coordination drawings are required for the benefit of contractor's fabricators/installers as an aid to coordination of their work so as

Division 06 – Woods and Plastics
06651 – Solid Surface Fabrications

to eliminate or reduce conflicts that may arise during the installation of their work.

- G. Job mock-up:
 - 1. Prior to fabrication of architectural millwork, erect sample unit to further verify selections made under sample submittals and to demonstrate the quality of materials and execution.
 - 2. Build the mock-up to comply with the contract documents and install in a location as directed by the Architect.
 - 3. Notify the architect two weeks in advance of the date of when the mock-up will be delivered.
 - 4. Should mock-up not be approved, re-fabricate and reinstall until approval is secured.
 - a. Remove rejected units from project site.
 - 5. After approval, the mock-up may become a part of the project.
 - 6. This mock-up, once approved, shall serve as a standard for judging quality of all completed units of work.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver no components to project site until areas are ready for installation.
- B. Store components indoors prior to installation.
- C. Handle materials to prevent damage to finished surfaces.
 - 1. Provide protective coverings to prevent physical damage or staining following installation for duration of project.

1.07 WARRANTY

- A. Provide manufacturer's warranty against defects in materials.
 - 1. Warranty shall provide material and labor to repair or replace defective materials.
 - 2. Damage caused by physical or chemical abuse or damage from excessive heat will not be warranted.
- B. Manufacturer's warranty period:
 - 1. Ten years from date of substantial completion.

1.08 MAINTENANCE

- A. Provide maintenance requirements as specified by the manufacturer.

PART 2 – PRODUCTS**2.01 MANUFACTURERS**

- A. Subject to compliance with requirements, manufacturers offering solid surface fabrications that may be incorporated into the Work are not limited. Specifications are based on Corian® surfaces from the DuPont Company.

2.02 MATERIALS

- A. Solid polymer components
1. Cast, nonporous, filled polymer, not coated, laminated or of composite construction with through body colors meeting ANSI Z124.3 or ANSI Z124.6, having minimum physical and performance properties specified.
 2. Superficial damage to a depth of 0.010 inch (.25 mm) shall be repairable by sanding and/or polishing.
- B. Thickness:
1. 1/2 inch
- C. Edge treatment:
1. Full Bullnose
- D. Backsplash:
1. 4" Coved minimum.
- H. Sidesplash: as required
1. 4" Coved minimum.
- I. Performance characteristics:

Property	Typical Result	Test
Tensile Strength	6,000 psi	ASTM D 638
Tensile Modulus	1.5×10^{-6} psi	ASTM D 638
Tensile Elongation	0.4% min.	ASTM D 638
Flexural Strength	10,000 psi	ASTM D 790
Flexural Modulus	1.2×10^{-6} psi	ASTM D 790
Hardness	>85	Rockwell "M" Scale
	56	ASTM D 785
		Barcol Impressor
		ASTM D 2583
Thermal Expansion	3.02×10^{-5} in./in./°C	ASTM D 696

Division 06 – Woods and Plastics
06651 – Solid Surface Fabrications

Gloss (60° Gardner)	(1.80 x 10 ⁻⁵ in./in./°F)	
Light Resistance	5–75 (matte—highly polished) (Xenon Arc) No effect	ANSI Z124 NEMA LD 3-2000 Method 3.3
Wear and Cleanability	Passes	ANSI Z124.3 & Z124.6
Stain Resistance: Sheets	Passes	ANSI Z124.3 & Z124.6
Fungus and Bacteria Resistance	Does not support microbial growth	ASTM G21&G22
Boiling Water Resistance	No visible change	NEMA LD 3-2000 Method 3.5
High Temperature Resistance	No change	NEMA LD 3-2000 Method 3.6
Izod Impact (Notched Specimen)	0.28 ft.-lbs./in. of notch	ASTM D 256 (Method A)
Ball Impact Resistance: Sheets	No fracture—1/2 lb. ball: 1/4" slab—36" drop 1/2" slab—144" drop	NEMA LD 3-2000 Method 3.8
Weatherability	ΔE* ₉₄ < 5 in 1,000 hrs.	ASTM G 155
Specific Gravity †	1.7	
Water Absorption	Long-term 0.4% (3/4") 0.6% (1/2") 0.8% (1/4")	ASTM D 570
Toxicity	99 (solid colors) 66 (patterned colors)	Pittsburgh Protocol Test ("LC50" Test)
Flammability	All colors (Class I and Class A)	ASTM E 84, NFPA 255 & UL 723
Flame Spread Index	<25	
Smoke Developed Index	<25	

† Approximate weight per square foot: 1/4" (6 mm) 2.2 lbs., 1/2" (12.3 mm) 4.4 lbs.

Shapes meet or exceed the ANSI Z124.3 and ANSI Z124.6 standards for plastic sinks and lavatories.

NEMA results based on the NEMA LD 3-2000

2.03 ACCESSORIES

- A. Joint adhesive:
 1. Manufacturer's standard one- or two-part adhesive kit to create inconspicuous, nonporous joints.
- B. Sealant:
 1. Manufacturer's standard mildew-resistant, FDA-compliant, NSF 51-compliant (food zone — any type), UL-listed silicone sealant in colors matching components.

- C. Sink/lavatory mounting hardware:
 - 1. Manufacturer's standard bowl clips, panel inserts and fasteners for attachment of undermount sinks/lavatories.
- D. Conductive tape:
 - 1. Manufacturer's standard aluminum foil tape, with required thickness, for use with cutouts near heat sources.
- E. Insulating felt tape:
 - 1. Manufacturer's standard for use with conductive tape in insulating solid surface material from adjacent heat source.

2.04 FACTORY FABRICATION

- A. Shop assembly
 - 1. Fabricate components to greatest extent practical to sizes and shapes indicated, in accordance with approved shop drawings manufacturer's printed instructions and technical bulletins.
 - 2. Form joints between components using manufacturer's standard joint adhesive without conspicuous joints.
 - a. Reinforce with strip of solid polymer material, 2" wide.
 - 3. Provide factory cutouts for plumbing fittings and bath accessories as indicated on the drawings.
 - 4. Rout and finish component edges with clean, sharp returns.
 - a. Rout cutouts, radii and contours to template.
 - b. Smooth edges.
 - c. Repair or reject defective and inaccurate work.
- and

2.05 FINISHES

- A. Select from the manufacturer's standard color chart.
- B. Finish:
 - 1. Provide surfaces with a uniform finish.
 - a. Matte; gloss range of 5-20.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine substrates and conditions, with fabricator present for compliance with requirements for installation tolerances and other conditions affecting performance of work.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.
1. Provide product in the largest pieces available.
 2. Form field joints using manufacturer's recommended adhesive, with joints inconspicuous in finished work.
 - a. Exposed joints/seams shall not be allowed.
 3. Reinforce field joints with solid surface strips extending a minimum of 1 inch on either side of the seam with the strip being the same thickness as the top.
 4. Cut and finish component edges with clean, sharp returns.
 5. Rout radii and contours to template.
 6. Anchor securely to base cabinets or other supports.
 7. Align adjacent countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop.
 8. Carefully dress joints smooth, remove surface scratches and clean entire surface.
 9. Install countertops with no more than 1/8-inch (3 mm) sag, bow or other variation from a straight line.
- B. Coved backsplashes and applied sidesplashes:
1. Install applied sidesplashes using manufacturer's standard color-matched silicone sealant.
 2. Adhere applied sidesplashes to countertops using manufacturer's standard color-matched silicone sealant.
- C. Integral sinks/vanities:
1. Provide solid surface materials bowls and/or lavatories sinks with overflows in locations shown on the drawings.
 2. Secure sinks and lavatory bowls to tops using manufacturer's recommended sealant, adhesive and mounting hardware to maintain warranty.

3.03 REPAIR

- A. Repair or replace damaged work which cannot be repaired to architect's satisfaction.

3.04 CLEANING AND PROTECTION

- A. Keep components clean during installation.

- B. Remove adhesives, sealants and other stains.

END OF SECTION 06610

SECTION 07050 – BASIC THERMAL AND MOISTURE PROTECTION

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. This section contains the general requirements relating to thermal and moisture protection including but not limited to waterproofing, dampproofing, water repellants, vapor retarders, air barriers, insulation, fireproofing, firestopping, and roofing.

1.02 RELATED SECTIONS

- A. Section 07110 – Dampproofing
- B. Section 07210 – Board Insulation
- C. Section 07215 – Blanket Insulation
- D. Section 07220 – Blown Insulation
- E. Section 07260 – Vapor Retarders
- F. Section 07410 – Metal Roof Panels
- G. Section 07420 – Metal Wall Panels
- H. Section 07540 – PVC Thermoplastic Membrane Roofing
- I. Section 07620 – Sheet Metal Flashing and Trim
- J. Section 07630 – Gutters and Downspouts
- K. Section 07650 – Flexible Flashing
- L. Section 07710 – Manufactured Roof Specialties
- M. Section 07720 – Roof Accessories.
- N. Section 07721 – Roof Hatches
- O. Section 07840 – Firestopping
- P. Section 07910 – Joint Sealers

1.03 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.

1.04 QUALITY ASSURANCE

- A. All systems and materials listed in this Division shall be in accordance with the roof system manufacturer's recommendations as well as the NRCA Roofing and Waterproofing, Latest Edition

Division 07 – Thermal and Moisture Protection
07050 – Basic Thermal and Moisture Protection

- B. For chemical compatibility purposes, specifications shall require that any “systems” (e.g. roofing) shall be by a single manufacturer. Furthermore only the manufacturers recommended accessories or adhesives shall be allowed.
- C. For all roofing systems provide adequate design criteria, data, cost and life cycle information to the Architect prior to the commencement of design to properly evaluate and determine appropriateness of use of the specialty roofing system.
- D. For all Thermal or Moisture Protection Systems, materials shall be appropriately in a dry, safe environment. Wet or damaged materials shall not be used for roofs, waterproofing, insulation, sealants, etc.
- E. For all pitched roofs, maintain proper ventilation, including accessories (e.g. baffles, vents, etc.) to prevent ice damming or moisture damage.
- F. Manufacturer Qualifications: Company specializing in performing the work with a minimum of five (5) years documented experience.
- G. Installer Qualifications: Company specializing in performing the work with a minimum of five (5) years documented experience.
- H. During installation and after completion of roofing system installation, contractor must provide presence on job site during and immediately after heavy rains in order to identify and repair leaks, clean up water and repair water damage.

PART 2 – PRODUCTS

2.01 BUILDING INSULATION

- A. Faced mineral Fiber Blanket/Batt Insulation: lightweight thermal and acoustical fiber glass insulation made of long, resilient glass fibers bonded with an acrylic thermosetting binder, facing is protected against mold growth and serves as a vapor retarder; in extreme humidity, the permeability doubles and allows moisture to escape at a faster rate.
- B. Unfaced Batt Insulation: lightweight thermal and acoustical fiber glass insulation made of long, resilient glass fibers bonded with an acrylic thermosetting binder.

2.02 ROOF AND DECK INSULATION

- A. Long Tabbed Banded Insulation System: Bottom layer faced Fibergalss with extension tabs and widths to match purlins, top layer unfaced fiberglass roll widths in increments to match roof panels, metal banding and hex head screws for attachment. Thickness as dictated by required R-vlaues.
- B. Glass-mat-faced, water-resistant gypsum substrate conforming to ASTM C 1177/C 1177M. Material as approved by the roof membrane manufacturer.

Division 07 – Thermal and Moisture Protection
07050 – Basic Thermal and Moisture Protection

- C. Polyisocyanurate Board Insulation: Complying with ASTM C 1289, Type II, felt or glass-fiber mat facer on both major surfaces. Material as approved by the roof membrane manufacturer.

2.03 FIRESTOPPING

- D. Expandable polyurethane foam is not acceptable for sealing penetrations through rated assemblies. Comply with ASTM E-184, “Standard Method of Fire Test of Through Penetration Fire Stops”, that has an F Rating equal to fire rating of penetrated assembly and minimum T Rating and meets all other specified requirements.

2.04 ROOFING

- A. General:
1. Roofing Contractor shall provide a complete roof plan of each roof area and provide large scale details clearly showing relationships between membranes, flashings, counter flashings, expansion joints, perimeter metal work, roof accessories, roof top equipment, any interruptions of the membrane, and all penetrations.
 2. All roofing installations shall comply with manufacturer’s specifications, NRCA and SMACNA standards.
- B. Flat Roofs: Flat roofs shall be a single layer membrane thermoplastic membrane system (TPO) 60 mil minimum thickness. No flat roof system will be considered without a minimum twenty (20) year no dollar limit manufacturer standard warranty.
- C. Metal Roofs: Standing Seam Roof Panels System to be machined seamed and related items as shown on drawings with a minimum manufacturer’s standard finish warranty of twenty (20) years and complying with the following:
1. Provide roof panel system with no air leakage when tested in accordance with ASTM E 283 at pressure differential up to 1.57 psf.
 2. Provide roof panel system with no water penetration when tested in accordance with ASTM E 331 at an inward static air pressure differential of not less than 6.24 psf and not more than 12.0 psf
 3. Provide roof panel system with a fire resistance rating tested and listed by design number in UL “Fire Resistance Directory” for a two (2) hour assembly rating.
 4. Provide roof panel system including supports meeting requirements of UL for Class 90 wind uplift resistance.

2.05 MISCELLANEOUS

- A. Access: Provide roof hatches with ladders located in separate closets or mechanical rooms, where possible. Do not install in hallways, stairwells, offices, classrooms or other normally occupied spaces.

Division 07 – Thermal and Moisture Protection
07050 – Basic Thermal and Moisture Protection

- B. Walk Pads: Provide walk pads from roof access to all roof mounted equipment. Pads shall extend around each piece of equipment. Pads shall be compatible to roofing system and a minimum size of 24" x 24".
- C. Lightning Protectors: Provide as per Electrical Engineers specifications. Install according to roofing system manufacturer specifications and in a manner that will not void any part of the roofing system warranty.
- D. Gutters and Downspouts: Provide gutter and downspout system as specified and shown on drawings and complying with the following:
 - 1. Follow NRCA and SMACNA standards.
 - 2. Downspouts shall be mounted a minimum of one (1) inch away from face of building.
 - 3. All connections between downspouts and gutters should be designed to be readily removed for maintenance purposes.
- E. Parapet Walls: provide parapet wall systems as shown on as specified and shown on drawings and complying with the following:
 - 1. Cap all parapet walls.
 - 2. All interior surfaces of parapet walls shall be treated as an integral part of the roofing system. No exposed blocking.
- F. Roof Mounted Equipment: All roof mounted equipment shall be set on curbs as specified and attached to resist area wind loads.

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 07050

SECTION 07110 - DAMPPROOFING**PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Cold applied water based emulsified asphalt dampproofing for exterior below grade foundations.
- B. Cold applied water based emulsified asphalt vapor retarding coating for exterior above grade cavity walls.

1.02 REFERENCES

- A. American Society for Testing and Materials:
 - 1. ASTM D41 - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.
 - 2. ASTM D1227 - Standard Specification for Emulsified Asphalt Used as a Protective Coating for Roofing.
- B. National Roofing Contractors Association: The NRCA Waterproofing and Dampproofing Manual.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide material complying with the following requirements:
 - 1. Nonflammable
 - 2. VOC Content:
 - a. 0.25 pounds per gallon (30 g/L) less water and exempt solvents
 - 3. Service Temperature Range:
 - a. Minus 40 Degrees F to 150 degrees F
 - 4. Compliance:
 - a. Brush, roller and spray applied fiber free complying with ASTM D1187, Type 1, and ASTM D1227, Type 3, Class I.
 - b. Trowel applied long fiber reinforced complying with ASTM D1227, Type 2, Class I and ASTM D1187, Type 1.
 - c. Brush, roller and spray applied short fiber reinforced complying with ASTM D1227, Type 2, Class I, and ASTM D1187, Type 1.

1.04 SUBMITTALS

- A. Product Data: Submit properties of primer, bitumen, and mastics.
- B. Manufacturer's Installation Instructions: Submit special procedures and perimeter conditions requiring special attention.

- C. Quality Control Submittals: Provide protection plan for surrounding areas and surfaces not to receive dampproofing.

1.05 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer Qualifications: Company with minimum 15 years of experience in manufacturing of specified products and systems.
2. Manufacturer Qualifications: Company shall be ISO 9001:2000 Certified.
3. Applicator Qualifications: Company with minimum of 5 years experience in application of specified products and systems on projects of similar size and scope, and is acceptable to product manufacturer.
4. Successful completion of a minimum of 5 projects of similar size and complexity to specified Work.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- B. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Store tightly sealed materials off ground and away from moisture, direct sunlight, extreme heat, and freezing temperatures.

1.07 PROJECT CONDITIONS

- A. Weather: Proceed with dampproofing work only when existing and forecast weather conditions will permit work to be performed in accordance with manufacturer's recommendations. Maintain ambient temperatures above 40 degrees F for 24 hours before and during application until membrane has cured.
- B. Ventilation: Provide adequate ventilation during application of solvent-based components in enclosed spaces. Maintain ventilation until dampproofing membrane has thoroughly cured.
- C. Environmental Requirements:
1. Keep from freezing in the container.
 2. Do not apply at temperatures below 40 degrees F (4 degrees C) or when temperatures are expected to fall to 40 degrees F (4 degrees C) within 24 hours.
 3. Protect from rain until coating has set.
 4. Application shall be protected or covered within 7 days of application.
 5. Do not expose to long-term UV.

PART 2 - PRODUCTS**2.01 BITUMINOUS DAMPPROOFING**

- A. Subject to compliance with requirements, manufacturers offering dampproofing systems that may be incorporated into the Work are not limited. Specifications are based on Sonneborne: Hydrocide 700B for brush or spray application. 700 for trowel application. Subject to compliance with requirements, Manufacturers offering dampproofing systems which may be incorporated into the Work are as follows but are not limited to:
1. United Gilsonite Laboratories
 2. EPRO Waterproofing Systems
 3. W. R. Meadows Inc.

2.02 MATERIALS

- A. Cold applied water based emulsified asphalt:
1. Non-fibrated Product: Hydrocide 600 by BASF Building Systems.
 2. Long-fiber Fibrated Product: Hydrocide 700 by BASF Building Systems.
 3. Short-fiber Fibrated Product: Hydrocide 700B by BASF Building Systems.
- B. Insulation Board: Refer to Section 07211.
- C. Reinforcing Fabric: Sonoshield Reinforcing Fabric by BASF Building Systems.
- D. Chemical Cleaner: Reducer 990 by BASF Building Systems.

2.03 COMPONENTS

- A. Asphalt Emulsion: Asphalt-and-water-emulsion coating, compounded to penetrate substrate and build to moisture-resistant coating. Provide heavy fibrated-type mastic asbestos-free emulsion; ASTM D 1227, Type IV, except containing nonasbestos, inorganic fibrous reinforcement materials.
- B. Asphalt Primer: ASTM D41, compatible with substrate.
- C. Protection Board: 1 in thick polystyrene foam sheet.

