

Specifications

MAINTENANCE BUILDING FOR: JONESBORO COUNTRY CLUB

Jonesboro, Arkansas

Commission No. 2108



**BRACKETT
KRENNERICH**

architects

100 East Huntington, Suite D
Post Office Box 1655
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SECTION 00 0101

PROJECT TITLE

**MAINTENANCE BUILDING FOR:
JONESBORO COUNTRY CLUB
JONESBORO, ARKANSAS**

OWNER:

**JONESBORO COUNTRY CLUB
1408 E. NETTLETON
JONESBORO, AR 72401**

OWNER'S REPRESENTATIVE:

**MARK CAGLE, CLUB MANAGER
(870) 932-2371**

ARCHITECT:

**BRACKETT KRENNERICH ARCHITECTS
100 E. HUNTINGTON, SUITE D
POST OFFICE BOX 1655
JONESBORO, ARKANSAS 72403-1655
(870) 932-0571 OFFICE**

STRUCTURAL:

**SMITH ENGINEERING CO.
P.O. BOX 299
MARION, AR 72364
(870) 739-5533**

COMMISSION NUMBER: 2108

PROJECT DOCUMENTS DATE: JUNE 14, 2021

DIVISION 00

**PROCUREMENT
AND CONTRACTING REQUIREMENTS**

SECTION 00 0110

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SECTION 00 0115
LIST OF DRAWING SHEETS

THE FOLLOWING DRAWINGS DATED JUNE 14, 2021 BEARING THE ARCHITECT'S COMMISSION NUMBER 2108 WITH THESE SPECIFICATIONS FORM THE CONTRACT DOCUMENTS.

ARCHITECTURAL

A001 DOOR SCHEDULE, VISUAL DOOR TYPES, HOLLOW METAL FRAME SCHEDULE
AND DOOR DETAILS
A100 FLOOR PLAN
A101 ROOF PLAN AND DETAILS
A200 EXTERIOR BUILDING ELEVATIONS
A201 EXTERIOR BUILDING ELEVATIONS
A202 BUILDING SECTIONS

STRUCTURAL

S100 FOUNDATION PLAN, DETAILS, AND GENERAL NOTES
S200 FRAMING PLAN AND NOTES

End of List of Drawings

SECTION 00 1113

INVITATION TO BID

Qualified Contractors are invited to bid on a contract for "**Maintenance Building for: Jonesboro Country Club, Jonesboro, Arkansas**". The bids shall be on a lump sum basis.

Jonesboro Country Club, hereinafter termed owner, will receive bids until **2:00 p.m.; July 2, 2021**. Bids may be mailed or delivered in care of Mark Cagle, Jonesboro Country Club, 1408 E. Nettleton, Jonesboro, Arkansas, 72401. Bids received after this time will not be accepted.

Bids will be privately opened at the stated time at the manager's office, Jonesboro Country Club, 1408 E. Nettleton, Jonesboro, Arkansas, 72401.

The scope of work consists of an approximately 4,800 sf. Pre-engineered metal building structure with metal roof and wall panels. In addition, scope of work includes a conventional concrete foundation. Sitework, mechanical/electrical work, and site utilities are not part of this scope of work.

Plans, specifications, bid forms, and other contract documents may be examined at the office of the architect. While contract documents can be examined at the following plan rooms, bidders should use caution in doing so:

Jonesboro Blueprint
222 Madison St.
Jonesboro, AR 72401
(870) 932-4349

Southern Reprographics
901 W. 7th Street
Little Rock, AR 72201
(501) 372-4011

Obtaining contract documents through any source other than the Design Professional or their representative(s) is not advisable due to the risks of receiving incomplete or inaccurate information. Contract documents obtained through the Design Professional or their representative(s) are considered the official version and take precedence should any discrepancies occur. The official version of the complete set of the contract documents should be examined and are obtainable from Brackett-Krennerich and Associates, P.A., 100 E. Huntington, Suite D, Jonesboro, Arkansas. General contractors may obtain two (2) complete sets of bidding documents from Brackett-Krennerich and Associates upon deposit of **\$100.00** which is refundable, less postage/shipping costs, if applicable, to bona fide bidders upon return of documents in good condition within 3 days after bid date.

Additional sets of documents may be obtained for use by subcontractors and material suppliers upon receipt of **\$50.00** per set which is refundable less cost of reproduction (**50% refundable**), and less postage/shipping costs if applicable, upon return of documents in good condition within 3 days after the bid date. No partial sets will be issued.

Bid Security in the amount of five percent (5%) of the bid must accompany each bid in accordance with the Instructions to Bidders.

Bidders shall conform to the requirements of the Arkansas licensing laws and regulations for contractors, and shall be licensed before his bid is submitted.

The Owner encourages all small, minority, and women business enterprises submit bids for capital improvements. Encouragement is also made to all general contractors that in the event they subcontract portions of their work, consideration is given to the identified groups.

There will be a **Pre-Bid Conference** held at the site on **June 24, 2021**. The conference will start at exactly **2:00 p.m.** Prime contractors who arrive late or fail to attend this meeting may forfeit their bidding privilege. The owner reserves the right to waive this requirement and/or schedule additional meetings.

The owner reserves the right to reject any and all bids, or to waive any formalities.

Mark Cagle, Club Manager
Jonesboro Country Club

SECTION 00 2100
INSTRUCTIONS TO BIDDERS

1.01 RECEIPT AND OPENING OF BIDS

- A. Owner: Jonesboro Country Club
- B. Bid Location: Jonesboro Country Club, Manager's Office, 1408 E. Nettleton, Jonesboro, Arkansas 72401.
- C. Bid Date/Time: July 2, 2021 @ 2:00 p.m.
- D. The Owner reserves the right to reject any or all bids and to waive formalities.
- E. The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities.
- F. Owner assumes no obligations to accept the lowest bid or any bid withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof.
- G. Any bid received after the time and date specified shall not be considered.
- H. No bidder may withdraw a bid within 30 days after the actual date of the opening thereof.

1.02 PREPARATION OF BID

- A. Each bid must be submitted on the prescribed forms.
- B. All blank spaces for bid prices must be filled, in ink or typewritten.
- C. Bids must be signed in ink showing title or authority to bind bidder to a contract.
- D. Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, the name of the project and the contractor's license number as issued and approved by Arkansas State Licensing Board previous to bid date. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope as specified in the bid form.