PART 3 – EXECUTION**3.01 EXAMINATION**

Division 07 – Thermal and Moisture Protection
07110 - Dampproofing

- A. Verify substrate surfaces are durable, free of matter detrimental to adhesion or application of dampproofing system.
- B. Verify items penetrating surfaces to receive dampproofing are securely installed.

3.02 PREPARATION

- A. Protection of Other Work: Do not allow liquid and mastic compounds to enter and clog drains and conductors. Prevent spillage and migration onto other surfaces of work, by masking or otherwise protecting adjoining work.
- B. Install separate flashings and corner protection stripping as recommended by prime materials manufacturer, where indicated to precede application of dampproofing. Comply with details shown and manufacturer's recommendations. Give particular attention to requirements at building expansion joints, if any.
- C. Clean and prepare surfaces to receive dampproofing.
- D. Fill voids, seal joints, and apply bond breakers (if any) as recommended by prime materials manufacturer, with particular attention at construction joints. Apply mastic to seal penetrations, small cracks, or minor honeycomb in substrate. Do not apply dampproofing to unacceptable surfaces.

3.03 INSTALLATION

- A. Prime surfaces in accordance with NRCA - Waterproofing Manual.
- B. Comply with manufacturer's recommendations, except where more stringent requirements are indicated or specified and where project conditions require extra precautions or provisions to ensure satisfactory performance of work.

3.04 BITUMINOUS DAMPPROOFING INSTALLATION

- A. General: Apply dampproofing to all exterior below-grade surfaces of exterior underground walls in contact with earth or other backfill and where space is enclosed on opposite side. Apply dampproofing to all masonry wall cavity systems from
 - 1. Exterior Surface Below Grade – Dense Surfaces
 - a. Apply short fiber fibrated material in two (2) coats by brush or spray
 - b. Fill in crevices and grooves, providing continuous coating and free from breaks and pinholes. Carry coating over exposed top and outside edge of footings. Spread around joints, grooves, and slots, and into chases, corners, reveals, and soffits. Bring coating to finish grade.

Division 07 – Thermal and Moisture Protection

07110 - Dampproofing

- c. Place backfill at least 24 to 48 hours after application, but within seven (7) days. Do not rupture or damage film or displace coating or membranes.
 - 2. Exterior Surface Below Grade – Pourous Surfaces
 - a. Apply prime coat of asphalt emulsion of non-fibrated material, cut 20 percent by volume with clean water. Allow prime coat to dry to tacky to touch and apply 1 coat of short fiber fibrated material.
 - b. Fill in crevices and grooves, providing continuous coating and free from breaks and pinholes. Carry coating over exposed top and outside edge of footing. Spread around joints, grooves, and slots, and into chases, corners, reveals, and soffits. Bring coating to finished grade.
 - c. Place backfill at least 24 to 48 hours after application, but within seven (7) days. Do not rupture or damage film or displace coating or membranes.
 - 3. Cavity Wall Construction Above Grade – Vapor Retarder
 - a. Apply fibrated material in 1 coat, carrying coating in and around joints, grooves, and slots following reveals and soffits of windows, and continuing 12 inches out on adjoining partitions and soffits.
 - b. Apply non fibrated material in 1 coat, as required to achieve required vapor retarding rate.
 - c. Allow material to set.
 - d. Install insulation board in conjunction with bituminous material application with fibrated asphalt.
- B. Extend vertical dampproofing down walls from finished grade line to top of footing, extend over top of footing, and turn down minimum of 6 inches over outside face of footing. Extend 12 inches onto intersecting walls and footings but do not extend onto surfaces that will be exposed to view when project is completed.
- C. Brush or Spray - 2 coat method:
 - 1. Apply coat of cold, liquid bituminous dampproofing material, by brushing or spraying at rate of 1.25 to 2.0 gallons per 100 sq. ft., depending upon substrate texture, as required to produce a uniform dry film thickness of not less than 12 mils.
 - 2. Apply a second coat same as specified above, after allowing 24 hours for drying of first coat. Apply second coat at rate of 0.8 to 1.25 gallons per 100 sq. ft. Double thickness of second coat where first application has failed to produce smooth, lustrous, impervious coat.
- D. Trowel Applied - 1 coat method: Apply coat of cold, fibrated, mastic asphalt dampproofing material, by troweling onto substrate at minimum rate of 7.0 gal. per 100 sq. ft., to produce average dry film of 70 mils but not less than 30 mils at any point.
- E. Seal items Projecting through dampproofing surface with mastic. Seal watertight.

3.05 INSTALLATION OF DAMPPROOF PROTECTION COURSE

Division 07 – Thermal and Moisture Protection
07110 - Dampproofing

- A. General: Where indicated, install protection course of type indicated over completed-and-cured dampproofing treatment. Comply with dampproofing materials manufacturer's recommendations for method of support or attachment of protection materials. Support with spot application of plastic cement where not otherwise indicated.
- B. Place protection board directly against membrane; butt joints. Adhere protection board to substrate with mastic. Scribe and cut boards around Projections, penetrations, and interruptions.

3.06 PROTECTION

- A. Immediately backfill against dampproofing or protection thereto to protect from damage.

END OF SECTION 07110

SECTION 07260 – VAPOR RETARDERS**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Vapor Retarders, Seam Tape and Accessories for installation under concrete slabs.
- B. Vapor Retarders: Materials to make exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls, water vapor-resistant and air-tight.

1.02 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete: Vapor retarder under concrete slabs on grade.
- B. Section 05400 - Cold-Formed Metal Framing: Water-resistive barrier under exterior cladding.
- C. Section 06100 - Rough Carpentry: Water-resistive barrier under exterior cladding.
- D. Section 07210 - Batt Insulation: Vapor retarder installed in conjunction with batt insulation.
- E. Section 07540 - PVC Thermoplastic Membrane Roofing: Vapor retarder installed as part of roofing system.
- G. Section 07620 - Sheet Metal Flashing and Trim: Metal flashings installed in conjunction with weather barriers.
- H. Section 07910 - Joint Sealers: Sealant materials and installation techniques.
- I. Section 09260 - Gypsum Board Assemblies: Water-resistive barrier under exterior cladding.

1.03 DEFINITIONS

- A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, vapor retarders, or water-resistive barriers.
- B. Air Barrier: Air-tight barrier made of material that is relatively air impermeable but water vapor permeable, both to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
- C. Vapor Retarder: Air-tight barrier made of material that is relatively water vapor impermeable, to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
 - 1. Water Vapor Permeance: For purposes of conversion, $57.2 \text{ ng}/(\text{Pa s sq m}) = 1 \text{ perm}$.
- D. Water-Resistive Barrier: Water-shedding barrier made of material that is moisture-resistant, to the degree specified, intended to be installed to shed water without

sealed seams.

1.04 REFERENCES

- A. ASTM C920; Standard Specification for Elastomeric Joint Sealants
- B. ASTM C1193; Standard Guide for Use of Joint Sealants
- C. ASTM D882; Test Method for Tensile Properties of Thin Plastic Sheeting
- D. ASTM D1117; Standard Guide for Evaluating Non-woven Fabrics
- E. ASTM E1677; Specification for Air Retarder Material or System for Framed Building Walls
- F. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2007.
- G. ASTM E 96/E 96M - Standard Test Methods for Water Vapor Transmission of Materials; 2005.
- H. ASTM E 1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 1997 (Reapproved 2004).
- I. ASTM E 2178 - Standard Test Method for Air Permeance of Building Materials; 2003.
- J. ICC-ES AC308 - Acceptance Criteria for Water-Resistive Barriers; ICC Evaluation Service, Inc.; 2004.
- K. Test Method 127 Water Resistance: Hydrostatic Pressure Test

1.05 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on material characteristics, samples and literature.
- C. Manufacturer's Installation Instructions: Indicate preparation, placement, seaming and pipe boot installation.

1.06 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

PART 2 – PRODUCTS

2.01 UNDER SLAB VAPOR RETARDER MATERIALS

- A. Vapor Retarder Sheet Type of 100% Virgin Resin High Density Polyethylene Vapor Retarder
 - 1. Thickness: 10 mil.
 - 2. Water Vapor Permeance: 0.036 perms, maximum, when tested in

Division 07 – Thermal and Moisture Protection
07260 – Vapor Retarders

- accordance with ASTM E 96/E 96M.
- 3. Water Vapor Retarder: Meets Class A (Plastics) when tested in accordance with ASTM E 1745
- 4. Tensile Strength: 50 lbs/in when tested in accordance with ASTM D 882
- 5. Puncture Resistance: 2400 grams when tested in accordance with ASTM D 1709
- 6. Peel Adhesion to Concrete: 4 lbs/in when tested in accordance with ASTM D 903
- B. Vapor Retarder Tape must have the following characteristics:
 - 1. Water Vapor Permeance: 0.3 perms when tested in accordance with ASTM E 96
 - 2. Tensile Strength: 22 lbs/in minimum when tested in accordance with ASTM D 882
- C. Seam Welding:
 - 1. Seams may be heat welded if desired as per manufacturers specifications
- D. Pipe Boots: Construct Pipe Boots from Vapor Retarder material and seam tape per manufacturer

2.02 EXTERIOR WALL WEATHER BARRIER

- A. A non-perforated, nonwoven, non-absorbing, breathable membrane that resists air flow, bulk water and wind driven rain and channels water and moisture to the outside of the building envelope. It has microscopic pores that allow moisture vapor to escape from inside walls.
- B. Physical Properties
 - 1. Spunbonded polyolefin membrane.
- C. Performance Characteristics:
 - 1. Air Penetration: 0.001 cfm/ft² at 75 Pa, when tested in accordance with ASTM E2178. Type I per ASTM E1677.
 - 2. Water Vapor Transmission: 28 perms, when tested in accordance with ASTM E96, Method B.
 - 3. Water Penetration Resistance: Minimum 280 cm when tested in accordance with AATCC Test Method 127.
 - 4. Basis Weight: Minimum 2.7 oz/yd², when tested in accordance with TAPPI Test Method T-410.
 - 5. Air Resistance: Air infiltration at >1500 seconds, when tested in accordance with TAPPI Test Method T-460.
 - 6. Tensile Strength: Minimum 38/35 lbs/in., when tested in accordance with ASTM D882, Method A.

Division 07 – Thermal and Moisture Protection
07260 – Vapor Retarders

7. Tear Resistance: 12/10 lbs., when tested in accordance with ASTM D1117.
8. Surface Burning Characteristics: Class A, when tested in accordance with ASTM E84. Flame Spread: 10, Smoke Developed: 10.
- D. Accessories:
 1. Seam Tape: As recommended by the weather barrier manufacturer.
 2. Fasteners:
 - a. 1-5/8 inch rust resistant screw with 2-inch diameter plastic cap or manufacturer approved 1-1/4" or 2" metal gasketed washer
 - b. Nail Caps: #4 nails with large 1-inch plastic cap fasteners.
 - c. Masonry tap-con fasteners with Caps: 2-inch diameter plastic cap fasteners.
 3. Sealants:
 - a. Provide sealants that comply with ASTM C920, elastomeric polymer sealant to maintain watertight conditions.
 - b. Products: Sealants recommended by the weather barrier manufacturer.
 4. Adhesives:
 - a. Provide adhesive recommended by weather barrier manufacturer.
 5. Primers:
 - a. Provide flashing manufacturer recommended primer to assist in adhesion between substrate and flashing.
 6. Flashing
 - a. Flexible membrane flashing materials for window openings and penetrations recommended by manufacturer.
 - b. Straight flashing membrane materials for flashing windows and doors and sealing penetrations such as masonry ties, etc. recommended by manufacturer.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces and conditions are ready to accept the work of this section.
- B. Ensure that subsoil is approved by Architect, Civil Engineer, structural Engineer, and Geotechnical Firm.

- C. Level and tamp or roll aggregate, sand or tampered earth base.

3.02 INSTALLATION

A. Under Slab Vapor Retarder:

1. Installation shall be in accordance with manufacturer's instructions and ASTM E 1643-98
 - a. Unroll Vapor Retarder with the longest dimension parallel with the direction of the pour.
 - b. Lap Vapor Barrier over footings and seal to foundation walls.
 - c. Overlap joints six (6) inches minimum and seal with manufacturers specified tape.
 - d. Seal all penetrations (including pipes) as per manufacturers instructions.
 - e. No penetration of the Vapor Retarder is allowed except for reinforcing steel and permanent utilities.
 - f. Repair damaged areas by cutting patches of Vapor Retarder, overlapping damaged area six (6) inches minimum and taping all four sides with tape.
 - g. Vapor Retarder installation to be inspected by field representative prior to concrete placement at no charge to Owner, Architect, or Engineer.
 - h. Architect to be notified when installation of Vapor Retarder is started and schedule for field inspection.

B. Exterior Wall Weather Barrier:

1. Install weather barrier over exterior face of exterior wall substrate in accordance with manufacturer recommendations.
2. Install weather barrier prior to installation of windows and doors.
3. Start weather barrier installation at a building corner, leaving 6-12 inches of weather barrier extended beyond corner to overlap.
4. Install weather barrier in a horizontal manner starting at the lower portion of the wall surface with subsequent layers installed in a shingling manner to overlap lower layers. Maintain weather barrier plumb and level.
5. Sill Plate Interface: Extend lower edge of weather barrier over sill plate interface 3-6 inches. Secure to foundation with elastomeric sealant as recommended by weather barrier manufacturer.
6. Window and Door Openings: Extend weather barrier completely over openings.
7. Overlap weather barrier

Division 07 – Thermal and Moisture Protection
07260 – Vapor Retarders

- a. Exterior corners: minimum 12 inches.
- b. Seams: minimum 6 inches.
- 8. Weather Barrier Attachment:
 - a. Attach weather barrier to studs through exterior sheathing. Secure using weather barrier manufacturer recommend fasteners, space 12-18 inches vertically on center along stud line, and 24 inch on center, maximum horizontally.
- 9. Apply flashing to weather barrier membrane prior to installing cladding anchors.
- 10. Seal seams of weather barrier with seam tape at all vertical and horizontal overlapping seams.
- 11. Seal any tears or cuts as recommended by weather barrier manufacturer.
- 12. Opening Preparation:
 - a. Flush cut weather barrier at edge of sheathing around full perimeter of opening.
 - b. Cut a head flap at 45-degree angle in the weather barrier at window head to expose 8 inches of sheathing. Temporarily secure weather barrier flap away from sheathing with tape.
- 13. Flashing:
 - a. Cut flexible flashing a minimum of 12 inches longer than width of sill rough opening.
 - b. Cover horizontal sill by aligning flexible flashing edge with inside edge of sill. Adhere to rough opening across sill and up jambs a minimum of 6 inches. Secure flashing tightly into corners by working in along the sill before adhering up the jambs.
 - c. Fan flexible flashing at bottom corners onto face of wall. Firmly press in place. Mechanically fasten fanned edges.
 - d. Apply 9-inch wide strips of flashing at jambs. Align flashing with interior edge of jamb framing. Start flashing at head of opening and lap sill flashing down to the sill.
 - e. Spray-apply primer to top 6 inches of jambs and exposed sheathing.
 - f. Install flexible flashing at opening head using same installation procedures used at sill. Overlap jamb flashing a minimum of 2 inches.
 - g. Coordinate flashing with window installation.
 - h. On exterior, install backer-rod in joint between window frame and flashed rough framing. Apply sealant at jambs and head, leaving sill unsealed. Apply sealants in accordance with sealant manufacturer's instructions and ASTM C1193.
 - i. Position weather barrier head flap across head flashing. Adhere

Division 07 – Thermal and Moisture Protection
07260 – Vapor Retarders

using flashing over the 45-degree seams.

- j Tape top of window in accordance with manufacturer recommendations.
- k On interior, install backer rod in joint between frame of window and flashed rough framing. Apply sealant around entire window to create air seal. Apply sealant in accordance with sealant manufacturer's instructions and ASTM C1193.

3.03 FIELD QUALITY CONTROL

- A. Do not cover installed weather barriers until required inspections have been completed.
- B. Obtain approval of installation procedures by the weather barrier manufacturer prior to proceeding with remainder of installation.
- C. Take digital photographs of each portion of the installation prior to covering up.
- D. Notify manufacturers representative to obtain periodic observations of all types of weather barrier installations.

3.04 PROTECTION

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.
- B. Do not leave paper- or felt-based barriers exposed to weather for longer than one week.

END OF SECTION 07260

SECTION 07412 – COMPOSITE METAL WALL PANEL SYSTEM

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. Metal-faced composite wall panels and related components.
- B. Related Sections include the following:
 - 1. Division 5 Section “Cold-Formed Metal Framing” for secondary support framing supporting metal wall panels.
 - 2. Division 7 for vapor barrier and/or moisture barrier.

1.3 DEFINITIONS

- A. Metal Wall Panel Assembly: Metal wall panels, attachment system components and accessories necessary for a complete weather tight system.

1.4 PERFORMANCE REQUIREMENTS

- A. **Provide:** Metal wall panel assemblies that comply with performance requirements specified within this section. Manufacturers’ standard assemblies indicated for this Project, shall have been tested by a certified (3rd party) testing and inspecting agency.
- B. Structural Performance: Provide metal wall panel assemblies capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, based on testing according to ASTM E 330-02:
 - 1. Wind Loads: Determine loads based on the following minimum design wind pressures:

- a. Uniform pressure of 50 psf, inward or outward.
- 2. Deflection Limits: Metal wall panel assemblies shall be shown to withstand test pressures with deflection no greater than $1/180$ perimeter and $L/60$ of the span and no evidence of material failure, structural distress, or permanent deformation exceeding 0.4 percent of the clear span.
- C. Specified panel system shall be a pressure equalized rain screen system tested and passed to AAMA 508-07. Also, system shall have been tested and compliant with AAMA 509-09 requirements with a water rating of .40 Fl oz/FT² and an air rating of .57 CFM/FT².
- D. Product Test Reports: Florida Product Approval **(If applicable)**.
- E. Large Missile Impact: Provide metal panel system which has been successfully tested to and is compliant with the requirements of (Testing Application Standard for the State of Florida) TAS 201, 202 and 203. Panel system shall have achieved “pass” status without the use of supplemental materials such as plywood or panel stiffeners.
- F. Surface-Burning Characteristics: Provide metal wall panels with the following surface-burning characteristics as determined by testing identical products per ASTM E 84 under a testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1. PE Core:
 - a. Flame-Spread Index: 0
 - b. Smoke-Developed Index: 0
 - OR**
 - 2. FR Core:
 - a. Flame-Spread Index: 0
 - b. Smoke-Developed Index: 10

1.5 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal wall panel and accessory.
- B. Shop Drawings: Show fabrication and installation layouts of metal wall panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
 - 1. Accessories: Include details of all integral panel components and their interface with adjacent materials.
 - 2. 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. (Optional)

- C. **Samples for Initial Selection:** For each type of metal wall panel indicated with factory-applied color finishes.
 - 1. Include MCM manufacturer's standard color charts showing full range of colors available, in specified finish type, for the metal panel system.
- D. **Samples for Verification:**
 - 1. **Metal Wall Panels:** Two (2) each, six inches by ten inches minimum, panel samples with joinery included as part of the sample.
 - 2. **Accessories:** Twelve-inch long samples for each type of accessory.
- E. **Compatibility and Adhesion Test Reports:** From sealant manufacturer indicating the following:
 - 1. Materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- F. **Maintenance Data:** For metal wall panels to include in maintenance manuals.
- G. **Warranties:** Special warranties specified in this Section.