1.03 PROPRIETARY INFORMATION

- A. All information submitted in response to this bid is public after the bid opening. The bidder should not include as a part of the response to the invitation to bid any information which the bidder believes to be a trade secret or otherwise privileged or confidential. If the bidder wishes to include such material with a bid, then the material should be supplied under separate cover and identified as confidential. The Owner does not warrant or agree to, but will endeavor to keep that information confidential. Contractor acknowledges that information in the possession of the City of Jonesboro may be subject to the provisions of the Arkansas Freedom of Information Act.

1.04 SEVERABILITY

- A. The finding or determination of any part or parts of the general instructions, terms and conditions is void, unenforceable, invalid or voidable shall result in only that part being stricken with the remainder to continue in full force and effect.

1.05 BIDDING DOCUMENTS

- A. Bidders may obtain complete sets of Contract Documents from the architect.
- B. Complete sets of Contract Documents must be used in preparing bids; neither Owner nor Design Professional assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.
- C. Obtaining Contract Documents through any source other than the architect is not advisable due to the risks of receiving incomplete or inaccurate information, and the bidder runs the risk of basing bidder's proposal on such information.
- D. The documents obtained through the architect are considered the official version and take precedence if any discrepancies occur.

- E. The fact that documents used for bidding purposes are named "Contract Documents" does not diminish in any way the right of the owner to reject any and all bids and to waive any formality.

1.06 QUALIFICATION OF BIDDER

- A. The owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the owner all such information and date of same for this purpose as the owner may request.
- B. The owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.
- C. Conditional bids will not be accepted.
- D. All bidders shall comply with the requirements of the Contractor's Licensing Law of the State of Arkansas, Arkansas Code Annotated § 17-25-101 et seq.
 - 1. **Note: All contractors must be licensed the day the project bids.**
- E. The company may be required, upon request, to prove to the satisfaction of the owner that they have the skill, experience, and the necessary facilities and financial resources to perform the contract in a satisfactory manner and within the required time. If the evidence of competency is not satisfactory, the bid of such company may be rejected.

1.07 ASSIGNMENTS

- A. Neither this contract nor any interest therein nor claim thereunder may or shall be assigned or transferred by the contractor except as expressly authorized in writing by the Owner.
- B. No contractor, subcontractor or agreement shall be made by the contractor with any other party for furnishing any of the product, work or services herein contracted without the written approval of the Owner.

1.08 CONFLICT OF INTEREST

- A. By submitting a bid, the contractor represents and warrants that no employee of the Owner is in any manner interested directly or indirectly in the bid or contract which may result from the bid or in any of the expected profits which might arise therefrom; further, that no attempt has been made to influence or gain favorable advantage by communicating directly or indirectly with any official of the owner.
- B. It is understood that any action taken which might tend to degrade the integrity of the competitive bidding process will be considered as grounds for disqualification or a breach of this contract.

1.09 NON-COLLUSIVE AFFIDAVIT

- A. By submitting a bid, the company and the individual personally signing the bid represent and warrant that such bid is genuine and is neither collusive or made for or on behalf of any person not named, and that he has neither induced or solicited any other company to place a sham bid nor directly or indirectly caused another company to refrain from or be unable to present a bid.

1.10 BID SECURITY

- A. Each bid proposal shall include with it a bid security in the amount of 5% of the total bid offered.
- B. The bidder will be required to submit a bidder's deposit which includes enclosing a cashier's check payable to the order of the owner drawn upon and certified by a bank or trust company doing business in Arkansas or by a corporate bid bond in an amount equal to 5% of the bid.
- C. Such bid bonds will be returned to all except the three lowest bidders within three days after the opening of the bids, and the remaining bid bonds will be returned promptly after the owner and the accepted bidder have executed the contract, or if no bids were accepted, upon demand of the bidder at the time specified, so long as he has not been notified of the acceptance of his bid.

1.11 LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

- A. The successful bidder, upon his failure to execute the contract and bonds required within ten (10) days after he has received notice of the acceptance of his bid, shall forfeit to the owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

1.12 TIME OF COMPLETION / LIQUIDATED DAMAGES

- A. Bidder must agree to commence work within ten (10) days of the date of the "Notice to Proceed" of the owner and to **fully complete the project and all punch list items within 180 days**
- B. The contractor will proceed with the work at such rate of progress to insure full completion within the contract time. It is expressly understood and agreed, by and between the contractor and the owner, that the contract time for completion of the work described in the contract is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.
- C. If the contractor shall fail to complete the work within the contract time, of extension of time granted by the owner, then the contractor will pay to the owner the amount of **Three Hundred Dollars (\$300.00)** for liquidated damages for each calendar day that the contractor shall be in default after the time stipulated in the contract documents for each phase of the work.
- D. Time extensions will be granted to the contractor only when the delay in completion of the work is due to the following and the contractor has promptly given written notice of such delay to the owner or architect.
 - 1. To any preference, priority or allocation order duly issued by the owner.
 - 2. To unforeseeable causes beyond the control and without the fault or negligence of the contractor, including, but not restricted to, acts of God, or the public enemy, acts of the owner, acts of another contractor in the performance of a contract with the owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and
 - 3. To any delays of subcontractors occasioned by any of the causes specified in 1. and 2. above.

1.13 CONDITIONS OF WORK/EXAMINATION OF SITE OF WORK

- A. Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor therein.
- B. Bidder shall examine the Contract Documents and visit the project site of work.
- C. Bidder shall become familiar with all existing conditions and limitations under which the work is to be performed, and shall base bid on items necessary to perform the work as set forth in the contract documents.
- D. No allowance will be made to Bidder because of lack of such examination or knowledge.
- E. The submission of a bid shall be construed as conclusive evidence that the Bidder has made such examination.

1.14 PRE-BID CONFERENCE

- A. A Pre-Bid Conference is to be held on **June 24, 2021** at the site.
- B. The meeting will begin precisely at **2:00 p.m.** CDST.
- C. Prime contractors who arrive late or fail to attend this meeting may forfeit their bidding privilege.
- D. The owner reserves the right to waive this requirement and/or schedule additional meetings.

1.15 ADDENDA AND INTERPRETATIONS

- A. No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally.
- B. Every request for such interpretation should be in writing addressed to: Brackett Krennerich and Associates, P.A., Architects, 100 E. Huntington, Suite D, Post Office Box 1655, Jonesboro,

Arkansas 72401/72403 and to be given consideration must be received at least three (3) days prior to the date fixed for the opening of bids.

- C. All such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed and faxed to all prospective bidders (at the respective addresses and fax numbers furnished for such purposes), not later than three days prior to the date fixed for the opening of bids.
- D. All addenda so issued shall become part of the contract documents.

1.16 SECURITY FOR FAITHFUL PERFORMANCE

- A. Simultaneously with his delivery of the executed contract, the contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under the contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein.
- B. The surety on such bond or bonds shall be a surety company duly authorized to do business in the State of Arkansas and satisfactory to the owner.

1.17 POWER OF ATTORNEY

- A. Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their Power of Attorney.

1.18 TAXES, LAWS, AND REGULATIONS

- A. The bidders' attention is directed to the fact that all applicable sales tax, social security taxes, state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout; and they will be deemed to be included in the contract, inspection fees, licenses, and building permits where required.
- B. The contractor shall pay for all such taxes and fees required for this project.
- C. Labor. Contractors employed upon the work will be required to conform to the labor laws of the State of Arkansas and various acts amendatory and supplementary thereto, and to all laws, regulations, and legal requirements applicable thereto.
- D. State licensing laws for contractors.

1.19 MINORITY PARTICIPATION

- A. Pursuant of Ark. Code Ann. Section 22-9-203, the State encourages all small, minorities, a women business enterprises to submit bids for capital improvements.
- B. Encouragement is also made to all general contractors that in the event they subcontract portions of their work, consideration is given to the identified groups.

1.20 DISCRIMINATION

- A. Bidder shall not discriminate against any employee, applicant for employment, or subcontractor as provided by law.
- B. Bidder shall be responsible for ensuring that all subcontractors comply with federal and state laws and regulations related to discrimination.
- C. Upon final determination by a court or administrative body having proper jurisdiction that the Bidder has violated state or federal laws or regulations, the Owner may impose a range for appropriate remedies up to and including termination of the contract.

1.21 SUBMISSION OF POST-BID INFORMATION

- A. The selected bidder shall within seven (7) days after "Notice of Intent of Award of Contract" submit the following:
 - 1. A statement of costs of each major item of work included in his bid.
 - 2. A designation of the work to be performed by the bidder with his own forces.
 - 3. A list of names of subcontractors or other persons or organizations (including those who are to furnish materials or equipment fabricated to a special design), proposed for the

principal portions of the work, including suppliers of major equipment. Prior to the award of the contract, the architect will notify the bidder in writing if either the owner or the architect, after due investigation, has reasonable and substantial objection to any person or organization on such list. If the owner refuses in writing to accept such person or organization, the bidder may, at his option withdraw his bid without forfeiture of bid security, notwithstanding anything to the contrary contained in Paragraph 1.07 "Liquidated Damages for Failure to Enter Into Contract." Subcontractors and other persons and organizations proposed by the bidder and accepted by the owner and the architect must be used on the work for which they were proposed and accepted and shall not be changed except with the written approval of the owner and the architect.

a. Note: Subcontractors referred to in above paragraph are those subcontractors other than those listed on bid form. Subcontractors listed on the bid form must be used for work listed in compliance with Arkansas Statutes, Arkansas Code Annotated § 22-9-204.

B. Upon completion of the project, List of Subcontractors, AIA Document G-805, shall be completed to include subcontractors and suppliers of major equipment, complete with names and addresses, along with telephone numbers.

1.22 SUBCONTRACTORS

- A. Arkansas Code Annotated § 22-9-204, requires that in each instance where the total bid submitted by the licensed prime contractor exceeds \$50,000.00, all prime contractors, as a condition to perform work for and in the State of Arkansas shall use no other subcontractors when the subcontractors' portion of the project is \$50,000 or more, except those qualified and licensed by the Contractors Licensing Board in Mechanical (HVAC-R), Plumbing, Electrical and Roofing.
- B. For those bids where the listed work is \$50,000 or more, the prime contractor must make a definite decision as to which subcontractor he intends to use. The prime contractor shall place the names, licenses of each subcontractor and indicate on the space provided on the Form of Proposal the amount of the listed work is \$50,000 or more. The prime contractor may use his own forces to do the listed work, however if the listed work is \$50,000 or more, the prime contractor must be qualified and licensed by the Arkansas Contractors Licensing Board to perform the listed work. Once the prime contractor determines his own forces will be used, he shall place his name, license number and indicate on the space provided on the Form of Proposal the amount of listed work is \$50,000 or more.
- C. In the event, the amount of the listed work is below \$50,000, the Prime Contractor shall place the names of the person or firm performing the work and indicate on the space provided on the Form of Proposal the listed work is under \$50,000.
- D. Failure to fill the form correctly shall cause the bid to be declared non-responsive and the bid will not receive consideration.
- E. In the event that one (1) or more of the subcontractors named by the prime contractor in his successful bid thereafter refuse to perform his contract or offered contract, the prime contractor may substitute another subcontractor, after having obtained prior approval from the architect or engineer, and the owner.
- F. The prime contractor shall submit written evidence that the substituted contractor is costing the same amount of money or less and, if costing less, that his savings will be deducted from the total contract of the prime contractor and rebated to the owner.
- G. It shall be mandatory that any subcontractors listed in (A) – (D) on the form of proposal by the Prime Contractor be awarded a contract under Arkansas Code Annotated § 22-9-204.
- H. Subcontractors List:
1. Mechanical H.V.A.C.
 2. Plumbing
 3. Electrical (cannot be included in the Mechanical Bid)
 4. Roofing and Sheet metal

- I. Electrical License Requirement
 1. No person shall perform electrical work on the contract without processing an Arkansas State Master or Journeyman License from the Arkansas State Electrical Examiners Board. All electrical work and apprentice electricians shall be supervised by a Master or Journeyman Electrician on a one to one ratio.
 2. All electricians shall have a copy of their license with them and shall be required to show it to an appropriate inspector upon request.

1.23 STANDARDS OF QUALITY

- A. Reference in the specifications to any article, device, product, material, fixture, etc., by name, manufacturer, or catalog numbers, shall be interpreted as establishing a standard of quality and shall not be considered or construed as limiting competition.
- B. The contractor may use any article, device, product, material, fixture, etc., which, in the judgment of the architect, and with written approval, is equal to that specified.

1.24 APPROVAL

- A. Request for approval and/or substitutions prior to the time/date for receiving bids on this project shall be submitted to the architect, in written form, only through general contractors or prime contractors who propose to submit bids.
- B. Submission of each request shall be in accord with requirements set forth in Paragraph 1.10 "Addenda and Interpretations" of "Instructions To Bidders."
- C. Such requests shall include a complete description of the proposed substitution with drawings, cuts, performance and test data, or information necessary for a complete evaluation.