1.6 QUALITY ASSURANCE

- A. **Panel System Manufacturer:**
 - 1. System Manufacturer responsibilities include engineering and fabricating metal wall panel assemblies and when required, provide professional engineering services and stamp, showing engineering responsibility.
 - 2. Panel Manufacturer shall have a minimum of 5 years experience with the fabrication of MCM panels.
 - 3. **Drawing Responsibility:** Preparation of Shop Drawings and comprehensive engineering analysis by the manufacture, not a subcontractor.
- B. **Fabrication Location:** Panels to be factory assembled at manufacturer's facility. Panels fabricated on site shall not be permissible.
- C. **Installer:** MCM installers shall be certified by MCM manufacture.
- D. **Testing Agency Qualifications:** Qualified according to ASTM E 329 for testing indicated, as

documented according to ASTM E 548.

- E. Source Limitations: Obtain each type of metal wall panel through one source from a single fabricator.
- F. Product Options: Drawings indicate size, profiles, and dimensional requirements of metal wall panels and are based on the specific system indicated.
- G. Manufacturer to have established a written quality assurance program. QA program to be monitored and audited by a third party independent inspection agency.
- H. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section “Project Management and Coordination”. Review methods and procedures related to metal wall panel assemblies including, but not limited to, the following:
 - 1. Meet with Owner, Architect, Owner’s insurer if applicable, testing and inspecting agency representative, metal wall panel installer, metal wall panel manufacturer’s representative, structural-support installer, and installers whose work interfaces with or affects metal wall panels including installers of doors, windows, and louvers.
 - 2. Review and finalize construction schedule and verify availability of materials, Installer’s personnel, equipment and facilities needed to make progress and avoid delays.
 - 3. Review methods and procedures related to metal wall panels installation, including fabricator’s written instructions.
 - 4. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
 - 5. Review flashings, special siding details, wall penetrations, openings, and condition of other construction that will affect metal wall panels.
 - 6. Review governing regulations and requirements for insurance, certificates, and testing and inspecting if applicable.
 - 7. Review temporary protection requirements for metal wall panel assembly during and after installation.
 - 8. Review wall panel observation and repair procedures after metal wall panel installation.
 - 9. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, sheets, metal wall panels, and other manufactured items so as not to be damaged or deformed. Package metal wall panels for protection during transportation and handling.

- B. Unload, store, and erect metal wall panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal wall panels on platforms, pallets, or within crates, covered with suitable weathertight and ventilated covering. Store metal wall panels to ensure dryness, with positive slope for drainage of water. Do not store metal wall panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Leave protective strippable film as applied by MCM sheet manufacturer on panel face throughout fabrication and installation. Remove only after panels are installed and not subject to damage.

1.8 PROJECT CONDITIONS

- A. Field Measurements: Verify locations of structural members and wall opening dimensions by field measurements before metal wall panel fabrication, as the project schedule permits.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal wall panel assemblies that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures, including rupturing, cracking, or puncturing.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 2. Warranty Period: Two (2) years from date of Substantial Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal wall panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Panel Finish: Finish deterioration shall be defined as:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: Twenty (20) years from date of Substantial Completion.

PART 2 – PRODUCTS

2.1 MCM Sheet Manufacturer:

- A. Products from the following manufacturers will be acceptable provided that they meet the requirements of this specification:
- a. ALFREX FR, by ALFREX
 - b. Alpolic, by Mitsubishi Plastics Composites America, Inc.
 - c. Alucobond, by 3A
 - d. Reynobond, by Alcoa
 - e. Larson, by Alucoil

2.2 Panel System Manufacturer:

- A. The following requirements apply for product selection:
1. Basis of Design: Altech Panel Systems (678-721-4569) or (800-684-6178). System: Accu-Trac® DS
 2. Subject to compliance with all the requirements of the specifications, provide products by manufacture noted above. Other fabricators must be approved by architect prior to bid, but in no case shall the requirements of this specification not be met.

2.3 PANEL MATERIALS:

A. Composite Metal Panel System:

1. Rear Ventilated Pressure Equalized Rain Screen / Dry Joinery System
 - a. Panel system shall be nominal two-inch depth with shop applied, concealed continuous perimeter extrusions. (Note: Intermittent extrusions at panel perimeter are not acceptable.) Panel system shall employ shop attached clips with sliding capability for exact location over supports, while allowing for thermal movement in all four directions. To minimize thermal stresses on the panels, fixed attachment systems that don't allow free movement are not permissible.
 - b. Panel system shall have minimal 1/2" or as indicated at the drawings vertical and horizontal joinery. Panel system shall be of rainscreen type with no exposed sealants permissible in the panel to panel joinery. Caulking is allowed only for non-exposed areas (e.g. top of roof coping).
 - c. Panel joints to utilize an integral spline of the same composition as the panels. Splines to be held in place by slots in the perimeter panel extrusions. Bonding of metal material within the joinery to simulate an encapsulated spline is not permissible.
 - d. All rivets and / or fasteners that are used to attach the MCM sheet to the extrusions shall be countersunk, painted the same color as the panel and

- uniformly aligned both vertically and horizontally.
- e. All internal weeps shall be baffled and aligned vertically
- f. All panel corners shall be reinforced with aluminum angles
- g. All routed folds at panel perimeter shall be reinforced with continuous extrusion system.
- h. Panel system shall be provided in panel modules and lengths as indicated on the Contract drawings (up to 60" in the short direction and up to 240" in the long direction).
- i. Panel system to be applied over properly installed vapor and/or moisture barrier.

B. MCM – Aluminum Composite Material: Formed with 0.020-inch thick coil-coated aluminum sheet facings. MCM sheets to be formed in a continuous, inline process:

1. MCM Thickness: 0.157 inch (4 mm).
2. Core: Standard PE or FR as required.
3. Bond Strength: (ASTM D1781): 22 in-lb/in minimum.
4. Finish shall consist of a fluoropolymer paint finish that complies with AAMA 2605 standards.
5. Exposed Finish –
 - a. 2-Coat Fluoropolymer:
 - (1) .8 mil nominal coil coated color coat with a Lumiflon based fluoropolymer paint finish. Color coat to be applied over .2 mil nominal coil coated primer coat.
 - (2) Colors to match architect's samples (2 colors)

OR
 - b. 3-Coat Fluoropolymer:
 - (1) .8 mil coil coated clear coat with a Lumiflon based fluoropolymer paint finish applied over coat coated .8 mil color coat also with fluoropolymer paint finish. Fluoropolymer based coats to be applied subsequent to .2 mil nominal coil coated primer coat.
 - (2) Color to be selected by Architect from manufacturer's standard metallic or non-metallic colors.

OR
 - c. 2-coat Mica:
 - (1) .8 mil nominal coil coated color coat containing pearlescent flakes within Lumiflon based fluoropolymer paint finish. Color coat to be applied over .2 mil coil coated primer coat.
 - (2) Color to be as selected by Architect from manufacturer's standard Mica colors.

OR.
 - d. Clear Anodized
6. Backside/Concealed Finish: Backside of panels to be coated with manufacturer's standard backside washcoat.

2.4 ACCESSORIES

- A. Wall Panel Accessories: Provide components required for a complete metal wall panel assembly including trim, copings, fasciae, splines, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels, unless otherwise indicated.

2.5 FABRICATION

- A. General: Fabricate and finish metal wall panels and accessories at the factory to greatest extent possible, by manufacture's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
 - 1. Form panel lines, breaks and angles to be sharp and true, with surfaces free from warp and buckle.
- B. Fabricate metal wall panels in a manner that would weep any possible condensation to the exterior.
- C. Provide panel profile for full length of panel.
- D. Fabricate metal wall panel joints in a manner that will minimize noise from movements within panel assembly.
- E. Metal-Faced Composite Wall Panels:
 - 1. Fabricate panels, as required to comply with deflection limits, without the use of backside panel stiffeners.
 - 2. Fabricate panels with sharply cut edges, with no displacement of face sheets or external exposure of core material.
 - 3. Dimensional Tolerances:
 - a. Length: Plus 0.375 inch (9.5 mm).
 - b. Width: Plus 0.188 inch (4.8 mm).
 - c. Thickness: Plus or minus 0.008 inch (0.2 mm).
 - d. Panel Bow: 0.8 percent maximum or panel length or width.
 - e. Squareness: 0.2 inch (5 mm) maximum.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal wall panel supports, and other conditions affecting performance of work.
 - 1. Examine primary and secondary wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.
 - 2. Examine solid wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 COMPOSITE WALL PANEL INSTALLATION, GENERAL

- A. General: Install metal wall panels in orientation, sizes, and locations indicated on approved shop drawings. Install panels perpendicular to girts and subgirts, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.
- B. Install attachment system required to support wall panels and to provide a complete weathertight wall system, including subgirts, perimeter extrusions, tracks, panel clips, and anchor channels as may be required.
 - 1. Include attachment to supports, panel-to-panel joinery, panel-to-dissimilar-material joinery, and panel-system joint seals.
 - 2. Do not begin installation until water barrier and flashings that will be concealed by composite panels are installed.
- C. Clip Installation: Attach integral panel clips to supports at locations, spacings, and with fasteners recommended by system fabricator. Panel clips to be attached to panels at the factory in lieu of field applied.
 - 1. Install wall panels to allow individual panels to “free float” and be installed and removed without disturbing adjacent panels. No joint sealants shall be utilized at typical vertical or horizontal joints. Panel joints shall include a spline fabricated from same ACM system as panels.

3.3 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align metal wall panel units within installed tolerance of 1/4-inch in 20-feet (6-mm in 6-m), non accumulative, on level, plumb, and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces

and of alignment of matching profiles.

3.4 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal wall panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal wall panel installation, clean finished surfaces as recommended by metal wall panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 07412

SECTION 07620 – SHEET METAL FLASHING AND TRIM

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This Section consists of metal counter flashing and base flashing (if any); expansion joints; reglet flashing; built-in metal valleys, gutters, and scuppers; laminated and composition flashing; elastic flashing; miscellaneous sheet metal accessories; and other related items as indicated on Drawings and specified herein.

1.02 PROJECT CONDITIONS

- A. Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.

PART 2 – PRODUCTS

2.01 METAL FLASHING AND TRIM MATERIALS

- A. Fascia: Color from manufacturer's Custom Colors, 0.05 Aluminum, Kynar finish as selected.

2.02 REGLET FLASHING

- A. Reglet flashing shall be similar to springlok flashing system type. Reglet and flashing shall be galvanized steel (reglet 24 ga., flashing 26 ga.).

2.03 FLEXIBLE SHEET MEMBRANE FLASHING

- A. Elastic Sheet Flashing/Membrane: a flexible elastomeric sheet of non-plasticized chlorinated polyethylene (CPE), 20 mils thick.
- B. Mastic for sealing Membrane Flashing: Shall be solvent-base asphalt.

2.04 FABRICATED UNITS

- A. Shop-fabricate work to greatest extent possible. Comply with details shown and with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant performance, with expansion provisions for running work, sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed sheet metal work without excessive oil-canning, buckling, and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.

PART 3 – EXECUTION

3.01 METAL FLASHING

- A. Comply with manufacturer's installation instructions and recommendations and with SMACNA "Architectural Sheet Metal Manual." Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weatherproof.

3.02 REGLET FLASHING

- A. Before installation, clean substrate. Install reglet as per data sheets provided by manufacturer. Lap ends of reglet at stamped offset. Install at least 7 inches above cant strip at highest point on roof. Use mitered and sealed corners supplied by factory.
- B. After roofing is applied, install flashing with a constant pressure against both reglet and roofing with flashing ends overlapping 3 inches to insure a tight seal.

3.03 MEMBRANE FLASHING

- A. Install elastic flashing in accordance with manufacturer's recommendations. Where required, provide for movement at joints by forming loops or bellows in width of flashing. Locate cover or filler strips at joints to facilitate complete drainage of water from flashing. Seam adjacent flashing sheets with adhesive, seal and anchor edges in accordance with manufacturer's recommendations.
- B. Apply membrane flashing at base of exterior wall and at brick head and sill of windows and where thru-wall flashing is shown and noted as membrane flashing.

3.04 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.
- B. Protection: Advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction to ensure that work will be without damage or deterioration other than natural weathering at time of Substantial Completion.

END OF SECTION 07620

SECTION 07910 – JOINT SEALERS**PART 1 – GENERAL****1.01 WORK OF THIS SECTION**

- A. The WORK of this Section includes providing preformed joint sealers and appurtenant WORK.

1.02 RELATED SECTIONS

- A. The WORK of the following Sections applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this WORK.
1. Section 08800 – Glazing
 2. Section 07950 – Expansion Control
 3. Section 05810 – Expansion Joint Cover Assemblies

1.03 CODES

- A. The WORK of this Section shall comply with the current editions of the following codes:
1. International Building Code
 2. National Fire Protection Association

1.04 SPECIFICATIONS AND STANDARDS

- A. Except as otherwise indicated, the current editions of the following apply to the WORK of this Section:
1. ASTM C 719 Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement
 2. ASTM C 790 Recommended Practices for Use of Latex Sealing Compounds
 3. ASTM C 804 Recommended Practices for Use of Solvent-Release Type Sealants
 4. ASTM C 834 Specification for Latex Sealant Compounds
 5. ASTM C 919 Practice for Use of Sealants in Acoustical Applications
 6. ASTM C 920 Specification for Elastomeric Joint Sealants
 7. ASTM C 962 Guide for Use of Elastomeric Joint Sealants
 8. ASTM D 412 Test Methods for Rubber Properties in Tension
 9. ASTM D 1056 Specification for Flexible Cellular Materials - Sponge or Expanded Rubber
 10. ASTM D 2628 Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete

Division 07 – Thermal and Moisture Protections
07910 – Joint Sealers

11. ASTM D 3405 Specification for Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements
12. ASTM D 3406 Specification for Joint Sealant, Hot-Poured, Elastomeric-Type, for Portland Cement Concrete Pavement

1.05 SHOP DRAWINGS AND SAMPLES

- A. The following shall be submitted in compliance with Section 01300:
 1. Product Data: Manufacturer's recommended applications and technical data for each joint sealer product required, including instructions for joint preparation and joint sealer application.
 2. Samples for Initial Selection Purposes: Submit manufacturer's standard bead samples consisting of strips of actual products showing the full range of colors available, for each product exposed to view.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery of Materials: Manufactured materials shall be delivered in original, unbroken packages or containers bearing the manufacturer's label. Packages or containers shall be delivered to the site with seals unbroken.
- B. Manufacturer's labels shall bear name of manufacturer, product name and designation, color, expiration period for use, pot life, curing time and mixing instructions for multi-component materials.
 1. Storage: All materials shall be carefully stored in an area that is protected from deleterious elements and in a manner recommended by the product manufacturer. Storage and handling of materials shall be in such a manner as to prevent deterioration or damage due to moisture, temperature changes, contaminants or other causes.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Manufacturer's Recommendations: Only products recommended for the specific application indicated shall be used.
- B. Single Source Responsibility: All joint sealer materials for a specific application shall be obtained from a single manufacturer.
- C. Compatibility: Joint sealers, joint fillers, and other related materials shall be provided which are compatible with one another and with joint

Division 07 – Thermal and Moisture Protections
07910 – Joint Sealers

substrates under the indicated conditions of service and application, as demonstrated by manufacturer's testing and field experience.

- D. Colors: Colors of exposed joint sealers shall be provided as indicated or, if not otherwise indicated, as selected by the Architect from manufacturer's standard colors.

2.02 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standards: Manufacturer's standard chemically curing elastomeric sealant shall be of base polymer indicated which complies with ASTM C 920 requirements, including those for Type, Grade, Class and Uses.
1. Two-Part Nonsag Polysulfide Sealant: Type M; Grade NS; Class 12 1/2; Uses NT, M, G, A, and as applicable to the joint substrate indicated, Use O.
 2. Two-Part Pourable Polysulfide Sealant: Type M; Grade P; Class 12 1/2; Uses T, M, G, A, and, as applicable to the joint substrates indicated, Use O.
 3. Two-Part Water Immersion Polysulfide Sealant: Type M; Grade NS; Class 12 1/2; Uses T, M, G, A, and, as applicable to the joint substrates indicated, Use O; with a history of successful field experience in sealing joints immersed intermittently or continuously in water.
 4. One-Part Polysulfide Sealant: Type S; Grade NS; Class 12 1/2; Uses T, M, G, A, and, as applicable to joint substrates indicated, Use O.
 5. One-Part Non-Acid-Curing Silicone Sealant: Type S; Grade NS; Class 25; and complying with the following requirements for Uses NT, M, G, A, and, as applicable to joint substrates indicated, Use O. Modulus and additional joint movement capabilities as follows:
 - a. Low Modulus: Tensile strength of 45 psi or less at 100 percent elongation when tested after 14 days at 77 degrees F and 50 percent relative humidity per ASTM D 412.
 - b. Medium Modulus: Tensile strength of not less than 45 nor more than 75 psi or less at 100 percent elongation when tested after 14 days at 77 degrees F and 50 percent relative humidity per ASTM D 412.
 - c. Additional capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, withstand 50 percent increase and decrease of joint width as measured at time of application and remain in compliance with other requirements of ASTM C 920.

Division 07 – Thermal and Moisture Protections
07910 – Joint Sealers

6. One-Part Acid-Curing Silicone Sealant: Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to joint substrates indicated, Use O.
7. One-Part Mildew-Resistant Silicone Sealant: Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to nonporous joint substrates indicated, Use O; formulated with fungicide for sealing interior joints with nonporous substrates around ceramic tile, showers, sinks and plumbing fixtures.
8. Two-Part Non-Acid Curing Silicone Sealant for Use T: Type M; Grade NS; Class 25; Uses T, M, and, as applicable to joint substrates indicated, Use O; and complying with the following requirement for additional joint movement capability:
 - a. Additional capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand an increase and decrease of 50 percent of joint width as measured at time of application and remain in compliance with other requirements of ASTM C 920.
9. Multi-Part Nonsag Urethane Sealant: Type M; Grade NS; Class 25; Uses NT, M, G, A, and, as applicable to joint substrates indicated, Use O.
10. Two-Part Nonsag Low-Modulus Urethane Sealant: Type M; Grade NS; Class 25; Uses NT, M, A, and as applicable to joint substrates indicated, Use O; with additional capability to withstand an increase and decrease of 50 percent of joint width as measured at time of application and remain in compliance with other requirements of ASTM C 920, based on manufacturer's recommendations and testing.
11. Two-Part Pourable Urethane Sealant: Type M; Grade NS; Class 25; Uses T, M, A, and, as applicable to joint substrates indicated, Use O.
12. Two-Part Nonsag Urethane Sealant for Use T: Type M, Grade NS; Class 25; Uses T, M, A, and, as applicable to joint substrates indicated, Use O.
13. One-Part Nonsag Urethane Sealant: Type S; Grade NS; Class 25; Uses NT, M, A, and, as applicable to joint substrates indicated, Use O.
14. One-Part Nonsag Low-Modulus Urethane Sealant: Type S; Grade NS; Class 25; Uses NT, M, A, and, as applicable to joint substrates indicated, Use ; with additional capability to withstand an increase and decrease of 50 percent of joint width as measured at time of application and remain in compliance with other requirements of ASTM C 920, based on manufacturer's recommendations and testing.