1.25 METHOD OF BIDDING

- A. Base Bid:
 1. Base bid to be a lump sum bid including all construction work required to complete the total project in accordance with the requirements of the contract documents and shall cover all new construction including Site Work, Mechanical H.V.A.C. Work, Plumbing Work, Electrical Work, Roofing and Sheet metal Work.

1.26 EVALUATION AND CONSIDERATION OF BIDS

- A. It is the intent of the Owner to award a contract to the lowest responsive, qualified Bidder provided the bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available.
- B. The Owner shall have the right to waive formalities in a bid received and to accept the bid which, in the Owner's judgment, is in the Owner's own best interests.
- C. The Owner shall have the right to accept any bid for a period not to exceed 30 days.
- D. Bids will be considered on the basis of price, however, the Owner reserves the right to establish the award criteria and to reject any or all and to award the Contract to the firm who, in the judgment of the Owner, is the best qualified to perform the work.

1.27 TIE BIDS

- A. If two or more sealed bids are equal in amount, meet specifications, and are the lowest received at the bid opening, then the apparent low bidder will be determined by lot (placing the name of the tie bidders into a container and drawing one name).
- B. The drawing will be done by the owner or another person so designated by the owner in the presence of a witness and tie bidders. The witness shall be an employee of the Owner.
- C. Documentation of the drawing must be included on the bid tabulation and signed by those present.
- D. Nothing in the above and foregoing will diminish the owner's reserved right to reject any and all bids and to waive formalities.

1.28 MODIFICATION, WITHDRAWAL AND SCRIVENER'S ERROR

- A. Modification and Withdrawal. Bidder may withdraw bid at any time before bid opening and may resubmit up to the date and time designated for receipt of bids. No bid may be withdrawn or modified after time has been called for the bid opening. Oral modifications to bids will not be considered. Bidder may submit written modifications to bid in writing, or by facsimile at any time prior to the expiration of the bidding time and date and shall so word the modification(s) as to not reveal the amount of the original bid. Facsimile modifications shall require written confirmation over the Bidder's signature within 24 hours after bid opening.
- B. Scrivener's Error. Pursuant to Ark. Code Ann. § 19-4-1405 (e), bidders may request in writing, to be relieved of their bid any time after the bid opening, but no later than 72 hours after receiving the intent to award, excluding Saturdays, Sundays and holidays. Scrivener's error is an error in the calculation of the bid which can be documented by clear and convincing written evidence and which can be clearly shown by objective evidence drawn from inspection of the original work papers, documents, or materials used in preparation of the bid sought to be withdrawn; and the bid was submitted in good faith and the mistake was due to a calculation or clerical error, an inadvertent omission, or typographical error as opposed to an error in judgment.
- C. Failure to make a timely request constitutes a waiver by the bidder of the bidder's right to claim that the mistake in his or her bid was a scrivener's error.

1.29 DISQUALIFICATION OF BIDDERS.

- A. The Owner shall have the right to disqualify bids (before or after opening), which includes but is not limited to, evidence of collusion with intent to defraud or other illegal practices upon the part of the Bidder, to reject a bid not accompanied by the required bid security or by other data required by the Contract Documents, or to reject a Bid which is in any way incomplete or irregular.
- B. The Owner may reject any and all bids and may reject a bid of any party who has failed to perform, been unfaithful and/or delinquent in any former relationship with the Owner. The Owner reserves the right to waive any irregularities or formalities in any solicitation or bid response. The Owner shall be the sole judge as to which bid is best and, in determining that fact, may consider the contractor's business integrity, financial resources, experience, facilities and/or capacity for performing the work.

1.30 EXECUTION OF CONTRACT.

- A. The successful Bidder shall be prepared, if so required by the Owner, to present evidence of experience, qualifications, and financial ability to carry out the terms of the Contract.
- B. The successful Bidder will be required to execute an Agreement with the Owner on a form identical to the Agreement Form included with the Contract Documents and the Performance and Payment Bond and Certification of Insurance and a copy of the policies showing all endorsement, exclusions within 10 days after receipt of the Intent to Award. Failure of the Bidder to do so may result in the Bidder being rejected and could result in disqualification and forfeiture of bid bond. The owner's notice to proceed shall not be issued until the insurance policies have been reviewed and approved by the owner.
- C. The successful Bidder will be required to furnish Owner with proof of insurance, as prescribed by the General Conditions and Supplementary General Conditions.

1.31 RESERVATIONS

- A. The invitation to bid does not commit the Owner to award a contract, to pay any costs incurred in the preparation of a bid in response to this invitation, or to procure or contract for services or supplies. The Owner reserves the right to accept, or reject, in part or its entirety, any bid received as a result of this invitation, if it is in the best interest of the Owner to do so.

END OF SECTION

SECTION 00 4100

BID FORM

THE PROJECT AND THE PARTIES

1.01 TO:

A. Owner: Jonesboro Country Club

1.02 FOR:

A. Maintenance Building For: Jonesboro Country Club, Jonesboro, Arkansas

1.03 DATE: _____ (Bidder to enter date)

1.04 SUBMITTED BY: (Bidder to enter name and address)

A. Bidder's Full Name _____
1. Address _____
2. City, State, Zip _____

1.05 OFFER

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Brackett-Krennerich and Associates, P. A. Architects for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

- B. _____
(dollar amount to be shown numerically)
- C. We have included the required security Bid Bond as required by the Instructions to Bidders.
- D. All applicable federal taxes are included and State of Arkansas taxes are included in the Bid Sum.
- E. We understand that the owner reserves the right to reject any and all bids and waive any informalities in the bidding.

1.06 DEDUCTIVE ALTERNATIVES

A. Deductive Alternate No. 1 - Deduct the sum of:

(dollar amount to be shown numerically)

1.07 ACCEPTANCE

- A. This offer shall be open to acceptance for thirty days from the bid closing date.
- B. If this bid is accepted by the Owner within the time period stated above, we will:
 - 1. Execute the Agreement within Ten (10) days of receipt of Notice of Award.
 - 2. Furnish the required bonds within Ten (10) days of receipt of Notice of Award.
 - 3. Commence work within Ten days after written Notice to Proceed of this bid.
- C. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.
- D. In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.08 CONTRACT TIME/LIQUIDATED DAMAGES

- A. If this Bid is accepted, we will:
- B. Complete the work by : **within 180 calendar days**

- C. Liquidated Damages: **\$300.00** for liquidated damages will be assessed to the contractor for each calendar day that the contractor is in default after time stipulated in the contract documents.

1.09 ADDENDA

- A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum or price.
 - 1. Addendum # _____ Dated _____.
 - 2. Addendum # _____ Dated _____.
 - 3. Addendum # _____ Dated _____.
 - 4. Addendum # _____ Dated _____.

1.10 LISTING OF ROOFING WORK

- A. All roofing work shall be listed regardless of qualifications, licensures or work amount.
- B. Bidders should consult the project manual on how to fill out this form. Failure to fill out this form correctly shall cause the bid to be declared non-responsive and the bid will not receive consideration.
 - 1. Indicate the Name(s), License Number(s) of each entity performing the listed work and the amount:
- C. ROOFING AND SHEET METAL: Name-

- 1. License No. _____
- 2. Is the amount of work \$50,000 or over: Yes ___ No ___

1.11 BID FORM SIGNATURE(S)

- A. Company Name: _____
- B. Signature: _____
- C. Printed Name: _____
- D. Title: _____
- E. Business Address: _____
- F. Contractor's License No. _____
- G. Seal if bid is by a corporation.

**SECTION 00 5200
AGREEMENT FORM**

PART 1 GENERAL

1.01 FORM OF AGREEMENT

- A. AIA Document A101 - 2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum.
- B. Sample copy of Agreement Form is enclosed at the end of this section.

END OF AGREEMENT

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)

Jonesboro Country Club
1408 E. Nettleton
Jonesboro, AR 72401

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

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

Maintenance Building for:
Jonesboro Country Club
Jonesboro, Arkansas

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

Brackett-Krennerich & Associates P.A.
100 E. Huntington Ave., Suite D
Jonesboro, AR 72401

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. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added or deleted from the original AIA text.

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

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.

Init.

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.)

Init.

[] 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 day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the day of the 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 () 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.)

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

§ 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.)

§ 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.)

§ 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.)

%

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.)

§ 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)

§ 8.3 The Contractor’s representative:

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

Init.

§ 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.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201-2017, may be given in accordance with AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203-2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 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
- .4 AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

.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.)

Init.

[] 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)

CONTRACTOR (Signature)

(Printed name and title)

(Printed name and title)

Init.

SECTION 00 6000

PROJECT FORMS

1.01 PROJECT FORMS INCLUDED

- A. Submittal Transmittal Form
- B. AIA Document G702 - 1992 Application and Certificate for Payment
- C. AIA Document G703 - 1992 Continuation Sheet
- D. AIA Document G701 - 2017 Change Order
- E. AIA Document G704 - 2017 Certificate of Substantial Completion
- F. AIA Document G706 - 1994 Contractor's Affidavit of Payment of Debts and Claims
- G. AIA Document G706A - 1994 Contractor's Affidavit of Release of Liens
- H. AIA Document G707 - 1994 Consent of Surety to Final Payment
- I. Substitution Request Form

END OF PROJECT FORMS



AIA Document G702 - 1992

Application and Certificate for Payment

TO OWNER: Jonesboro Country Club
1408 E. Nettleton
Jonesboro, AR 72401

PROJECT: Maintenance Building for:
Jonesboro Country Club
Jonesboro, Arkansas

APPLICATION NO: 001
PERIOD TO:

FROM CONTRACTOR:

VIA ARCHITECT: Brackett-Krennerich & Associates P.A.
100 E. Huntington Ave., Suite D
Jonesboro, AR 72401

CONTRACT FOR: General Construction
CONTRACT DATE:
PROJECT NOS: 2108 / /

Distribution to:
OWNER:
ARCHITECT:
CONTRACTOR:
FIELD:
OTHER:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703®, Continuation Sheet, is attached.

- 1. ORIGINAL CONTRACT SUM \$0.00
- 2. NET CHANGE BY CHANGE ORDERS \$0.00
- 3. CONTRACT SUM TO DATE (Line 1 + 2) \$0.00
- 4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$0.00
- 5. RETAINAGE:
 - a. 0 % of Completed Work (Column D + E on G703) \$0.00
 - b. 0 % of Stored Material (Column F on G703) \$0.00

- 6. TOTAL EARNED LESS RETAINAGE \$0.00
(Line 4 Less Line 5 Total)
- 7. LESS PREVIOUS CERTIFICATES FOR PAYMENT \$0.00
(Line 6 from prior Certificate)
- 8. CURRENT PAYMENT DUE \$0.00
- 9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6) \$0.00

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$0.00	\$0.00
Total approved this Month	\$0.00	\$0.00
TOTALS	\$0.00	\$0.00
NET CHANGES by Change Order		\$0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: _____
By: _____ Date: _____
State of: _____
County of: _____
Subscribed and sworn to before me this _____ day of _____
Notary Public: _____
My Commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$0.00
(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT: _____
By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.



AIA® Document G701™ – 2017

Change Order

PROJECT: *(Name and address)*
 Maintenance Building for:
 Jonesboro Country Club
 Jonesboro, Arkansas

CONTRACT INFORMATION:
 Contract For: General Construction

 Date:

CHANGE ORDER INFORMATION:
 Change Order Number: 001

 Date:

OWNER: *(Name and address)*
 Jonesboro Country Club
 1408 E. Nettleton
 Jonesboro, AR 72401

ARCHITECT: *(Name and address)*
 Brackett-Krennerich & Associates P.A.
 100 E. Huntington Ave., Suite D
 Jonesboro, AR 72401

CONTRACTOR: *(Name and address)*

THE CONTRACT IS CHANGED AS FOLLOWS:

(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

The original Contract Sum was	\$	0.00
The net change by previously authorized Change Orders	\$	0.00
The Contract Sum prior to this Change Order was	\$	0.00
The Contract Sum will be increased by this Change Order in the amount of	\$	0.00
The new Contract Sum including this Change Order will be	\$	0.00

The Contract Time will be increased by Zero (0) days.