Division 07 – Thermal and Moisture Protections
07910 – Joint Sealers

15. One-Part Pourable Urethane Sealant: Type S; Grade P; Class 25; Uses T, M, and, as applicable to joint substrates indicated, Use O.

2.03 SOLVENT RELEASE CURING JOINT SEALANTS

- A. Acrylic Sealant: Manufacturer's standard one-part, nonsag, solvent release curing, acrylic terpolymer sealant complying with ASTM C 920 for Type S; Grade NS: Uses NT, M, G, A, and, as applicable to joint substrates indicated, Use O; except for selected test properties which are revised as follows:
1. Heat aged hardness - 40 to 50
 2. Weight loss - 15 percent
 3. Maximum cyclic movement capability - plus or minus 7-1/2 percent (Class)
- B. Butyl Sealant: Manufacturer's standard one-part, nonsag, solvent release curing, polymerized butyl sealant complying with FS TT-S-001657 for Type I and formulated with minimum of 75 percent solids to be nonstaining, paintable, and have a tack-free time of 24 hours or less.
- C. Pigmented Small Joints Sealant: Manufacturer's standard, solvent release curing, pigmented, synthetic rubber sealant formulated for sealing joints 3/16-inch or smaller in width.

2.04 LATEX JOINT SEALANTS

- A. Acrylic-Emulsion Sealant: Manufacturer's standard, one-part, nonsag, acrylic, mildew resistant, acrylic-emulsion sealant complying with ASTM C 834, formulated to be paintable and recommended for exposed applications on interior and on protected exterior exposures involving joint movement of not more than plus or minus 7.5 percent.

2.05 MISCELLANEOUS JOINT SEALANTS

- A. Acoustical Sealant for Concealed Joints: Manufacturer's standard, nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic rubber sealant recommended for sealing interior concealed joints to reduce transmissions of airborne sound.
- B. Butyl-Polyisobutylene Sealant: Manufacturer's standard solvent release curing, butylpolyisobutylene sealant recommended for concealed joints.
- C. Butyl-Polyisobutylene Tape Sealant: Manufacturer's standard, solvent-free, butylpolyisobutylene tape sealants with a solids content of 100 percent; formulated to be nonstaining, paintable, and non-migrating in

contact with nonporous surfaces; packaged on rolls with release paper on one side; with or without reinforcement thread to prevent stretching.

2.06 COMPRESSION SEALS

- A. **Preformed Foam Sealant:** Manufacturer's standard preformed, precompressed, impregnated open-cell foam sealant manufactured from high-density urethane foam impregnated with a nondrying, water repellent agent; factory-produced in precompressed sizes and in roll or stick form to fit joint widths indicated and to develop a watertight and airtight seal when compressed to the degree specified by the manufacturer. Provide products which are permanently elastic, mildew-resistant, non-migratory, nonstaining, compatible with joint substrates and other joint sealers, and comply with the following requirements:
 - 1. Impregnating agent: Manufacturer's standard
 - 2. Density: Manufacturer's standard
 - 3. Backing: Pressure sensitive adhesive, factory applied to one side, with protective wrapping or coated on one face with release agent serving as bond breaker for primary joint sealant.
- B. **Preformed Hollow Neoprene Gasket:** Manufacturer's standard preformed polychloroprene elastomeric joint seal of the open-cell compression type complying with ASTM D 2628 and with requirements indicated for size, profile and cross-section design.

2.07 JOINT SEALANT BACKING

- A. **General:** Provide sealant backings of material and type which are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers.
- B. **Plastic Foam Joint-Fillers:** Preformed, compressible, resilient, non-waxing, non-extruding strips of plastic foam of either flexible, open cell polyurethane foam or non-gassing, closedcell polyethylene foam, subject to sealant manufacturer's approval; and of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. **Bond-Breaker Tape:** Polyethylene tape or other plastic tape as recommended by the sealant manufacturer for preventing bond between sealant and joint filler or other materials at the back or third surface of the joint. Provide self-adhesive tape where applicable.

Division 07 – Thermal and Moisture Protections
07910 – Joint Sealers

- D. Elastomeric Tubing Joint Fillers: Neoprene, butyl or EPDM tubing complying with ASTM D 1056, non-absorbent to water and gas, capable of remaining resilient at temperatures down to minus 26 degrees F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth and otherwise contribute to optimum sealant performance.

2.08 MISCELLANEOUS MATERIALS

- A. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated.
- B. Cleaners for Nonporous Surfaces: Provide non-staining, chemical cleaner of type acceptable to manufacturer of sealant and sealant backing materials which are not harmful to substrates and adjacent nonporous materials.
- C. Masking Tape: Provide non-staining, non-absorbent type compatible with joint sealants and with surfaces adjacent to joints.

2.09 SECURITY SEALANTS

- A. Rigid two part high solids, high modulus epoxy resin compound, meeting ASTM C-881 Type I testing.
- B. Surface preparation: Surfaces must be clean, sound and free of surface water. Remove laitance, curing compounds, coatings, oil, grease, rust, waxes and other bond inhibiting substances.
- C. Joint Backing: for deep joints install a closed cell backer rod allowing for proper tooling of the sealant under pressure. Closed cell backer rod should have a 25% minimum compression when installed.
- D. Physical Properties:
 - 1. Compression Strength: 11,000psi
 - 2. Hardness, Shore D: 70 (max 72 hours)
 - 3. Pot Life: 75 minutes
 - 4. Viscosity: Heavy paste consistency
 - 5. VOC Content: Base – 0 g/L
Activator – 0 g/L

2.10 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering joint sealant systems that may be incorporated into the Work are not limited.

PART 3 – EXECUTION**3.01 PROJECT CONDITIONS**

- A. Environmental Conditions: CONTRACTOR shall not proceed with installation of joint sealers under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside the limits permitted by the joint sealer manufacturers.
 - 2. When joint substrates are wet due to rain, frost, condensation, or other causes.
- B. Joint Width Conditions: Installation of joint sealers shall not proceed when joint widths are less than, or more than, allowed by the joint sealer manufacturer for the application indicated.

3.02 PREPARATION

- A. Surface Cleaning of Joints: All joints shall be cleaned out immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
 - 1. All foreign material shall be removed from joint substrates which could interfere with adhesion of joint sealer, including dust; paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer) oil; grease; waterproofing; water repellents; water, and surface dirt.
 - 2. Concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces shall be cleaned by brushing, grinding, blast cleaning, mechanical abrading, acid washing or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Loose particles remaining from the above cleaning operations shall be removed by vacuuming or blowing out joints with oil-free compressed air.
 - 3. Laitance and form release agents shall be thoroughly removed from all concrete surfaces.
 - 4. Metal, glass, porcelain enamel, glazed surfaces of ceramic tile and other nonporous surfaces shall be cleaned with chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
- B. Joint Priming: Joint substrates shall be primed where indicated or where recommended by joint sealer manufacturer. Primer shall be applied so as to comply with joint sealer manufacturer's recommendations. Primers shall be confined to areas of joint sealer bond. Spillage or migration onto adjoining surfaces shall not be allowed.

- C. **Masking Tape:** Masking tape shall be used where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Tape shall be removed immediately after tooling without disturbing joint seal.

3.03 INSTALLATION

- A. **General:** Unless otherwise indicated, comply with joint sealer manufacturers' printed installation instructions.
- B. **Elastomeric Sealant Installation Standard:** Comply with recommendations of ASTM C 962 for use of joint sealants as applicable to materials, applications and conditions indicated.
- C. **Solvent-Release-Curing Sealant Installation Standard:** Comply with requirements of ASTM C 804 for use of solvent-release-curing sealants.
- D. **Latex Sealant Installation Standard:** Comply with requirements of ASTM C 790 for use of latex sealants.
- E. **Acoustical Sealant Application Standard:** Comply with recommendations of ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications and conditions indicated.
- F. **Installation of Sealant Backings:** Install sealant backings to comply with the following requirements:
 - 1. Install joint-fillers of the types indicated to provide support of sealants during application and at position necessary to product the required cross-sectional shapes and depths.
 - a. Do not leave gaps between ends of joint-fillers.
 - b. Do not stretch, twist, puncture or tear joint-fillers.
 - c. Remove absorbent joint-fillers which have become wet prior to sealant application and replace with dry material.
 - 2. Install bond breaker tape between sealants and joint-fillers, compression seals or back of joints, where required to prevent third-side adhesion of sealant to back of joint.
 - 3. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint-fillers.
- G. **Installation of Sealants:** Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.

- H. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated to eliminate air pockets and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by the sealant manufacturer.
1. Concave joint configuration per Figure 6A in ASTM C 962, unless otherwise indicated.
 2. Flush joint configuration per Figure 6B in ASTM C 962, where indicated.
 3. Recessed joint configuration per Figure 6C in ASTM C 962, of recess depth and at locations indicated.
 - a. Where necessary, use masking tape to protect adjacent surfaces of tooled joints.
- I. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, and complying with sealant manufacturer's directions for installation methods, materials and tools which produce seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in conformance with sealant manufacturer's recommendations.
- J. Installation of Preformed Hollow Neoprene Gaskets: Install gaskets, with minimum number of end joints, in joint recesses with edges free of spalls and sides straight and parallel, both within tolerances specified by gasket manufacturer. Apply manufacturer's recommended adhesive to joint substrates immediately prior to installing gaskets. For straight sections provide gaskets in continuous lengths; where changes in direction occur, adhesively splice gasket together to provide watertight joints. Recess gaskets below adjoining surfaces by 1/8 inch to 1/4 inch.

3.04 PROTECTION AND CLEANING

- A. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they 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 sealers and reseal joints with new materials to produce installations with repaired areas indistinguishable from original work.

Division 07 – Thermal and Moisture Protections
07910 – Joint Sealers

- B. Clean off excess sealants or sealant smears adjacent to joints as WORK progresses, by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

END OF SECTION 07910

SECTION 08050 – BASIC DOOR AND WINDOW MATERIALS AND METHODS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Section includes all general door and window the extent and location of each is indicated in on the Drawings and specified hereafter.

1.02 CERTIFICATIONS AND STANDARDS

- A. Wood and Door Manufacturers Association (WDMA)
- B. NFPA 80 “Standard for Fire Doors and Windows”
- C. ASTM E152 “Standard Methods of Fire Tests of Door Assemblies”
- D. NFPA 101 “Standard for Fire Rated Openings Hardware”
- E. UBC 7-2 or UL-10C – Positive Pressure Testing for Door Frame and Hardware Assemblies
- F. Consumer Products Safety Commission Publication 16 CFR, part 1201
- G. FGMA – Glazing Manual
- H. UL 752 – Bullet Resistant Glazing
- I. US-10 or US-26D – Architectural Hardware Finishes

1.03 CERTIFICATIONS

- A. Installation Contractor / Sub-Contractors
 - 1. For each product/system specified and requiring manufacturers warranty and contractors maintenance bond, the proposed installation contractor must provide evidence of manufacturer’s license to install and affidavit of the following required duration of continuous experience on projects of equivalent size, quantity and complexity.
 - a. Standard Steel Doors - 3 years
 - b. Custom Steel Doors - Minimum 3 years.
 - c. Wood Doors - Minimum 3 years.
 - d. Overhead Coiling Doors - Minimum 3 years.

Division 08 – Doors and Windows

08050 – Basic Door and Window Materials and Methods

- e. Metal Frame Storefront and Curtain Wall Systems - Minimum 5 years.
- f. Automatic and ADA Entrance Doors - Minimum 5 years.
- g. Windows and Glazing - Minimum 5 years.
- h. Door Hardware (Supplier) - Minimum 5 years.
- i. Door Hardware (Installer) - Minimum 3 years.
- j. Security Doors (Supplier) - Minimum 5 years.
- k. Security Doors (Installer) – Minimum 5 years
- l. Security Window Frames (Supplier) – Minimum 5 years
- m. Security Window Frames (Installer) – Minimum 5 years
- n. Security Glazing (Supplier) – Minimum 5 years
- o. Security Glazing (Installer) – Minimum 5 years
- p. Security Hardware (Supplier) – Minimum 5 years
- q. Security Hardware (Installer) – Minimum 5 years

1.04 WARRANTIES AND GUARANTEES

A. Manufacturers Guarantee

1. All components of each door and window system shall be protected against failure and/or performance deficiencies by a product manufacturer's installation and materials warranty. Said warranties shall be specific to each system required and shall be non-prorated warranties which guarantee against material and labor defects for a minimum period of five (5) years.
2. Guarantee stating all Interior doors shall carry a lifetime guarantee. Guarantee shall include removal, finishing, and hanging of doors at no cost to the Owner.
3. Typical and Security Windows and Window Installation: Provide a written guarantee that all parts of the installation will meet specified performance requirements and will be free from defects in materials and workmanship for a period of two years following acceptance. Weather-stripping shall be guaranteed for a period of five years. Guarantee shall certify that all work is in accordance with the Contract Documents and shall contain a statement that, should defects develop during the guarantee period, caused by improper workmanship or materials, such defects will be repaired or windows will be replaced at no expense to the Owner.
4. Insulating and Reflective Glass and Security Glazing Guarantee: Provide manufacturer's written guarantee that for ten years from date of manufacture a replacement will be provided for any unit which develops edge separation or other defects which materially obstruct vision through the glass or safety; except, that guarantee shall not cover glass breakage from other than natural causes.
5. Type of Guarantee:
All Guarantees shall include all labor for periodic inspection and

Division 08 – Doors and Windows

08050 – Basic Door and Window Materials and Methods

maintenance for one year and service within eight (8) working hours.

6. **Warranty:**
Power operators, controls, electrical circuitry provided by the power door operator equipment supplier shall be guaranteed against defects in material and workmanship at no cost to the Owner for a period of five (5) year from date of Substantial Completion.
7. **Hardware including:** closers, hinges, locksets, hold opens, etc. required for the proper installation of all interior and exterior doors shall be provided with a manufacturers minimum 5 year guarantee against defects in labor and materials.

1.05 QUALITY CONTROL

- A. All materials and fabrication shall be of the highest quality available and shall be identified by the official mark of the appropriate regulatory or testing agency and manufacturers name.
 1. **Compliance with ANSI:**
Door operator system, controls, wiring and other components shall comply with the latest edition of American National Standards Institute “ Specifications for Making Buildings and Facilities Accessible to, and to be Usable by the Physically Handicapped”.
 2. **Quality and Design:** Hardware must be adequate for the intended use and must satisfy code requirements, but shall not be excessively sophisticated nor unnecessarily expensive. Make submittal at a time which will allow for adequate review and for making required changes without causing unnecessary delays to the Project.
 3. **Labels:** Labeled construction and labels shall be provided where required by codes.

1.06 SUBMITTALS

- A. **Shop Drawings**
Provide complete shop drawings including all technical data sheets and testing reports for each product. Shop drawings shall include installation requirements and details. Drawings shall indicate all necessary allowances and components for thermal expansion, contraction and normal building movement. Shop drawing shall show all necessary flashing profiles/sections and fastening requirements; including installation details and minor components.
- B. **Samples**
Provide product section/material samples for all door, window and

Division 08 – Doors and Windows

08050 – Basic Door and Window Materials and Methods
hardware components. Samples shall include all finish and color
selection options.

- C. Maintenance Manual
Three copies of an appropriate maintenance manual shall be provided to
Owner on completion of work.

PART 2 – PRODUCTS**2.01 DESIGN STANDARDS - DOORS**

- A. Typical Doors – Steel
Typical steel doors shall not be less than 16-gauge reinforced steel. The
top channel of each metal door shall be turned web up, to avoid a dirt
pocket or moisture trap. All exterior doors shall be of seamless insulated
hot dipped A60 galvanized steel construction.
- B. Entrance Doors – Aluminum
Entrance doors shall be wide stile type, with 12-inch bottom rail. Face
plates not less than 0.064-inch thick shall be provided for flush aluminum
doors.
- C. Security Doors – Steel
Security Exterior shall be two (2) inch minimum thickness, , with vertical
stiffeners. All exterior doors shall be of seamless insulated hot dipped
A60 galvanized steel construction.
- D. Typical Door Frames - Steel
Frames shall be one piece, welded frames of not less than 14-gaugesteel.
All frames shall be heavily reinforced at hinge locations. Exterior frames to
be hot dipped A60 galvanized steel construction.
- E. Security Door Frames – Steel
Frames shall be one piece, welded frames of not less than 10-gaugesteel.
All frames shall be heavily reinforced at hinge locations. Exterior frames to
be hot dipped A60 galvanized.
- F. Typical Wood Doors
Interior Wood Doors shall be of stave lumber core construction, meeting
WDMA Quality Grade for Standard Duty. Face with finished Class 1
tempered hardboard with factory applied finish.
- G. Labels -
Labeled construction and labels shall be provided where required by
codes.

Division 08 – Doors and Windows

08050 – Basic Door and Window Materials and Methods

- H. Provisions for Noise Control -
On machine room doors and other doors where excessive noise is anticipated weather-stripping at heads and jambs and surface applied automatic door bottoms shall be required.
- I. Removable Mullions -
Pairs of double doors shall have a removable mullion with lock strike unless approval is given by Architect to deviate from this requirement.

2.02 DESIGN STANDARDS - HARDWARE

- A. Typical Finishes -
For all typical hardware, specify US-10 or US-26D. Other finishes may be used only where necessary to match materials to which hardware is applied.
- B. Prohibited Materials and Installations -
 - 1. Raised Thresholds: Thresholds raised above floor levels at doors to trash and receiving rooms and over 1/2-inch high at doors intended for use of handicapped persons.
 - 2. Floor Mounted Door Stops:
Floor mounted door stops should be avoided if possible.
 - 3. Closers:
Floor closers should be avoided if possible.
- C. Typical Locks -
 - 1. Heavy duty, mortise locks only, **with 2 - piece metal anti friction latch**. Locks shall be reversible and shall have capability for changing function within any one case.
- D. Typical Keying -
 - 1. Specification:
All locking devices shall be equipped with cylinders with removable 7-pin tumbler cores. For security while the building is under construction, locks shall be equipped with temporary construction cores.

2.03 POWER DOOR OPERATORS

- A. Handicapped Door Openers -
Furnish and install power door operators and controls as indicated on drawings and as specified.
- B. Work Included Under this Section -
 - 1. Power door operators:
To be surface - mounted or concealed in door - head.