The new date of Substantial Completion will be

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

Brackett-Krennerich & Associates P.A.
ARCHITECT *(Firm name)*

CONTRACTOR *(Firm name)*

Jonesboro Country Club
OWNER *(Firm name)*

SIGNATURE

SIGNATURE

SIGNATURE

Kyle Cook, President
PRINTED NAME AND TITLE

PRINTED NAME AND TITLE

Mark Cagle, Club Manager
PRINTED NAME AND TITLE

DATE

DATE

DATE



AIA® Document G704® – 2017

Certificate of Substantial Completion

PROJECT: <i>(name and address)</i> Maintenance Building for: Jonesboro Country Club Jonesboro, Arkansas	CONTRACT INFORMATION: Contract For: General Construction Date:	CERTIFICATE INFORMATION: Certificate Number: 001 Date:
OWNER: <i>(name and address)</i> Jonesboro Country Club 1408 E. Nettleton Jonesboro, AR 72401	ARCHITECT: <i>(name and address)</i> Brackett-Krennerich & Associates P.A. 100 E. Huntington Ave., Suite D Jonesboro, AR 72401	CONTRACTOR: <i>(name and address)</i>

The Work identified below has been reviewed and found, to the Architect's best knowledge, information, and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated below is the date established by this Certificate.
(Identify the Work, or portion thereof, that is substantially complete.)

Brackett-Krennerich &
Associates

ARCHITECT *(Firm Name)*

SIGNATURE

Kyle Cook, AIA, President

PRINTED NAME AND TITLE

DATE OF SUBSTANTIAL COMPLETION

WARRANTIES

The date of Substantial Completion of the Project or portion designated above is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)

WORK TO BE COMPLETED OR CORRECTED

A list of items to be completed or corrected is attached hereto, or transmitted as agreed upon by the parties, and identified as follows:
(Identify the list of Work to be completed or corrected.)

The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. The Contractor will complete or correct the Work on the list of items attached hereto within () days from the above date of Substantial Completion.

Cost estimate of Work to be completed or corrected: \$

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work, insurance, and other items identified below shall be as follows:

(Note: Owner's and Contractor's legal and insurance counsel should review insurance requirements and coverage.)

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

CONTRACTOR <i>(Firm Name)</i>	SIGNATURE	PRINTED NAME AND TITLE	DATE
_____	_____	_____	_____
OWNER <i>(Firm Name)</i>	SIGNATURE	PRINTED NAME AND TITLE	DATE
_____	_____	_____	_____



AIA® Document G706™ – 1994

Contractor's Affidavit of Payment of Debts and Claims

PROJECT: <i>(Name and address)</i> Maintenance Building for: Jonesboro Country Club Jonesboro, Arkansas	ARCHITECT'S PROJECT NUMBER: 2108	OWNER: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i> Jonesboro Country Club 1408 E. Nettleton Jonesboro, AR 72401	CONTRACT FOR: General Construction CONTRACT DATED:	ARCHITECT: <input type="checkbox"/>
		CONTRACTOR: <input type="checkbox"/>
		SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

STATE OF:
COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

- Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose

Indicate Attachment Yes No

CONTRACTOR: *(Name and address)*

The following supporting documents should be attached hereto if required by the Owner:

- Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
- Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
- Contractor's Affidavit of Release of Liens (AIA Document G706A).

BY: _____

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:
My Commission Expires:

 **AIA**® Document G706A™ – 1994

Contractor's Affidavit of Release of Liens

PROJECT: <i>(Name and address)</i> Maintenance Building for: Jonesboro Country Club Jonesboro, AR 72401	ARCHITECT'S PROJECT NUMBER: 2108	OWNER: <input type="checkbox"/>
		ARCHITECT: <input type="checkbox"/>
	CONTRACT FOR: General Construction	CONTRACTOR: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i> Jonesboro Country Club 1408 E. Nettleton Jonesboro, AR 72401	CONTRACT DATED:	SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

STATE OF:
COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS:

- SUPPORTING DOCUMENTS ATTACHED HERETO:**
1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
 2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR: *(Name and address)*

BY: _____
(Signature of authorized representative)

_____ *(Printed name and title)*

Subscribed and sworn to before me on this date:

Notary Public:
My Commission Expires:



AIA Document G707™ – 1994

Consent Of Surety to Final Payment

PROJECT: <i>(Name and address)</i> Maintenance Building for: Jonesboro Country Club Jonesboro, Arkansas	ARCHITECT'S PROJECT NUMBER: 2108	OWNER: <input type="checkbox"/>
	CONTRACT FOR: General Construction	ARCHITECT: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i> Jonesboro Country Club 1408 E. Nettleton Jonesboro, AR 72401	CONTRACT DATED:	CONTRACTOR: <input type="checkbox"/>
		SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

on bond of _____, SURETY,
(Insert name and address of Contractor)

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall
not relieve the Surety of any of its obligations to _____, CONTRACTOR,
(Insert name and address of Owner)

as set forth in said Surety's bond. _____, OWNER,

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

Attest:
(Seal):

(Printed name and title)

SUBSTITUTION REQUEST FORM

To: _____ Commission Number: _____
 _____ Date Received: _____
 Project: _____

Specification Section Title/Number/Paragraph: _____

Drawing/Details Affected: _____

Proposed Substitution: _____

Manufacturer: _____ Address: _____ Phone: _____

Product Description: _____

Differences between proposed substitution and specified product: _____

WHY IS SUBSTITUTION BEING SUBMITTED? (SELECT 1 OF THE FOLLOWING):

- Pre-Bid Substitution (Prior Approval): Included detail analysis comparing proposed substitution against specified product, including redlined specification section showing differences.
- Specified product is not available. Explain in detail, use attached letter.
- Cost savings to Owner. Indicate cost analysis as attachment.
- Other. Explain

EFFECTS OF PROPOSED SUBSTITUTION

Answer the following questions and attach explanations.

1. Attach list of at least 3 projects where proposed substitution has been used within past 12 months include Name, address, and telephone number of Owner and Architect.
(attachment included) (attachment not included, explain)
2. Does substitution affect dimensions indicated on Drawings?
(No) (Yes, explain)
3. Does substitution affect work of other sections?
(No) (Yes, explain)
4. Does substitution require modifications to design, changes to drawings, or revisions to specifications?
(No) (Yes, explain)

CONTRACTORS'S/BIDDER'S REPRESENTATION

Undersigned accepts responsibility for coordination of proposed substitution and accepts all additional costs resulting from the incorporation of proposed substitutions into the Project per Section 01 6300. A request for substitution constitutes a representation that the Contractor/Bidder has investigated the proposed product and determined that it is equal to or superior in all respects to specified product.

The only response to this Request for Substitution will be by Addendum (if prior to award) or Supplemental Instruction (if after award, unless Change Order is necessary to reduce Contract Amount).