Division 08 – Doors and Windows

08050 – Basic Door and Window Materials and Methods

2. Possible Reinforcement:
Reinforcement of aluminum doors and frames as may be found necessary to assure that doors and frames are sufficiently sturdy to accept power operations.
 3. Wall Switches:
Wall switches, mounted by various means as shown on drawings.
 4. Electrical Controls:
Low-voltage electrical controls circuits from power door operators to wall switches.
 5. Wiring:
Wiremolds and conduits for electrical control circuits.
 6. Electrical Boxes:
Anchorage of wall switch electrical boxes to walls and posts.
- C. Equipment and Labor -
Equipment and labor shall be provided by a factory authorized and trained distributor for products specified.

2.04 WINDOWS

- A. Typical Exterior Windows -
1. Performance Requirements:
The manufacturer shall, if requested by the Associate, submit copies of test reports, made or witnessed by an independent testing laboratory, which show conformance to the following performance standards, as made on previously manufactured windows of the same type to be furnished for this project.
Air infiltration of an assembled sash and frame shall not exceed 0.15 cubic feet of air per minute, per foot of sash perimeter, when the window is subjected to a static air pressure equivalent to a wind velocity of 50 miles per hour. There shall be no apparent water leakage to the indoor side of the window when tested for fifteen minutes with water spray at a rate of 5 gallons per square foot per hour under a pressure equivalent to a wind velocity of 50 miles per hour.
 2. Thermal Performance:
All windows shall be constructed and installed to provide the maximum in thermal efficiency possible. All units shall be thermally broken with a minimum total "U" value of $U=.625$.

2.05 GLAZING

- A. Wired Glass
Borrowed light windows shall be glazed with 1/4 inch wired glass or as required by code.
- B. Laminated Glass

Division 08 – Doors and Windows

08050 – Basic Door and Window Materials and Methods

Glass for exterior aluminum doors shall be 1/4 inch thick, double laminated safety glass, or an approved equal.

- C. Insulating Glass
Glass for exterior windows shall be 3/4 clear (non-reflective) “Low-E” type with interior air space filled with inert low heat transfer gas.
- D. Security Glass
Glass for security windows shall be a glass clad polycarbonate type with a single source responsibility program.
- G. Texture
All glass shall be smooth float type glass, with obscure glass provided for toilet rooms and areas as specified in program documents. Obscure glass textures shall be as approved by the Architect.

PART 3 – EXECUTION**3.01 PRE-INSTALLATION**

- A. Each primary door and window system shall be proceeded by a Pre-installation conference attended by the General Contractor, Manufacturer, Installer, Associate Owner and Architect.
 - 1. Observation of Installation by Personnel -
All Parties shall be given 2 weeks advance notice of intent to start installation of systems and materials. Designated personnel must be permitted to perform a pre-installation inspection and to be present throughout installation to observe installation techniques for compliance with specifications. Questionable installations will be brought to the attention of the Contractor who shall take immediate action to correct any deficiencies in materials or installation. Failure of personnel to call attention to deficiencies shall not relieve the Contractor of responsibilities stipulated in the Maintenance Bond.
 - 2. Finish materials and colors are subject to the approval of the Architect/Owner.
 - 3. Responsibility for Satisfactory Installation
Inspect work of other trades prior to any installation work. If any area or opening cannot be put into proper condition to receive the doors or window by specified methods, immediately notify the Architect in writing, or assume responsibility for and rectify.
 - 4. Test Panels

Division 08 – Doors and Windows**08050 – Basic Door and Window Materials and Methods**

The Architect reserves the right to order window units field tested in order to determine that minimum requirements have been met. The Contractor shall repair, at his own expense, the units where test were executed.

5. **Rated Enclosures**
Caulking used at rated enclosures shall be UL rated and of type appropriate for assembly type, materials, and trade.

3.02 TEMPLATES AND DIAGRAMS

- A. Templates and diagrams and other data as needed shall be furnished to fabricators and installers of related work for coordination of operators with Electrical Contract Work and other work.

END OF SECTION 08050

SECTION 08330 - OVERHEAD COILING COUNTER DOORS**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Overhead Coiling Counter Doors manually operated.

1.02 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications: Support framing and framed opening.
- B. Section 08333 - Security Grilles.
- C. Section 08710 - Door Hardware: Product Requirements for cylinder core and keys.
- D. Section 09910 - Painting: Field applied finish.

1.03 REFERENCES

- A. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- B. ASTM A 666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
- C. ASTM A 924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
- D. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- E. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).

1.04 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Details of construction and fabrication.
 - 4. Installation methods.
- C. Shop Drawings: Include detailed plans, elevations, details of framing

Division 08 – Doors and Windows
08330 – Overhead Coiling Counter Doors

members, required clearances, anchors, and accessories. Include relationship with adjacent construction.

- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five years experience in the fabrication and installation of security closures.
- B. Installer Qualifications: Company specializing in performing Work of this section with minimum three years and approved by manufacturer.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Install in areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship and installation is approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.
- C. Store materials in a dry, warm, ventilated weathertight location.

1.07 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.08 COORDINATION

- A. Coordinate Work with other operations and installation of adjacent finish

materials to avoid damage to installed materials.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements of this Section manufacturers offering systems that may be incorporated into the Work are not limited.

2.02 OVERHEAD COILING STEEL COUNTER DOORS

A. Overhead Coiling Door System Model 652 Basis of Design

1. Wall Mounting Condition:
 - a. Face-of-wall mounting.
2. Curtain: Interlocking slats, Type F-158 fabricated of anodized aluminum. End locks attached to alternate slats to maintain curtain alignment and prevent lateral slat movement.
3. Finish:
 - a. Slats and Hood: prime and paint as per manufacturers standard anodized aluminum powder coat finish specifications. Color to be selected by Architect from standard color range.
 - b. Non-galvanized exposed ferrous surfaces shall receive one coat of rust-inhibitive primer.
4. Color:
 - a. Gray polyester top prime coat.
 - b. Powder coating finish in color as selected by Architect from manufacturer's standard colors.
5. Bottom Bar:
 - a. Extruded aluminum tubular shape with astragal
6. Guides: Extruded aluminum.
7. Brackets: Steel plate to support counterbalance, curtain and hood.
8. Counterbalance: Helical torsion spring type housed in a steel tube or pipe barrel.
9. Hood: Provided with intermediate support brackets as required and fabricated of:
 - a. Aluminum.

- 10. Operation:
 - a. Manual push up.
- 11. Locking:
 - a. Two point dead locks with mortise cylinder/s.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify opening sizes, tolerances and conditions are acceptable.
- B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
- C. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.
- D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- E. Coordinate installation of electrical service with Section 16150. Complete wiring from disconnect to unit components.
- F. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07900.
- G. Install perimeter trim and closures.

3.04 ADJUSTING

- A. Test for proper operation and adjust as necessary to provide proper

Division 08 – Doors and Windows
08330 – Overhead Coiling Counter Doors

operation without binding or distortion.

- B. Adjust hardware and operating assemblies for smooth and noiseless operation.

3.05 CLEANING

- A. Clean curtain and components using non-abrasive materials and methods recommended by manufacturer.
- B. Remove labels and visible markings.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

3.06 PROTECTION

- A. Protect installed products until completion of project.

END OF SECTION 08330

SECTION 08510 - ALUMINUM WINDOWS

PART 1 GENERAL

1.01 SUMMARY

- A. Related Documents: Conditions of the Contract, Division 1 - General Requirements, and Drawings apply to Work of this Section.
- B. Section Includes:
 - 1. Aluminum Prime Windows
 - a. Type: Hung, and Fixed
 - b. Category: Architectural (AW)
 - c. Designation: Performance Grade-100(AW100)
- C. Related Sections
 - 1. Drawings, General and Supplementary Conditions of the Contract, Division 1 and the following Specification Sections, apply to this Section.
 - 2. Section 01 41 00 – Regulatory Requirements
 - 3. Section 01 43 00 – Quality Assurance
 - 4. Section 07 92 00 – Joint Sealants
 - 5. Section 08 51 13 – Aluminum Windows
 - 6. Section 08 81 00 – Glass Glazing

1.02 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA/WDMA/CSA 101/I.S.2/A440–Standard Specifications for Windows, Doors, and Skylights
 - 2. AAMA 910 – Voluntary “Life Cycle” Specifications and Test Methods for AW Class Architectural Windows and Doors
 - 3. AAMA 1503 – Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections
- B. American National Standards Institute (ANSI)
 - 1. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
- C. ASTM International
 - 1. ASTM E283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
 - 2. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

Division 08 – Doors and Windows
08510 – Aluminum Windows

3. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
 4. ASTM E2188 - Standard Test Method for Insulating Glass Unit Performance.
 5. ASTM E2189 - Standard Test Method for Testing Resistance to Fogging in Insulating Glass Units.
 6. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.
- D. Consumer Product Safety Commission (CPSC)
1. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
- E. Glass Association of North America (GANA)
1. Glazing Manual (current edition)

1.03 SYSTEM DESCRIPTION

- A. Test Procedures and Performance
1. Specifications for Windows, Doors and Unit Skylights: AAMA 101.
 2. Air Infiltration Test: ASTM E 283, at 6.24 psf static air pressure differential. Air infiltration shall not exceed 0.10 CFM per sq. ft.
 3. Water Resistance Test: ASTM E 331, no water leakage at 15 psf static air pressure differential.
 4. Operation and Cycling Performance: AAMA 910, life cycled and retested for air and water. [Delete 1.02, A., 4. if ventilators are not required.]
 5. Uniform Load Deflection Test: ASTM E 330, at static air pressure of +/- 100 psf. No member shall deflect more than 1/175 of its span.
 6. Uniform Load Structural Test: ASTM E 330, at static air pressure difference of +/- 150 psf.
 7. Condensation Resistance Test: AAMA 1503.1, CRF shall be not less than 55.
 8. Thermal Transmittance Test: AAMA 1503.1, U-Value shall not exceed .46 BTU/HR/SQ.FT/°F.
 9. Acoustical Test: ASTM E 90 / ASTM E 413, reference 2.02, D. for acoustical glass type, or Section 08 81 00 [Delete 1.02, A., 9. if there are no sound abatement requirements.]

1.04 SUBMITTALS

- A. Provide submittals in a timely manner to meet required construction completion schedule and in accordance with specifications.
1. Shop Drawings
 - a. Shop drawings will be prepared by the window manufacturer. Shop drawings prepared by window distributor, installer, representative/dealer of outside drafting firm are not acceptable.

Division 08 – Doors and Windows
08510 – Aluminum Windows

- b. Show components complete with dimensions, material and details of anchoring and fastening.
- c. Show finishes, sealants and other information indicating compliance with specifications.
- d. Submit test report per 1.03 SYSTEM DESCRIPTION A. Test Procedures and Performance.
- 2. Samples
 - a. Components: submit samples of anchors, fasteners, hardware, assembled corner sections and other materials and components if requested by architect.
 - b. Finish: submit full range color samples for approval by architect.
- 3. Warranties: submit written copies in accordance with - 1.08 WARRANTIES

1.05 DELIVERY, STORAGE AND HANDLING

- A. Protect materials from damage before installation per instructions and in accordance with specifications.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer that has completed the same or similar projects in size and scope.
- B. Source Limitations: Obtain aluminum windows from single source manufacturer.
- C. In-House Testing: Conduct air and/or water testing of 2% windows prior to shipping.
 - 1. Detailed documentation on in-house testing is available upon request.

1.07 PROJECT / SITE CONDITIONS

- A. Ensure ambient and surface temperatures and joint conditions are suitable for installation of materials.

1.08 WARRANTY

- A. Window System
 - 1. Qualified window manufacturer, with proven financial responsibility and years of experience of at least the length of the warranty period shall provide written 2, year warranty against defects in materials and workmanship.

PART 2 PRODUCTS

2.01 GENERAL

Division 08 – Doors and Windows
08510 – Aluminum Windows

- A. **Manufacturer's Recommendations:** Only products recommended for the specific application indicated shall be used.
- B. **Single Source Responsibility:** All materials for a specific application shall be obtained from a single manufacturer.
- C. **Compatibility:** Joint sealers, joint fillers, and other related materials shall be provided which are compatible with one another and with joint substrates under the indicated conditions of service and application, as demonstrated by manufacturer's testing and field experience.

2.02 MANUFACTURER

- A. Subject to compliance with requirements, manufacturers offering steel frames which may be incorporated into the Work are not limited. Specifications are based on Oldcastle BuildingEnvelope®. Drawings and Specifications are based on Signature™ Series Fixed and 5100 4 Track Vertical Hung approved manufacturers that may provide products are as follows but not limited :
 - 1. Jeld Wen Windows and Doors Inc.
 - 2. PGT Industries
 - 3. Harvey Building Products
 - 4. Pella Windows and Doors Inc.

2.03 MATERIALS – FIXED UNITS

- A. **Aluminum:** 6063-T5 alloy shall have 0.062" wall thickness.
 - 1. **Extrusions:** comply with ASTM B 221. Extrusion tolerances shall meet ANSI H35.2.
 - 2. **Sheet:** comply with ASTM B 209.
 - 3. **Frame Depth:** 4".
 - 4. **Thermal Barrier:** Crimped-in-place glass reinforced polyamide 6/6 nylon strut.
- B. **Hardware:** material shall be corrosion resistant and compatible with aluminum. Hardware must prove its strength and suitability by being installed on units that are tested in accordance with specifications.
 - 1. **Fasteners:** provide non-magnetic stainless steel screws, epoxy adhesives, or other material warranted by the manufacturer.
- C. **Sealants:** color of exposed sealants shall be compatible with adjacent window materials. Comply with AAMA 803.3.
- D. **Glazing:** windows shall be factory glazed unless too large or unsafe for handling.
 - 1. **Glass:** provide in accordance with Section 08810.

Division 08 – Doors and Windows
08510 – Aluminum Windows

2. Glazing Materials: units shall be wet glazed using silicone sealant, setting blocks, edge blocks and accessories as recommended by and in accordance with GANA Glazing Manual.

2.04 MATERIALS – HUNG UNITS

- A. Aluminum: 6063-T6 alloy shall have a minimum wall thickness of 0.061".
 1. Extrusions: comply with ASTM B 221. Extrusion tolerances shall meet ANSI H35.2.
 2. Sheet: comply with ASTM B 209.
 3. Frames:
 - a. Depth: 5-1/8" & 6"
 - b. Design: Equal leg
 4. Sash: 6063-T6 alloy shall have a minimum wall thickness of 0.061" & main wall thickness of 0.065".
 - a. Depth: 15/16"
 - b. Design: Solid stiles with tubular rails
 5. Thermal Barrier: 3/4" crimped in place PVC
- B. Hardware: material shall be corrosion resistant and compatible with aluminum. Hardware must prove its strength and suitability by being installed on units that are tested in accordance with specifications.
 1. Fasteners: provide non-magnetic stainless steel screws, epoxy adhesives, or other material warranted by the manufacturer.
- C. Sealants: color of exposed sealants shall be compatible with adjacent window materials. Comply with AAMA 803.3.
- D. Glazing: windows shall be factory glazed unless too large or unsafe for handling.
 1. Glass: provide in accordance with Section 08810
 2. Glazing Materials: units shall be exterior wet glazed using silicone cap beads, setting blocks, edge blocks and accessories as recommended by and in accordance with GANA Glazing Manual.
- E. Weatherstripping: shall be non-shrinking, resistant to ultraviolet degradation, and replaceable closed cell elastomer shall meet ASTM C 509. Dense elastomer shall meet ASTM C 864.
- F. Screens: shall be flat, inside removable, with frames the same finish as window surface. 18 x 16 black aluminum mesh, standard.

2.05 FABRICATION

- A. Frames: shall be machined, mechanically fastened and sealed to form a watertight joint.
- B. Component Forming: all aluminum components shall be formed, free of scratches and burrs, before application of finish.

2.06 FINISHES

- A. Cover all exposed areas of aluminum windows and components. Overall finish shall be Polyvinylidene Fluoride.

1. 70% Polyvinylidene Fluoride
 - a. Type: high performance baked-on organic coating
 - b. AAMA Specification: Comply with AAMA 2605
 - c. Color: To be selected by Architect/Owner from mfr. Standard color range

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings are dimensionally within allowable tolerances, plumb, level, clean, provide a solid anchoring surface and are in accordance with approved shop drawings.

3.02 INSTALLATION

- A. Install windows with skilled tradesman in accordance with approved shop drawings and specifications.
- B. Unfinished aluminum shall be insulated from direct contact with steel, masonry concrete, and non-compatible materials by bituminous paint, zinc chromate primer or other suitable insulating material.
- C. Install vapor retarder/air barrier in accordance specifications between window perimeter and adjoining collateral materials and existing wall barriers to assure continuity.
- D. Plumb window faces in a single plane for each wall plane. Erect square and true. Anchor to maintain position when subjected to normal thermal and building movement, seismic forces and specified wind loads.
- E. Apply sealants at joints and intersections and at opening perimeters in accordance with approved shop drawings and Section 07 93 13 to provide watertight installation.

3.03 FIELD QUALITY CONTROL

- A. Conduct on-site air and water infiltration tests in accordance with AAMA 502, ASTM E 783, ASTM E 1105, and with architect and window manufacturer's representative present. Architect will select units to be tested. Air infiltration shall not exceed 1.5 x air infiltration amount specified for laboratory testing.
- B. Tested units not meeting specified requirements and units having similar deficiencies shall be corrected at no cost to owner.
- C. Cost for successful tests shall be paid by owner. Unsuccessful tests shall be paid by contractor.
- D. Testing shall be by agency acceptable to architect and window manufacturer and employed by contractor.

3.04 CLEANING

- A. After installation and testing, windows and glazing shall be inspected, adjusted, and left clean and free of labels and dirt. Protect finished installation against damage.
- B. Final cleaning of anodized finish shall be in accordance with AAMA 609.1; painted finish shall be in accordance with AAMA 610.1.

END OF SECTION 08510

SECTION 09050 – BASIC FINISH MATERIALS AND METHODS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. General guideline for finishes for the project.
- B. General extent of building finish materials as shown on drawings and specified herein.
- C. Contractor is responsible for reviewing detailed requirements for individual product specifications contained within division. The requirements outlined in this section are basic requirements.

1.02 RELATED SECTIONS

- A. Section 01300 – Submittal Procedures
- B. Section 01600 – Product Requirements
- C. Division 9 - Finishes

1.03 REFERENCES

- A. General: The Work of Division 9 shall comply with the most current standards as published at the date of the contract and as listed in the Division.
- B. American Society for Testing and Materials

1.04 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.

1.05 DELIVERY STORAGE AND HANDLING

- A. Shall be in accordance with Section 01600 – Product Requirements and product manufacturers requirements

PART 2 – PRODUCTS

2.01 GYPSUM WALLBOARD

- A. Typical Board: Shall be 5/8" thick four (4) x eight (8) minimum board size. UL fire rating as required.
- B. High Impact Board: Shall be 5/8" thick four (4) x eight (8) minimum board size. Moisture, mold and mildew resistant, with UL fire rating as required.
- C. Moisture Resistant Board: Shall be 5/8" thick four (4) x eight (8) minimum board size. Moisture, mold and mildew resistant.
- G. Fasteners:
 - 1. Nails: Shall meet minimum requirements of ASTM C 514

2. Screws: Shall meet minimum requirements of ASTM C 1002

2.02 RESILIENT FLOORING

- A. Typical Resilient Flooring: Shall be thirteen (12) inch x thirteen (12) inch resilient vinyl enhanced composition tile, conforming to ASTM F1066, Composition 1, non-asbestos formulated, Class 2. When applicable floor tile at ramps shall be slip resistant.
- B. Concrete Slab Primer: Non Staining type as recommended by flooring manufacturer.
- C. Leveling and Patching Compounds: Latex type as recommended by flooring manufacturer.

2.03 CERAMIC TILE

- A. Comply with ANSI Standards referenced with products and materials indicated for setting and grouting
- B. Glazed Ceramic Mosaic Tile (UCT): Provide factory mounted flat tile complying with the following requirements:
 - 1. Composition: Natural Clay
 - 2. Face: Plain with cushion edges
- C. Unglazed Quarry Tile (UQT): Provide square edged flat tile complying with the following requirements:
 - 1. Wearing Surface: Abrasive aggregate embedded in surface
 - 2. Face: Plain
- D. Glazed Wall Tile (GCT): Provide flat tile complying with the following requirements:
 - 1. Face: Plain with cushioned edge
 - 2. Mounting: Factory back-mounted
- E. Trim Units: Provide tile trim units to match characteristics of adjoining flat tile:
 - 1. Shapes: as follows, selected from manufacturer's standard shapes
 - a. Base: Cove
 - b. Wainscot Cap: Surface Bullnose
 - c. External Corners: Surface Bullnose
- F. Metal Edge Strips: Zinc alloy or stainless steel terrazzo strips, one eighth (1/8) inch wide at top edge with integral provisions for anchorage to mortar bed or substrate unless otherwise indicated
- G. Marble Thresholds: Provide marble thresholds complying with ASTM C

503 requirements for exterior use and for abrasion resistance where exposed to foot traffic, a minimum hardness of 10 per ASTM C 241. Match adjoining tile sample for color and finish

- H. Polyethylene Sheet Waterproofing: Manufacturer's standard proprietary product consisting of composite sheets, sixty (60) inches wide by a nominal thickness of 0.030, composed of an inner layer of chlorinated polyethylene sheet faced on both sides with laminated high strength non woven polyester material, designed for embedding in latex Portland cement mortar, and as substrate for latex Portland cement mortar setting bed.
- J. Modified Epoxy Emulsion Mortar: Complying with ASTM A 118.8 and manufacturer's recommendations.
- K. Sand Portland Cement Grout: ANSI A108.10, composed of white or gray cement and white or colored aggregate as required to produce color selected.
- L. Water: Clean of debris and potable.

2.04 CARPET

- A. All carpeting and assembly (including padding) shall be certified to have a minimum flame spread and smoke developed rating of seventy five (75) or less, by either a copy of the ASTM E 84 Tunnel Test from an approved testing laboratory or a notarized statement from the manufacturer that their product has passed this test, in an approved independent testing laboratory.
- B. Provide a list of all toxic gases noted during the combustion test, including the relative quantities developed, shall be included with the notarized statement. Chemical analysis of the gases shall show degree of toxicity, irritability and such other characteristics which might be dangerous to the health of building occupants during a fire. Excesses of toxic gases may be cause for rejecting proposed materials.
- C. Carpet (CPT): Textured Loop Pattern with manufacturer approved nylon fibers, solution dyed, twenty four (24) inch by twenty four (24) inch carpet tile, non woven primary backing, with 85% post consumer content secondary backing. With manufacturers lifetime warranty.
- D. Adhesive: 67% solid multi purpose carpet adhesive approved by manufacturer, designed for heavy commercial traffic use, with zero calculated VOC, water resistant, non hazardous, non flammable, anti microbial protection, low odor, colorless when cured, freeze thaw stability of 5 cycles @ 10° - 15°, approved by carpet manufacturer with a lifetime warranty.
- E. Seam Sealer: Water based seam sealer with minimum 48% solids, high strength, water resistant, non hazardous, solvent free, low odor, with

minimum 35,000 cps viscosity, clear dry color, stable freeze thaw properties, approved by carpet manufacturer with a lifetime warranty.

2.05 RUBBER BASE AND ACCESSORIES

- A. Rubber Base: Cove type rubber wall base, eight (8) inch height standard, 1/8 inch thick standard, color to be selected. Include standard outside corners and other trim items. Meet FS-SS-W 40. Include edge strips and terminations as needed.
- B. Transition Adapters:
 - 1. Carpet to Resilient: 2-1/2 inch wide color as selected
 - 2. Carpet to Carpet: 2-1/2 inch wide color as selected

2.06 PAINTING

- A. Exterior Masonry Systems:
 - 1. Semi Gloss Finish
 - 1st Coat: Heavy Duty Block Filler
 - 2nd Coat: High Performance Acrylic Coating
 - 3rd Coat: Elastomeric High Build Coating
 - 4th Coat: Elastomeric High Build Coating
- B. Interior Masonry Systems:
 - 1. Semi Gloss Finish
 - 1st Coat: Heavy Duty Block Filler
 - 2nd Coat: High Performance Acrylic Coating
 - 3rd Coat: Epoxy High Build Coating
 - 4th Coat: Epoxy High Build Coating
- C. Interior Drywall
 - 1. Gloss Finish
 - 1st Coat: Latex Primer (4 mils wet, 1.2 mils dry)
 - 2nd Coat: Latex Gloss
 - 3rd Coat: Latex Gloss (4 mils wet, 1.5 mils dry per coat)
 - 2. Semi Gloss Finish
 - 1st Coat: Latex Primer (4 mils wet, 1.2 mils dry)
 - 2nd Coat: Latex Semi Gloss
 - 3rd Coat: Latex Semi Gloss (4 mils wet, 1.3 mils dry per coat)
 - 3. Egg Shell Finish
 - 1st Coat: Latex Primer (4 mils wet, 1.2 mils dry)
 - 2nd Coat: Latex Egg Shell
 - 3rd Coat: Latex Egg Shell, (4 mils wet, 1.6 mils dry per coat)
- D. Exterior Ferrous Metals (in addition to all required shop applied primers)
 - 1. Gloss Finish
 - 1st Coat: Rust Inhibitive Primer, (5-10 mils wet, 2-4 mils dry)
 - 2nd Coat: Exterior Latex Gloss

3rd Coat: Exterior Latex Gloss, (4 mils wet, 1.3 mils dry per coat)

2. Semi-Gloss Finish

1st Coat: Rust Inhibitive Primer, (5-10 mils wet, 2-4 mils dry)

2nd Coat: Acrylic Semi-Gloss

3rd Coat: Acrylic Semi-Gloss, (4 mils wet, 1.5 mils dry per coat)

E. Interior Ferrous Metals (in addition to all required shop applied primers)

1. Gloss Finish

1st Coat: Rust Inhibitive Primer, (2-4 mils dry)

2nd Coat: Latex Gloss

3rd Coat: Latex Gloss, (4 mils wet, 1.5 mils dry per coat)

2. Semi-Gloss Finish

1st Coat: Rust Inhibitive Primer, (2-4 mils dry)

2nd Coat: Latex Semi-Gloss,

3rd Coat: Latex Semi-Gloss, (4 mils wet, 1.3 mils dry per coat)

F. Exterior Galvanized Metals

1. Gloss Finish

1st Coat: Exterior Latex Gloss

2nd Coat: Exterior Latex Gloss (4 mils wet, 1.3 mils dry per coat)

2. Semi-Gloss Finish

1st Coat: Acrylic Semi-Gloss

2nd Coat: Acrylic Semi-Gloss, (4 mils wet, 1.5 mils dry per coat)

3. Satin Finish

1st Coat: Exterior Latex Satin,

2nd Coat: Exterior Latex Satin, (4 mils wet, 1.4 mils dry per coat)

4. Flat Finish

1st Coat: Exterior Latex Flat

2nd Coat: Exterior Latex Flat, (4 mils wet, 1.4 mils dry per coat)

G. Interior Galvanized Metals

1. Gloss Finish

1st Coat: Industrial Acrylic Primer, (2-4 mils dry)

2nd Coat: Gloss Enamel,

3rd Coat: Latex Gloss Enamel, (4 mils wet, 1.5 mils dry per coat)

2. Semi-Gloss Finish

1st Coat: Industrial Acrylic Primer, (2-4 mils dry)

2nd Coat: Latex Semi-Gloss

3rd Coat: Latex Semi-Gloss, (4 mils wet, 1.3 mils dry per coat)

3. Egg-Shell / Satin Finish
 - 1st Coat: Industrial Acrylic Primer, (2-4 mils dry)
 - 2nd Coat: Latex Egg-Shell
 - 3rd Coat: Latex Egg-Shell, (4 mils wet, 1.5 mils dry per coat)
4. Flat Finish
 - 1st Coat: Industrial Acrylic Primer, (2-4 mils dry)
 - 2nd Coat: Latex Flat
 - 3rd Coat: Latex Flat, (4 mils wet, 1.4 mils dry per coat)
- H. Interior Wood
 1. Natural Finish
 - 1st Coat: Interior Oil Stain
 - 2nd Coat: Water based Polyurethane Varnish
 - 3rd Coat: Water based Polyurethane Varnish, (400-500 sq ft/gal)

2.07 ACOUSTICAL CEILINGS

- A. Acoustical ceiling units shall conform to FS SS-S118A, Class 25. Units shall have a light reflectance of "A" (over 75%) unless otherwise noted.
- B. Lay In Acoustical Tile (LAT)
 1. Pattern: As specified
 2. Color: As selected from manufacturer standard colors
 3. Ceiling Sound Transmission Class: STC 35 Minimum; NRC 0.60 minimum
 4. Edge Detail: As selected
 5. Size: twenty four (24) inch by twenty four (24) inch standard
- C. Suspension System: Provide manufacturers standard metal suspension system of types, structural classifications, and finishes indicated that comply with applicable ASTM C 635 requirements. All suspension systems shall support the ceiling assemblies with a maximum deflection of 1/360th of the span.
- D. Suspended ceiling hangers shall be minimum twelve (12) gage galvanized wire, unless specified otherwise. Anchor to structure as per manufacturers specifications.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that all surfaces are ready to receive finish systems.
- B. Verify that indoor controlled environmental air conditions are within finish applications manufacturers standard ranges for installation.

3.02 PREPARATION

- A. Clean all surfaces with manufacturers approved cleaners and wipe dry.

3.03 INSTALLATION

- A. install all finish products according to applicable manufacturers instructions for each product.

3.04 CLEANING

- A. Remove excess materials from finish surfaces and adjacent surfaces that are not scheduled to receive finishes.
- B. Remove labels after Work is complete.
- C. Clean adjacent surfaces with manufacturer recommended products.

3.13 PROTECTION

- A. After installation protect all finish systems with appropriate measures that will ensure no damage by ongoing construction activities.
- B. Touch-up or replacement of damages finish systems shall be done by contractor at no extra cost to the Project.

END OF SECTION 09050

SECTION 09510 - SUSPENDED ACOUSTICAL CEILINGS

PART 1 – GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED SECTIONS

- A. Section 07210 - Batt Insulation: Acoustical insulation.
- B. Section 07910 - Joint Sealers: Acoustical sealant.
- C. Division 16 – Addressable Fire Alarm System
- D. Division 15 – HVAC Registers and Grilles
- E. Division 16 – Lighting

1.03 REFERENCES

- A. ASTM C 635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2004.
- B. ASTM E 1264 - Standard Classification for Acoustical Ceiling Products; 1998 (Reapproved 2005).
- C. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

1.04 ADMINISTRATIVE REQUIREMENTS

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

1.05 SUBMITTALS

Division 09 - Finishes
09510 – Suspended Acoustical Ceilings

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on suspension system components.
- C. Samples: Submit two samples six (6) x six (6) inch in size illustrating material and finish of acoustical units.
- D. Manufacturer's Installation Instructions: Indicate special procedures.
- E. Maintenance Materials:
 - 1. See Section 01600 - Product Requirements, for additional provisions.
 - 2. Provide 20 percent of total acoustical unit area of each type of acoustical unit for Washington County's use in maintenance of project.

1.06 QUALITY ASSURANCE

- A. Fire-Resistive Assemblies: Complete assembly listed and classified by UL for the fire resistance indicated.
- B. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.07 FIELD CONDITIONS

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

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements of this Section manufacturers offering products that may be incorporated into the Work are not limited. This specification is based off of products manufactured by United States Gypsum Company (USG). Other available manufacturers are included as follows but are not limited too:
 - 1. Armstrong World Industries Inc.

Division 09 - Finishes
09510 – Suspended Acoustical Ceilings

2. Sound Seal Inc.
3. Certain Teed Corporation
4. Rockfon Inc.

2.02 ACOUSTICAL UNITS

- A. Acoustical Units - General: ASTM E 1264, Class A.
 1. Units for Installation in Fire-Rated Suspension System: Listed and classified for the fire-resistive assembly the suspension system is a part of.
 2. Units for Installation in "Wet" areas shall be humidity resistant, with anti microbial coating.
- B. Acoustical Tile (LAT) Type 1: Painted natural mineral fiber, ASTM E 1264 Type III, with the following minimum characteristics:
 1. Size: 24 x 24 inches (600 x 600mm)
 2. Thickness: 15/16 inches
 3. Composition: Water felted
 4. Light Reflectance: 0.85 minimum, determined as specified in ASTM E 1264
 5. NRC Range: 0.55 determined as specified in ASTM E 1264.
 6. Ceiling Attenuation Class (CAC): 0.35, determined as specified in ASTM E 1264
 7. Edge: Square
 8. Surface Color: White
 9. Surface Pattern: Fine
- C. Acoustical Tile (LAT) Type 2: Wet Formed Mineral Fiber Painted, ASTM E 1264 Type IX, with the following minimum characteristics:
 1. Size: 24 x 24 inches (600 x 600mm)
 2. Thickness: 15/16 inches
 3. Composition: Wet Formed Mineral Fiber
 4. Light Reflectance: 0.89 minimum, determined as specified in ASTM E 1264
 5. NRC Range: Not applicable
 6. Ceiling attenuation Class: 0.33, determined as specified in ASTM E 1264
 7. Edge: Square
 8. Surface Color: White
 9. Surface Pattern: Light Texture
 10. Panel Features: Washable, scrubbable, soil and impact resistant finish. Meets USDA/FSIS guidelines for use in food processing areas.

2.03 SUSPENSION SYSTEM(S)

09510 – Suspended Acoustical Ceilings

- A. Suspension Systems - General: ASTM C 635; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.
- B. DX/DXL Suspension System as manufactured by USG: Exposed Steel Suspension System Formed steel, commercial quality cold rolled; intermediate-duty.
 - 1. Profile: Tee;
 - 2. Size: 15/16 inch wide face.
 - 3. Construction: Double web.
 - 4. Finish: Painted
 - 5. Class A Fire Rated where required.
 - 6. Color: Black

2.04 SUSPENDED DECORATIVE CHANNEL SCHEDULE

- A. Steel Channel Units for Suspended Decorative Channel: Where ceilings of this designation are indicated, provide channels complying with the following:
 - 1. Products: C2 Paired Compàsso Channels by USG Interiors, Inc.
 - 2. C2 Paired Compàsso Channels: 8-inch wide face, 9/16-inch horizontal legs with hems formed for attachment to the mounting bracket creating a 1-3/8-inch reveal; commercial quality cold-rolled 24-gauge steel, factory finished in baked polyester enamel paint finish [color] with gray interior.
 - 3. Splice Plate: steel in finish to match trim channels; formed for snap-fit into channel ends.
 - 4. Mounting Brackets: steel brackets in manufacturer's standard painted finish, color gray, formed for snap-fit into channels and attached to hanger devices.
 - 5. 90° Corner Trim Pieces: to match C2 Paired Compàsso Channels
 - 6. End Caps: to match C2 Paired Compàsso Channels
 - 7. Accessory Device Bracket: steel accessory angle in small 1-5/8-inch, to coordinate with electrical.
 - 8. Hanger Devices: Turnbuckle devices and accessories for 1/32-inch diameter aircraft cable.
 - 9. Color: Custom color to be Black to match typical grid system.

2.05 BATT INSULATION

- A. Provide glass fiber thermal insulation for ceiling assembly as indicated in building plans.
- B. Do not use unfaced insulation in exposed applications where there is potential for skin contact and irritation.

- C. **Insulation Types:**
Unfaced Batt Insulation: ASTM C665, Type I; preformed unfaced batt; friction fit, conforming to the following:
1. Thermal Resistance (R-Value) (ASTM C518): R-19
 2. Combustion Characteristics (ASTM E136): Pass.
 3. Critical Radiant Flux (ASTM E970): Greater than 0.11 Btu/ft² × s (0.12 W/cm²).
 4. Water Vapor Sorption (ASTM C1104): 5% or less.
 5. Odor Emission (ASTM C1304): Pass.
 6. Corrosiveness (ASTM C665): Pass.
 7. Fungi Resistance (ASTM C1338): Pass.
 8. Recycled Content: Certified by Scientific Certification Systems to contain minimum of 20% post-consumer and 5% pre-consumer recycled glass product, on average of manufacturer's products.
 9. Prove through documentation that product complies with CIWMB Section 01350 for indoor air quality.
 10. Thickness: 6-1/2"
 11. Flamespread (ASTM E84): 25, maximum.
 12. Smoke Developed (ASTM E84): 50, maximum.
 13. Material Standard: ASTM C665, Type I.
 14. Butt insulation edges together tightly to prevent thermal leaks

2.06 ACCESSORIES

- A. **Support Channels and Hangers:** Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. **Perimeter Moldings:** Same material and finish as grid.
1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid.
 2. At Concealed Grid: Provide exposed L-shaped molding.
- C. **Acoustical Insulation:** Specified in Section 07210.
- D. **Acoustical Sealant For Perimeter Moldings:** Specified in Section 07910.
- E. **Gasket For Perimeter Moldings:** Closed cell rubber sponge tape.
- F. **Touch-up Paint:** Type and color to match acoustical and grid units.

PART 3 – EXECUTION

3.01 EXAMINATION

09510 – Suspended Acoustical Ceilings

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

3.02 INSTALLATION - SUSPENSION SYSTEM

- A. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- B. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- C. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- D. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- E. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- F. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- G. Do not eccentrically load system or induce rotation of runners.
- H. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
 - 2. Overlap and rivet corners.
- I. Install light fixture boxes constructed of gypsum board above light fixtures in accordance with fire rated assembly requirements and light fixture ventilation requirements.

3.03 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.

09510 – Suspended Acoustical Ceilings

- D. Install units after above-ceiling work is complete.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.
- G. Install hold-down clips on each panel to retain panels tight to grid system; comply with fire rating requirements.