Submitted by: _____
Name: _____
Address: _____
Telephone: _____
Contact person of manufacturer/supplier of proposed substitution: _____
Subcontractor's signature and date: _____
Contractor's signature and date: _____

ARCHITECT'S REVIEW AND ACTION

- Substitution approved
- Substitution not approved
- No Action Required
- Submission Incomplete, not accepted
- Submission Too Late for Consideration

Reviewed by: _____ Date: _____

Additional Comments: Contractor Subcontractor Supplier Manufacturer A/E
 Other _____

SECTION 00 7200

GENERAL CONDITIONS

1.01 FORM OF GENERAL CONDITIONS

- A. AIA Document A201 – 2017 General Conditions of the Contract for Construction, included herewith, is the General Conditions between the Owner and Contractor.
- B. The AIA General Conditions and Supplementary Conditions Section 00 7300 of these specifications shall form part of the contract and apply to the contractor and all subcontractors alike.

1.02 SUPPLEMENTARY CONDITIONS

- A. Refer to Section 00 7300 for amendments to these General Conditions.

2.01 RELATED REQUIREMENTS

- A. Section 00 7300 – Supplementary Conditions.

END OF DOCUMENT

AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Maintenance Building for
Jonesboro Country Club
Jonesboro, AR 72401

THE OWNER:

(Name, legal status and address)

Jonesboro Country Club
1408 E. Nettleton
Jonesboro, AR 72401

THE ARCHITECT:

(Name, legal status and address)

Brackett-Krennerich & Associates
100 E. Huntington Ave., Suite D
Jonesboro, AR 72401

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ADDITIONS AND DELETIONS:

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

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

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

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14 **TERMINATION OR SUSPENSION OF THE CONTRACT**

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Init.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

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

§ 1.1.3 The Work

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

§ 1.1.4 The Project

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

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

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

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

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

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

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

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

§ 1.3 Capitalization

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

§ 1.4 Interpretation

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

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

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

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

§ 1.6 Notice

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

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

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

G202™-2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

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

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

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

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

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

§ 2.4 Owner's Right to Stop the Work

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

§ 2.5 Owner's Right to Carry Out the Work

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

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

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

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

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

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

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

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

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

§ 3.3 Supervision and Construction Procedures

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

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

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

§ 3.4 Labor and Materials

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

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

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

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

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

§ 3.7 Permits, Fees, Notices and Compliance with Laws

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

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

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

§ 3.7.4 Concealed or Unknown Conditions

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

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 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 to whom the Contractor has reasonable objection.

§ 3.8.2 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 but not in the allowances; and
- .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 (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

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

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

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

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

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and

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delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

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

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

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

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

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

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

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

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will

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

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

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

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

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

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

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

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

ARTICLE 4 ARCHITECT

§ 4.1 General

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

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

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

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

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

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

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

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

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

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

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

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

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

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

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

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

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

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

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

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

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

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

§ 6.2 Mutual Responsibility

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

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

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

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

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

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

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

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

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

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

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

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

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

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

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

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

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

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

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

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

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

§ 7.4 Minor Changes in the Work

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

ARTICLE 8 TIME

§ 8.1 Definitions

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

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

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

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

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

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

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

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

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;

- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will

promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act

or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

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The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and

approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

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

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

**SECTION 00 7300
SUPPLEMENTARY CONDITIONS**

PART ONE GENERAL

1.01 INTENT

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 00 7200 and other provisions of the Contract Documents as indicated below.
- B. All provisions which are not so amended or supplemented remain in full force and effect.
- C. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.

1.02 MODIFICATIONS TO AIA A201 - 2017

A. ARTICLE 1 - GENERAL PROVISIONS

1. FORM OF AGREEMENT

- a. 1.1., Basic Definitions, add the following subparagraph:
 - 1) 1.1.1.2, The form of agreement between owner and contractor shall be as defined in Section 00 5200 of the specifications.
- 2. 1.1.5 THE DRAWINGS
 - a. List of drawings are enumerated in Section 00 0115 of the specifications.

B. ARTICLE 2 - OWNER

- 1. Delete 2.1.2 entirely.
- 2. Delete 2.2.1 entirely.
- 3. Delete 2.3.3 entirely.

C. ARTICLE 3 – CONTRACTOR

1. LABOR AND MATERIALS

- a. Refer to the following paragraphs:
 - 1) No. 3.4 - Labor and Materials
 - 2) No. 3.6 - Taxes
 - 3) No. 3.7 - Permits, Fees, Notices and Compliance with Laws.
 - 4) No. 3.13 - Use of Site
- b. See Specifications Section 01 1100, Summary of Work, for additional provisions on these subjects.

2. CONTRACTOR'S CONSTRUCTION AND SUBMITTAL SCHEDULES

- a. Refer to Section 3.10; See Specifications Section 01 3216, Construction Schedules, for additional provisions on this subject.

3. DOCUMENTS AND SAMPLES AT THE SITE

- a. Refer to Section No. 3.11, Documents and Samples at the Site:
- b. See Specifications Section 01 7839, Project Record Documents, for additional provisions on this subject.

4. SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- a. Refer to Section No. 3.12, Shop Drawings, Product Data, and Samples
- b. See Specifications Section 01 3323, Submittals, for additional provisions on this subject.

5. CUTTING AND PATCHING WORK

- a. Refer to Section 3.14, Cutting and Patching:
- b. See Specifications Section 01 7329, Cutting and Patching, for additional provisions on this subject.

6. CLEANING

- a. Refer to Section 3.15, Cleaning Up
- b. See Specifications Section 01 7400, Cleaning, for additional provisions on this subject.

7. ACCESS TO WORK

a. Add the following paragraph:

- 1) 3.16.1 Inspection: The contractor awarded this project agrees to allow any Federal or State Inspector, acting in their official capacity, to have access to the jobsite.