3.04 ERECTION TOLERANCES

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

3.03 STOCK FOR OWNER

- A. Upon completion of this installation, furnish the Owner 30 pieces of each type of ceiling tile incorporated in the work. Wrap in heavy brown paper and marked.
- B. The acoustical units shall be protected until the end of the project.

END OF SECTION 09510

SECTION 09654 - RUBBER BASE AND ACCESSORIES**PART 1 – GENERAL****1.01 DESCRIPTION**

- A. Extent of rubber base and accessories is shown on drawings and in schedules.

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each type of base and accessory. Submit manufacturer's standard color charts for selection, showing full range of colors and patterns available, for each type of required.

1.03 PROJECT CONDITIONS

- A. Maintain minimum temperature of 65 degrees F (18 degrees C) in spaces to receive rubber base for at least 48 hours prior to installation, during installation, and for not less than 48 hours after installation. Store materials in spaces where they will be installed for at least 48 hours before beginning installation. Subsequently, maintain minimum temperature of 55 degrees F (13 degrees C) in areas where work is completed.
- B. Install base after other finishing operations, including painting, have been completed.

PART 2 – PRODUCTS**2.01 WALL BASE**

- A. Base (RB): cove type rubber wall base, 6 in high, 1/8 in thick, color as selected. Include standard outside corners and other trim items. Meet FS-SS W 40. Include edge strips and terminations.

2.02 TRANSITION ADAPTERS

- A. Adapter: All adapters must meet all ADA requirements
 1. Wheeled Traffic Carpet-to-Resilient, 2 ½ in wide, color as selected
 2. Wheeled Traffic Carpet-to-Carpet, 2 ½ in wide, color as selected.

2.03 STAIR NOSINGS

- A. Nosings: rubber stair tread nosing profile, 4" tread depth, 1.5" riser height, 1/8" thick color as selected

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Installer shall inspect surfaces to determine that they are satisfactory; i.e., one that is smooth and free from cracks, holes, ridges, coatings preventing adhesive bond, and other defects impairing performance or appearance. Install base in accordance with manufacturer's recommendations and instructions.

END OF SECTION 09654

09760 – RESINOUS FLOORING

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. Resinous flooring system as shown on the drawings and in schedules.
- B. Related sections include the following:
 - 1. Cast-in-Place Concrete, section 03 30 00
 - 2. Concrete Curing, section 03 39 00

1.3 SYSTEM DESCRIPTION

- A. The work shall consist of preparation of the substrate, the furnishing and application of an epoxy based multiroller applied flooring system with polymer resins and urethane topcoat. The system shall have the color and texture as specified by the Owner with a nominal thickness of 40 mils. It shall be applied to the prepared area(s) as defined in the plans strictly in accordance with the Manufacturer's recommendations.
- B. Cove base (if required) to be applied where noted on plans and per manufacturer's standard details unless otherwise noted.

1.4 SUBMITTALS

- A. Product Data: Latest edition of Manufacturer's literature including performance data and installation procedures.
- B. Manufacturer's Safety Data Sheet (SDS) for each product being used.
- C. Samples: A 3x3 inch square sample of the proposed system. Color, texture, and thickness shall be representative of overall appearance of finished system subject to normal tolerances.

1.5 QUALITY ASSURANCE

- A. The Manufacturer shall have a minimum of 10 years experience in the production, sales, and technical support of epoxy and urethane industrial flooring and related materials.

- B. The Applicator shall have experience in installation of the flooring system as confirmed by the manufacturer in all phases of surface preparation and application of the product specified.
- C. No requests for substitutions shall be considered that would change the generic type of the specified System.
- D. System shall be in compliance with requirements of United States Department of Agriculture (USDA), Food, Drug Administration (FDA), and local Health Department.
- E. System shall be in compliance with the Indoor Air Quality requirements of California section 01350 as verified by a qualified independent testing laboratory.
- F. Pre-installation conferences shall be held between Applicator, General Contractor and the Owner to review and clarification of this specification, application procedure, quality control, inspection and acceptance criteria and production schedule.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping

- 1. All components of the system shall be delivered to the site in the Manufacturer's packaging, clearly identified with the product type and batch number.

B. Storage and Protection

- 1. The Applicator shall be provided with a storage area for all components. The area shall be between 60 F and 90 F, dry, out of direct sunlight and in accordance with the Manufacturer's recommendations and relevant health and safety regulations.
- 2. Copies of Safety Data Sheets (SDS) for all components shall be kept on site for review by the Engineer or other personnel.

C. Waste Disposal

- 1. The Applicator shall be provided with adequate disposal facilities for non-hazardous waste generated during installation of the system.

1.7 PROJECT CONDITIONS

A. Site Requirements

- 1. Application may proceed while air, material and substrate temperatures are between 60 F and 90 F providing the substrate temperature is above the dew point. Outside of this range, the Manufacturer shall be consulted.
- 2. The relative humidity in the specific location of the application shall be less than 85 % and the surface temperature shall be at least 5 F above the dew point.
- 3. The Applicator shall ensure that adequate ventilation is available for the work area.
- 4. The Applicator shall be supplied with adequate lighting equal to the final lighting

level during the preparation and installation of the system.

- B. Conditions of new concrete to be coated with epoxy material.
 - 1. Concrete shall be moisture cured for a minimum of 7 days and have fully cured a minimum of twenty eight days in accordance with ACI-308 prior to the application of the coating system pending moisture tests.
 - 2. Concrete shall have a flat rubbed finish, float or light steel trowel finish (a hard steel trowel finish is neither necessary or desirable).
 - 3. Sealers and curing agents should not be used.
 - 4. Concrete surfaces on grade shall have been constructed with a vapor barrier to protect against the effects of vapor transmission and possible delamination of the system.
- C. Safety Requirements
 - 1. All open flames and spark-producing equipment shall be removed from the work area prior to commencement of application.
 - 2. "No Smoking" signs shall be posted at the entrances to the work area.
 - 3. The Owner shall be responsible for the removal of foodstuffs from the work area.
 - 4. Non-related personnel in the work area shall be kept to a minimum.

1.8 WARRANTY

- A. Manufacturer warrants that material shipped to buyers at the time of shipment substantially free from material defects and will perform substantially to Manufacturer published literature if used in accordance with the latest prescribed procedures and prior to the expiration date.
- B. Manufacturer liability with respect to this warranty is strictly limited to the value of the material purchase.

PART 2 – PRODUCTS

2.1 FLOORING

- A. Dur-A-Flex, Inc
 - 1. Dura Chip
 - 2. Dura Quartz System
- B. Euclid Chemical Company
 - 1. Eucopoxy Tufcoat
 - 2. Duraltex System

2.2 MANUFACTURERS

- A. Dur-A-Flex, Inc., 95 Goodwin Street, East Hartford, CT 06108, Phone: (860) 528-9838, Fax: (860) 528-2802
- B. Euclid Chemical Company (The); Duraltex, www.euclidchemical.com

2.3 PRODUCT REQUIREMENTS

A. Primer

1.	Percent Solids	56 %
2.	VOC	2 g/L
3.	Bond Strength to Concrete ASTM D 4541	550 psi, substrates fails
4.	Hardness, ASTM D 3363	3H
5.	Elongation, ASTM D 2370	9 %
6.	Flexibility (1/4: Cylindrical mandrel), ASTM D 1737	Pass
7.	Impact Resistance, MIL D-2794	>160
6.	Abrasion Resistance ASTM D 4060, CS 17 wheel, 1,000 g Load	30 mg loss

B. Broadcast Coat

1.	Percent Solids	100 %
2.	VOC	59 g/L
3.	Compressive Strength, ASTM D 695	16,000 psi
4.	Tensile Strength, ASTM D 638	3,800 psi
5.	Flexural Strength, ASTM D 790	4,000 psi
6.	Abrasion Resistance, ASTM D 4060 C-10 Wheel, 1,000 gm load, 1,000 cycles	35 mg loss
7.	Flame Spread/NFPA-101, ASTM E 84	Class A
8.	Impact Resistance MIL D-3134	0.025 inch Max
9.	Water Absorption. MIL D-3134	Pass
10.	Potlife @ 70 F	20-25 minutes

C. Broadcast Coat and Grout Coat

1.	Percent Solids	100 %
2.	VOC	3.8 g/L
3.	Compressive Strength, ASTM D 695	11,200 psi
4.	Tensile Strength, ASTM D 638	2,100 psi
5.	Flexural Strength, ASTM D 790	5,100 psi
6.	Abrasion Resistance, ASTM D 4060 C-10 Wheel, 1,000 gm load, 1,000 cycles	29 mg loss
7.	Flame Spread/NFPA-101, ASTM E 84	Class A
8.	Impact Resistance MIL D-24613	0.0007 inches, no cracking or

		delamination	
9.	Water Absorption, MIL D-24613		Nil
10.	Potlife @ 70 F		20 minutes
D. Topcoat			
1.	Percent Solids		95 %
2.	VOC		0 g/L
3.	Tensile Strength, ASTM D 2370		7,000 psi
4.	Adhesion, ASTM 4541		Substrate Failure
5.	Hardness, ASTM D 3363		4H
6.	60° Gloss ASTM D 523		70
7.	Abrasion Resistance, ASTM D406		Satin
	CS 17 wheel (1,000 g load) 1,000		8 mg loss with grit
			12 mg loss without grit
8.	Pot Life, 70 F, 50% RH		2 Hours
9.	Full Chemical Resistance		7 days

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for maximum moisture content, installation tolerances and other conditions affecting flooring performance.

1. Verify that substrates and conditions are satisfactory for flooring installation and comply with requirements specified.

3.2 PREPARATION

A. General

1. New and existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products.
2. Moisture Testing: Perform tests recommended by manufacturer and as follows.
 - a. Perform relative humidity test using in situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75% relative humidity level measurement.
 - b. If the relative humidity exceeds 75% then moisture mitigation system must be installed prior to resinous flooring installation. Slab-on-grade substrates without a vapor barrier may also require the moisture mitigation system.
3. There shall be no visible moisture present on the surface at the time of application.

of the system. Compressed oil-free air and/or a light passing of a propane torch may be used to dry the substrate.

4. Mechanical surface preparation
 - a. Shot blast all surfaces to receive flooring system with a mobile steel shot, dust recycling machine. All surface and embedded accumulations of paint, toppings hardened concrete layers, laitance, power trowel finishes and other similar surface characteristics shall be completely removed leaving a bare concrete surface having a minimum profile of CSP 3-4 as described by the International Concrete Repair Institute.
 - b. Floor areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment.
 - c. Where the perimeter of the substrate to be coated is not adjacent to a wall or curb, a minimum 1/4 inch key cut shall be made to properly seat the system, providing a smooth transition between areas. The detail cut shall also apply to drain perimeters and expansion joint edges.
 - d. Cracks and joints (non-moving) greater than 1/8 inch wide are to be chiseled or chipped-out and repaired per manufacturer's recommendations.
5. At spalled or worn areas, mechanically remove loose or delaminated concrete to a sound concrete and patch per manufacturer's recommendations.

3.3 APPLICATION

A. General

1. The system shall be applied in six distinct steps as listed below:
 - a. Substrate preparation
 - b. Priming
 - c. First broadcast coat application with first chip broadcast
 - d. Second broadcast coat with second chip broadcast
 - e. Grout coat application,
 - f. Topcoat application
2. Immediately prior to the application of any component of the system, the surface shall be dry and any remaining dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.
3. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.
4. The system shall follow the contour of the substrate unless pitching or other leveling work has been specified by the Architect.
5. A neat finish with well-defined boundaries and straight edges shall be provided by the Applicator.

B. Primer

1. The primers shall be mixed at the ratio of 1 part resin to 4 parts hardener per the manufacturer's instructions.
2. The primers shall be applied by 1/8 inch notched squeegee and backrolled at the rate of 200 sf/gal to yield a dry film thickness of 4 mils.

C. Broadcast Coats

1. The broadcast coat shall be applied as a double broadcast system as specified by the Architect.
2. The broadcast coat shall be comprised of two components, a resin, and hardener as supplied by the Manufacturer and mixed in the ratio of 2 parts resin to 1 part hardener.
3. The resin shall be added to the hardener and thoroughly mixed by suitably approved mechanical means.
4. The first broadcast coat shall be applied over horizontal surfaces using the dip and roll, and back roll method at the rate of 300 sf/gal.
5. Chips shall be broadcast to excess into the wet material, Macro chips at the rate of 0.1 lbs/sf, and Micro chips at the rate of 0.15 lbs/sf.
6. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose aggregate.
7. Scrape the floor with a trowel or floor scraper. Sweep and vacuum the floor again.
8. Apply a second broadcast coat of resin shall be applied by flat squeegee then backrolled with a coverage rate of 200 sf/gal.
9. Chips shall be broadcast to excess, Macro chips at the rate of 0.1 lbs/sf, and Micro chips at the rate of 0.15 lbs/sf.
10. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose chips.
11. Scrape the floor with a trowel or floor scraper. Sweep and vacuum the floor again.

D. Grout Coat

1. The grout coat shall be comprised of material that is mixed in the ratio of 1 part hardener to 2 parts resin and installed per the manufacturer's recommendations.
2. The grout coat shall be squeegee applied and backrolled with a coverage rate of 150 sf/gal.

E. Topcoat

1. The topcoat shall be roller applied at the rate of 500 sf/gal to yield a dry film thickness of 3 mils.
2. The finish floor will have a nominal thickness of 40 mils.

3.4 FIELD QUALITY CONTROL

A. Tests, Inspection

1. The following tests shall be conducted by the Applicator:
 - a. Temperature
 1. Air, substrate temperatures and, if applicable, dew point.
 - b. Coverage Rates
 1. Rates for all layers shall be monitored by checking quantity of material used against the area covered.

3.5 CLEANING AND PROTECTION

- A. Cure flooring material in compliance with manufacturer's directions, taking care to prevent their contamination during stages of application and prior to completion of the curing process.
- B. Remove masking. Perform detail cleaning at floor termination, to leave cleanable surface for subsequent work of other sections.

END OF SECTION

SECTION 09900 - PAINTS AND COATINGS**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints, stains, varnishes, and other coatings.
- C. Scope: Finish all interior and exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
 - 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 2. Exposed surfaces of steel lintels and ledge angles.
 - 3. Surfaces inside cabinets.
 - 4. Mechanical and Electrical:
 - a. In finished areas, paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
 - b. In finished areas, paint shop-primed items.
 - c. On the roof and outdoors, paint all equipment that is exposed to weather or to view, including that which is factory-finished.
 - d. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
 - e. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Stainless steel, anodized aluminum, bronze, terne, and lead items.
 - 6. Marble, granite, slate, and other natural stones.
 - 7. Floors, unless specifically so indicated.
 - 8. Ceramic and other tiles.
 - 9. Glass.
 - 10. Concealed pipes, ducts, and conduits.

1.02 RELATED SECTIONS

- A. Section 02765 - Pavement Markings: Painted pavement markings.
- C. Section 05500 - Metal Fabrications: Shop-primed items.
- D. Section 05510 - Metal Stairs: Shop-primed items.

1.03 REFERENCES

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D 16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2003.
- C. ASTM D 4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 1992 (Reapproved 2003).
- D. GreenSeal GS-11 - Paints; 1993.

1.04 DEFINITIONS

- A. Conform to ASTM D 16 for interpretation of terms used in this section.

1.05 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on all finishing products, including VOC content.
- C. Samples: Submit two paper chip samples, four (4) x four (4) inch in size illustrating range of colors and textures available for each surface finishing product scheduled.
- D. Samples: Submit two painted samples, illustrating selected colors and textures for each color and system selected with specified coats cascaded. Submit on aluminum sheet, twelve (12) x twelve (12) inch in size.
- E. Certification: By manufacturer that all paints and coatings comply with VOC limits specified.
- F. Certification: By manufacturer that all paints and coatings do not contain any of the prohibited chemicals specified; GreenSeal GS-11 certification is not required but if provided shall constitute acceptable certification.
- G. LEED Report: VOC content of all interior opaque coatings actually used.
- H. Manufacturer's Instructions: Indicate special surface preparation procedures.
- I. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

- J. Maintenance Materials:
 - 1. See Section 01600 - Product Requirements, for additional provisions.
 - 2. Supply two (2) gallons of each color; store where directed.
 - 3. Label each container with color and room numbers in addition to the manufacturer's label.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five (5) years experience.

1.07 MOCK-UP

- A. See Section 01400 - Quality Requirements, for general requirements for mock-up.
- B. Provide panel, six (6) feet long by six (6) feet wide, illustrating special coating color, texture, and finish.
- C. Provide door and frame assembly illustrating paint coating color, texture, and finish.
- D. Locate where directed.
- E. Mock-up may remain as part of the work.

1.08 DELIVERY, STORAGE, AND HANDLING

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

1.09 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior coatings during rain or snow, or when relative

humidity is outside the humidity ranges required by the paint product manufacturer.

- D. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- E. Minimum Application Temperature for Varnish Finishes: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.
- F. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 – PRODUCTS

2.01 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
 - 1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
 - 4. Supply each coating material in quantity required to complete entire project's work from a single production run.
 - 5. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- C. Volatile Organic Compound (VOC) Content:
 - 1. Provide coatings that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
 - 1) Opaque, Flat: 50 g/L, maximum.

Division 09 - Finishes
09900 – Paints and Coatings

- 2) Opaque, Nonflat: 150 g/L, maximum.
 - 3) Opaque, High Gloss: 250 g/L, maximum.
 - 4) Varnishes: 350 g/L, maximum.
- c. Architectural coatings VOC limits of State in which the project is located.
- d. USGBC LEED Rating System; for interior wall and ceiling finish (all coats), anti-corrosive paints on interior ferrous metal, clear wood stains and finishes, sanding sealers, other sealers, shellac, and floor coatings.
- 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- D. Chemical Content: The following compounds are prohibited:
 - 1. Aromatic Compounds: In excess of 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
 - 2. Acrolein, acrylonitrile, antimony, benzene, butyl benzyl phthalate, cadmium, di (2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, 1,2-dichlorobenzene, diethyl phthalate, dimethyl phthalate, ethylbenzene, formaldehyde, hexavalent chromium, isophorone, lead, mercury, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, naphthalene, toluene (methylbenzene), 1,1,1-trichloroethane, vinyl chloride.
- E. Flammability: Comply with applicable code for surface burning characteristics.
- F. Colors: As selected by Architect and approved by Owner.
 - 1. Selection to be made by M3A Architects, PLLC. after award of contract.
 - 2. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Washington County.
 - 3. Extend colors to surface edges; colors may change at any edge as directed by M3A Architects, PLLC..
 - 4. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.
 - 5. In utility areas, finish equipment, piping, conduit, and exposed duct work in colors according to the color coding scheme indicated.

2.02 MANUFACTURERS

- A. Subject to compliance with requirements of this Section manufacturers offering systems that may be incorporated into the Work are not limited.

Specification is based on products by Sherwin Williams, Inc. Other suggested manufacturers are as follows:

1. Benjamin Moore and Co.
2. Devoe and Reynolds Co.
3. PPG Industries, Pittsburgh Paints
4. ICI Inc.
5. Farrel Calhoun Paint Inc.

2.02 PAINT SYSTEMS – EXTERIOR

- A. Exterior Masonry: Elastomeric System
 - a. Flat Finish

1st Coat: S-W Loxon BlockSurfacer, A24W200 (50-100 sq ft/gal)

2nd Coat: S-W ConFlex XL Elastomeric High Build Coating, A5-400 Series

3rd Coat: S-W ConFlex XL Elastomeric High Build Coating, A5-400 Series (16 mils wet, 7.5 mils dry per coat)
- B. Exterior Metals (Aluminum, Galvanized): Latex Systems
 - a. Semi-Gloss Finish

1st Coat: S-W Metalatex Acrylic Semi-Gloss, B42 Series

2nd Coat: S-W Metalatex Acrylic Semi-Gloss, B42 Series (4 mils wet, 1.5 mils dry per coat)
- C. Exterior Metal (Misc. Iron, Ornamental Iron, Structural Iron & Steel, Ferrous Metal) Latex Systems
 - a. Semi-Gloss Finish

1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series (5-10 mils wet, 2-4 mils dry)

2nd Coat: S-W Metalatex Acrylic Semi-Gloss, B42 Series

3rd Coat: S-W Metalatex Acrylic Semi-Gloss, B42 Series (4 mils wet, 1.5 mils dry per coat)

2.03 PAINT SYSTEMS – INTERIOR

- A. Interior Masonry: Epoxy System (Water Base)
 - a. Semi-Gloss/High Luster Finish

1st Coat: S-W Heavy Duty Block Filler, B42W46 (18 mils wet, 10 mils wet)

2nd Coat: S-W Pro Industrial HB/ Waterbased Epoxy, B71W111/B71W100 Series

3rd Coat: S-W Pro Industrial HB/ Waterbased Epoxy, B71W111/B71W100 Series (4-6 mils dry per coat)
- B. Interior Metal (Aluminum, Galvanized): Epoxy Systems
 - a. Semi-Gloss Finish

1st Coat: S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series

Division 09 - Finishes
09900 – Paints and Coatings

(2-4 mils dry)

2nd Coat: S-W Pro Industrial Pre-Catalyzed Waterbased Epoxy, K46 Series

3rd Coat: S-W Pro Industrial Pre-Catalyzed Waterbased Epoxy, K46 Series (4 mils wet, 1.5 mils dry per coat)

- C. Interior Metal (Misc. Iron, Ornamental Iron, Structural Iron & Steel, Ferrous Metal): Epoxy Systems (Water Base)
 - a. Semi-Gloss Finish
 - 1st Coat: S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series (2-4 mils dry)
 - 2nd Coat: S-W Pro Industrial Pre-Catalyzed Waterbased Epoxy, K46 Series
 - 3rd Coat: S-W Pro Industrial Pre-Catalyzed Waterbased Epoxy, K46 Series (4 mils wet, 1.5 mils dry per coat)

- D. Interior Drywall (Walls, Ceilings, Gypsum Board): Epoxy Systems (Water Base)
 - a. Semi-Gloss Finish
 - 1st Coat: S-W PrepRite® 200 Latex Primer, B28W200 (4 mils wet, 1.2 mils dry)
 - 2nd Coat: S-W Water Based Catalyzed Epoxy, B70/B60V25 Series
 - 3rd Coat: S-W Water Based Catalyzed Epoxy, B70/B60V25 Series (2.5-3 mils dry per coat)

- D. Interior Wood (Walls, Ceilings, Doors, Trim,) Latex Systems
 - a. High Gloss Finish
 - 1st Coat: S-W PrepRite® Classic Primer, B28W101 (4 mils wet, 1.6 mils dry)
 - 2nd Coat: S-W ProClassic® Waterborne Acrylic High Gloss Enamel, B21W351 Series
 - 3rd Coat: S-W ProClassic® Waterborne Acrylic High Gloss Enamel, B21W351 Series (4 mils wet, 1.5 mils dry per coat)

- E. Interior Wood (Walls, Ceilings, Doors, Trim, etc.): Stain & Varnish
 - a. Clear Finish
 - 1st Coat: S-W Minwax 250 VOC Oil Stain (Optional)
 - Or
 - S-W Wood Classics® Interior Oil Stain, A49 Series (Optional)
 - 2nd Coat: S-W Wood Classics® Waterborne Polyurethane Varnish, Gloss or Satin
 - 3rd Coat: S-W Wood Classics® Waterborne Polyurethane Varnish, Gloss or Satin (4 mils wet, 1.0 mil dry per coat)

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents,

cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.

- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Do not begin application of coatings until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. If substrate preparation is the responsibility of another installer, notify M3A Architects, PLLC. of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.
- F. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Gypsum Wallboard: 12 percent.
 - 2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
 - 3. Interior Wood: 15 percent, measured in accordance with ASTM D 4442.
 - 4. Concrete Floors and Traffic Surfaces: 8 percent.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Concrete and Unit Masonry Surfaces to be Painted: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil

Division 09 - Finishes
09900 – Paints and Coatings

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. Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime defects after repair.
- H. Interior Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.
- I. Interior Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's instructions.
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance.
- E. Sand wood and metal surfaces lightly between coats to achieve required finish.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- G. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 FIELD QUALITY CONTROL

- A. See Section 01400 - Quality Requirements, for general requirements for field inspection.
- B. Inspect and test questionable coated areas in accordance with manufactures specifications.

3.05 CLEANING

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

Division 09 - Finishes
09900 – Paints and Coatings

- B. At end of each Work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
- C. Upon completion of painting, clean glass and paint splattered surfaces with cleaner that complies with surface manufacturers specifications. Remove splattered paint by washing and scraping, using care not to scratch or damage adjacent finished surfaces.

3.06 PROTECTION

- A. Protect work of other trades and disciplines, whether to be painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
- B. Provide “Wet Paint” signs to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their Work after completion of painting.
- C. At completion of construction activities of other trades, touch up and restore damaged or defaced surfaces.

END OF SECTION 09900

SECTION 10430 - EXTERIOR SIGNAGE**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Exterior signage of the following types:
 - 1. Wall mounted signs.
 - 2. Channel letter signs.
 - 3. Cast metal signs.
 - 4. Formed plastic signs.

1.02 REFERENCES

- A. ASTM B 209/209M - Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- B. ASTM B 221/221M - Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- B. ICC/ANSI A117.1 - Accessible and Useable Buildings and Facilities; 1998.
- C. USATBCB - Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).

1.03 SYSTEM DESCRIPTION

- A. Design exterior signs to withstand positive and negative wind loads as calculated in accordance with applicable building code.
- B. Frame and Enclosure:
 - 1. Design, construct and install structural and non-structural support framing in conformance with applicable building code and with AISI Standards.
 - 2. Design to provide for movement of components without damage, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.
 - 3. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.
 - 4. Seismic Loads: Design and size components to withstand seismic loads and sway displacement as calculated in accordance with applicable building code.

1.04 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used,

including:

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.
4. Provide proof of listing with UL or CSA.

- D. Shop Drawings: Showing sign styles, lettering, locations and dimensions of each sign.
1. Indicate component details including, framing, anchorage, design loading, and location of fasteners, and accessories or items required of related Work.
 2. Submit calculations for loadings and stresses of all framing under Professional Engineer's seal who is experienced in design of this Work and licensed at the Project location.
- E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- F. Verification Samples: Two full size samples, representing type, style and colors including method of attachment.

1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with requirements of ICC/ANSI A117.1 and ADAAG.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results.
- B. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements of this Section manufacturers

offering products that may be incorporated into the Work are not limited. Specifications are based on Gemini Incorporated, Fabricated metal Letters. Subject to compliance with product requirements, manufacturers offering products to be installed at project site are not limited. Other acceptable manufacturers are as follows but not limited:

1. Apco Signs Inc.
2. Metal Arts Inc.
3. ACE Sign Systems Inc.

2.02 EXTERIOR SIGNS

A. Standard Products: The following exterior sign systems shall be provided in locations indicated on Drawings and as directed by Owner/Architect.

1. Fabricated Aluminum Letter Series:
 - a. Type Face and Material:
 1. Type Face: To be selected by Owner
 2. Face Color: To be selected by Owner
 3. Hollow
 4. Material: Aluminum
 - b. Sizes:
 1. Fourteen (14) inch overall height as per drawings;
Text: G.A. Carmichael Family Health Center
 - c. Finish: Satin face, Matte Edges
 - d. Mounting:
 1. Project Mounting
2. Fabricated Aluminum Logo Sign:
 - a. Type Face and Material:
 1. Logo artwork: To be selected by Owner
 2. Face: Acrylic Inserts
 3. Hollow
 4. Material: 304 Stainless Steel Alloy – Vertical Grain Standard
 - b. Sizes: See Drawings.
 - c. Finish: Satin face, Matte Edges
 - d. Mounting:
 1. Standard Concealed Stud Mounting

2.02 CONSTRUCTION AND MATERIALS GENERAL

- A. ASTM B 221/221M: Extruded aluminum, 6063T5 alloy, anodizing quality.
- B. ASTM B 209/209M: Aluminum sheet and plate, anodizing quality.

- C. Fasteners: Corrosion resistant stainless steel.
- D. Provide gaskets between exterior wall face and mountings, to prevent water and dust from seeping into the interior.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until surfaces to receive signs have been finished and finishes are dry and correctly cured.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify raceways and boxes are ready for installation.
- D. Verify electrical and required data connections are available, in the proper locations and ready for use.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Locate signs in accordance with approved shop drawings and ADA requirements.

3.04 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 10430

SECTION 10440 - INTERIOR SIGNAGE**PART 1 – GENERAL****1.01 SECTION INCLUDES**

- A. Interior signage of the following types:
 - 1. Adhesive backed vinyl wall graphic.

1.02 REFERENCES

- A. ICC/ANSI A117.1 - Accessible and Useable Buildings and Facilities; 1998.
- B. USATBCB - Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).

1.03 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Manufacturer's descriptive literature.
 - 2. Installation methods.
- C. Shop Drawings: List sign styles, lettering, locations and dimensions of each interior sign.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with requirements of ICC/ANSI A117.1 and ADAAG.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.06 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results.
- B. Do not install products under environmental conditions outside

manufacturer's absolute limits.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements of this Section, manufacturers offering products that may be incorporated into the Work are not limited.

2.02 INTERIOR SIGNS/GRAPHICS

- A. Standard Products: The following interior sign systems shall be provided in locations indicated.
- B. Inkjet UV Printed Multicolor Scheme, printed on 3M Envision Translucent Film Series 3730 Film, or equal. Size as indicated on drawings.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until surfaces to receive signs have been finished and finishes are dry and correctly cured.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Locate signs in accordance with approved shop drawings and ADA requirements.

3.04 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 10440

SECTION 10530 - EXTRUDED ALUMINUM WALKWAY COVERS**PART I – GENERAL****1.01 RELATED DOCUMENTS:**

- A. The bidding requirements, general conditions, supplementary conditions, drawings and requirements of division one specification shall apply to work specified in this section.

1.02 DESCRIPTION OF WORK:

- A. The extent of aluminum walkway cover is shown on the drawings and as specified herein.
- B. Definition: Extruded Aluminum Walkway Cover shall consist entirely of extruded aluminum sections (roll-formed not acceptable). System shall consist of heli-arc welded, one-piece rigid structural bents (column and beam assemblies), decking, fascia, accessory items and hardware to provide a complete system.

1.03 SUBMITTALS

- A. Shop Drawings: Submit detailed drawings, layout of walkway cover system, all mechanical joint locations with complete details, connections, jointing and accessories.
- B. Product Data: Submit manufacturer's product data, specifications, component performance data and installation instructions.
- C. Calculations: Provide signed and sealed structural calculations for the proposed walkway cover, by a professional engineer registered in the state of Louisiana, who professes his discipline to be structural engineering.

1.04 QUALITY ASSURANCE

- A. Codes and Standards: Comply with provisions of the following except as other-wise indicated:
 - 1. Standard Building Code, latest addition with amendments, if any.
 - 2. AWS (American Welding Society) standards for structural aluminum welding.

Division 10 – Specialties
10530 – Extruded Aluminum Walkway Covers

- B. **Manufacturer:** Obtain aluminum covered walkway system from only one (1) manufacturer, although several may be indicated as offering products complying with requirements.
- C. **Installer Qualification:** Firm with not less than three (3) years experience in installation of aluminum walkway covers of type, quantity and installation methods similar to work of this section.
- D. **Field Measurements:** Take field measurements prior to preparation of shop drawings and fabrication where possible, to insure proper fitting of work. However, allow for adjustments within specified tolerations wherever taking of field measurements before fabrication might delay work.
- E. **Shop Assembly:** Preassemble units in shop to greatest extent possible and disassemble as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- F. **Coordination:** Coordinate work of this section with work of other sections which interface with covered walkway system (sidewalks, curbs, building fascias, etc.).

1.05 PERFORMANCE REQUIREMENTS:

- A. **System Performance:** Provide aluminum covered walkway system that has been designed, produced, fabricated and installed to withstand normal temperature changes as well as live loading, dead loading and wind loading in compliance with Standard Building Code requirements for geographic area in which work is located and as follows:
 - 1. **Live Load:** 30 p.s.f. minimum
 - 2. **Structural design for wind forces:** Comply with ANSI A58.1-1982
 - 3. **Design Wind Velocity:** 110 m.p.h.
 - 4. **Importance Factor:** 1.1.
 - 5. **Stability Criteria:** International Building Code
- B. **Sizes shown on drawings are to be considered minimum.**
- C. **Structure shall be capable of sustaining severe icing, hail, hurricane force winds and supporting a concentrated load.**

1.06 WARRANTY

Division 10 – Specialties
10530 – Extruded Aluminum Walkway Covers

- A. Manufacturer shall warrant the entire system against defects in labor and materials for a period of one (1) year commencing on the date of substantial completion as established in Division One of these specifications.
- B. Intention of this warranty is the manufacturer will come onto the jobsite and do all necessary to effect corrections of any deficiencies.
- C. Prima Facie Evidence of defects in labor and material may include but is not limited to, one or more of the following:
 - 1. Moisture leaks
 - 2. Metal failure including excessive deflection
 - 3. Fastener failure
 - 4. Finish failure

PART 2 – PRODUCT

2.01 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with requirements of this Section manufacturers offering products that may be incorporated into the Work are not limited. This specification is based on products by DITT-Deck Extruded Aluminum Walkway Cover System by Dittmer Architectural Aluminum. Other acceptable manufacturers are as follows but not limited to:
 - 1. Mason Corporation
 - 2. Peachtree Protective Covers, Inc.
 - 3. Tennessee Valley Metals, Inc.
 - 4. Perfection Architectural Systems Inc.

2.02 MATERIALS

- A. All aluminum extrusions shall be alloy 6063 heat treated to a T-6 temper.
- B. Provide the following finishes for the following canopy elements:
 - 1. Aluminum extrusions: Paint finish: Baked-on polyester coating, as per ASTM B449 and B117M, colors to be selected from manufacturer's standards.
 - 2. Aluminum sheeting: Factory finished with chemical cleaning, conversion coating and baked-on polyester coating. Coating conforms to the ASTM B449 and ASTM B117 testing.

Division 10 – Specialties
10530 – Extruded Aluminum Walkway Covers

- C. Fasteners:
 - 1. Deck Screws (rivets not permitted): Type 18-8 non-magnetic stainless steel sealed with a neoprene "O" ring beneath 5/8" outside dimension, conical washer.
 - 2. Fascia Rivets: Size 3/16" by 1/2" grip range aluminum rivets with aluminum mandrel.
 - 3. Bolts: All bolts, nuts and washers to be 18-8 non-magnetic stainless steel.
 - 4. Tek Screws: not permitted
- D. Warranty:
 - 1. Manufacturer shall warrant the entire system against defects in labor and materials for a period of one (1) year commencing on the date of substantial completion as established in Division One of these specifications.
 - 2. Intention of this warranty is the manufacturer will come onto the jobsite and do all necessary to effect corrections of any deficiencies.
 - 3. Prima Facie Evidence of defects in labor and material may include but is not limited to, one or more of the following:
 - a. Moisture leaks
 - b. Metal failure including excessive deflection
 - c. Fastener failure
 - d. Finish failure

2.03 FABRICATION

- A. Comply with indicated profiles, dimensioned requirements and structural requirements.
- B. Use sections true to details with clean, straight, sharply defined profiles and smooth surfaces of uniform color and texture, free from defects impairing strength and durability.
- C. All welding do be done by heli-arc process.
- D. Bents shall consist of shop welded one-piece units. When size of bents do not permit shipment as a welded unit, concealed mechanical joints may be used.
- E. Mechanical joints shall consist of stainless-steel bolts with a minimum of two (2) bolts per fastening. Bolts and nuts shall be installed in a concealed manner utilizing 1/2" thick by 1 1/2" aluminum bolt bars welded to structural members. All such mechanical joints must be detailed on shop drawings showing all locations.

- F. Roof Deck: Extruded Aluminum shapes, interlocking self-flashing sections. Shop fabricate to lengths and panels widths required for field assembly. Depth of sections to comply with structural requirements. Provide shop induced camber in deck units with spans greater than 16'- 0" to offset dead load deflections. Welded dams are to be used at non-draining ends of deck.
- G. Expansion joints, design structure for thermal expansion and contraction. Provide expansion joints as required.
- H. Exposed rivets used to fasten bottom of fascia to deck to have finish to match fascia.

PART 3 – EXECUTION

3.01 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle covered walkway system components as recommended by manufacturer. Handle and store in a manner to avoid deforming members and to avoid excessive stresses.

3.02 EXAMINATION

- A. Examine adjacent work for conditions that would prevent quality installation of system.
- B. Do not proceed until defects are corrected.

3.03 FIELD DIMENSIONS

- A. General contractor shall field confirm bent locations, dimensions and elevations shown on shop drawings prior to fabrication.

3.04 INSTALLATION

- A. Install roof deck sections, accessories and related flashing in accordance with manufacturer's instructions. Provide roof slope for rain drainage without ponding water. Align and anchor roof deck units to structural support frames.
- B. Assemble all components in a neat, workmanlike manner.

3.06 FLASHING

Division 10 – Specialties
10530 – Extruded Aluminum Walkway Covers

- A. Flashings: Flashings required between covered walkway system and adjoining structures are not work of this section. Refer to "Flashing and Sheet Metals", Section 07620.

3.07 CLEANING AND PROTECTION

- A. Damaged Units: Replace roof deck panels and other components of the work which have been damaged or have deteriorated beyond successful minor repair.
- B. Cleaning: Remove protective coverings at time in project construction sequence which will afford greatest protection of work. Clean finished surfaces as recommended by manufacturer. Maintain in a clean condition during construction.
- C. Protection: Advise Contractor of protection and surveillance procedures, as required to ensure that work of this section will be without damage or deterioration at time of substantial completion.

END OF SECTION 10530