D. ARTICLE 5 - SUBCONTRACTS

1. Refer to 5.2.1 and add the following subparagraph:

- a. 5.2.1.1, See Section 00 2100, of the specifications for additional requirements for subcontractors

E. ARTICLE 7 - CHANGES IN THE WORK

1. CHANGE ORDERS

a. 7.2.1, Delete in its entirety and substitute the following:

- 1) 7.2.1, The contractor shall present an itemized accounting together with appropriate supporting data for the purposes of considering additions or deductions. Supporting data shall include but is not limited to the following:
 - (a) costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and worker or workmen's compensation insurance;
 - (b) costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
 - (c) rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
 - (d) costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
 - (e) additional costs of supervision and field office personnel directly attributable to the change.
 - (f) The value of all such additions and deductions shall then be computed as set forth in Paragraph 'D'.
- 2) The burden of proof of cost rests upon the Contractor. Contractor shall be required, if called upon, to furnish the original bills and payrolls and support the statement with proper affidavits. Burden of proof of costs is upon the general contractor.
- 3) In no event shall any understanding or agreement, contract modification, change order or other matter which would constitute a deviation from the terms of this contract be effective or binding upon the owner unless expressly stated and agreed to in writing executed by the owner.

b. 7.2.1.2 Compute requests for changes be they additions or deductions as follows:

- 1) For work directly performed by the General Contractor or a Subcontractor:
 - (a) Net cost of material-----a
 - (b) State Sales Tax -----b
 - (c) Net Placing cost-----c
 - (d) W.C. Insurance Premium and FICA Tax-----d
 - (1) Subtotal-----a+b+c+d
 - (e) Overhead and profit, 12% X (a+b+c+d)-----e
 - (f) Allowable Bond Premium (if applicable)-----f
 - (1) TOTAL COST-----a+b+c+d+e+f
- 2) Credit for work omitted shall be computed as outlined in (1) "a through e" except the General Contractor or Subcontractor's share of overhead and profit percentage is 7%.
- 3) For work performed by Subcontractors the General Contractor Shall:
 - (a) Subcontractors shall compute their work as outlined in (1) "a through e". To the cost of that portion of the work (change) that is performed by the subcontractor, the general contractor shall add an overhead and profit charge of Five (5%) percent plus the allowable bond premium.

2. CONSTRUCTION CHANGE DIRECTIVES
 - a. Delete 7.3, Construction Change Directives, 7.3.1 through 7.3.10 in its entirety. Changes of work may only be accomplished through the change order process.
 - b. Delete reference to construction change directive in paragraph 7.1.2. All changes to work are to be through change order process.
- F. ARTICLE 9 - PAYMENTS AND COMPLETION
 1. Refer to Section 9.2, Schedule of Values:
 - a. See Specifications Section 01 2973 Schedule of Values, for additional provisions on this subject.
 2. PAYMENTS TO CONTRACTOR
 - a. 9.3 Applications for Payment, add the following subparagraphs:
 - 1) 9.3.2.1, Act 193 of 2009 amended Arkansas Code Annotated 22-9-604 (a) concerning withholding of retention proceeds in a construction contract, provides that payment to the contractor be as follows:
 - (a) Ninety Five percent (95%) of the value of labor executed will be paid to the contractor by the owner in monthly installments as work progresses in proportion to the amount of work executed during monthly period less previous payments. Five percent (5%) will be retained by the owner until final payment. One hundred percent (100%) of all materials delivered and stored on the premises or materials stored in a bonded warehouse approved by the owner will be paid monthly with pay requests
 - b. 9.3.2.2, Arkansas Code Annotated 22-9-501, makes provisions for the contractor to withdraw before completions of the project, the retainage withheld by the owner upon deposit of approved government bonds.
 - b. 9.3.2.2, Arkansas Code Annotated 22-9-501, makes provisions for the contractor to withdraw before completions of the project, the retainage withheld by the owner upon deposit of approved government bonds.
 3. Add to Subparagraph 9.3.1, Applications for Payment, the following sentence:
 - a. The form of Application for payment shall be AIA Document G-702, Application and Certification for Payment, supported by AIA Document G-703, Continuation Sheet.
 4. CERTIFICATES FOR PAYMENT
 - a. 9.4.1, Add the following:
 - 1) 9.4.1.1, Deliver three (3) copies of monthly estimates to architect on form to be provided by the architect.
 - 2) 9.4.1.2, The contractor shall promptly pay each subcontractor, upon receipt of payment from the owner, out of the amount paid to the contract on account of said subcontractor's work. The contractor shall require each subcontractor to make payments to his subcontractors in similar manner. Failure to promptly pay subcontractors shall be cause to call upon the contractor's payment bond for relief.
 - 3) 9.4.1.3, The owner shall make final payment within 30 days of completion and acceptance of the work. In the event the project extends beyond 30 days, periodic payments shall be made.
 5. PAYMENT WITHHELD
 - a. 9.5, Decisions to Withhold Certification, add the following subparagraph:
 - 1) 9.5.1.1, The Owner may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary in its opinion to protect the owner from loss because of:
 - (a) When periodic payments are made five percent (5%) will be withheld.
 - (b) Defective work not remedied;
 - (c) Third party claims filed or reasonable evidence indicating probable filing to such claims;
 - (d) Failure of the contractor to make payment properly to subcontractors or for labor, materials or equipment;
 - (e) Reasonable evidence that the work cannot be completed for the unpaid balance of the contract sum;
 - (f) Damage to the owner or another contractor;

- (g) Reasonable evidence that the work will not be completed within the contract time; or
 - (h) Persistent failure to carry out the work in accordance with the contract documents.
- 6. FAILURE OF PAYMENT
 - a. Delete 9.7 entirely.
- 7. FINAL COMPLETION AND FINAL PAYMENT
 - a. Add to 9.10.2:
 - 1) Forms for "Consent of Surety for Final Payment" and "Contractor's Affidavit of Payment of Debts and Claims," are included at the end of Section 00 6000 1, Project Forms. These forms are required to be submitted to the owner with other close-out documents prior to final payment.
- G. ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY
 - 1. Delete 10.3.3 entirely.
 - 2. Delete 10.3.6 entirely.
- H. ARTICLE 11 - INSURANCE AND BONDS
 - 1. CONTRACTOR'S INSURANCE AND BONDS
 - a. 11.1.1, In the first line following the word "maintain", insert the words "in a company or companies to which the owner has no reasonable objection".
 - b. 11.1.1, Add the following new subparagraph:
 - 1) 11.1.1.2, Liability insurance should include all major divisions of coverage and be on a comprehensive general basis including:
 - (a) Premises - Operation (including X-C-U)
 - (b) Owner's and Contractor's Protective
 - (c) Products and Completed Operations
 - (d) Contractual - Including specific provision for the contractor's obligation under Paragraph 11.1.
 - (e) The contractor shall purchase from and maintain such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract:
 - 1) Claims under worker's compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed.
 - 2) Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees.
 - 3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees.
 - 4) Claims for damages insured by usual personal injury liability coverage.
 - 5) Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of sue resulting therefrom.
 - 6) Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle.
 - 7) Claims for bodily injury or property damage arising out of completed operations; and
 - 8) Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.
 - 2) 11.1.1.3, The insurance required by Subparagraph 11.1.1 and 11.1.1.2 shall be written for not less than any limits of liability required by law or by those set forth below, whichever is greater, and shall include contractual liability insurance as applicable to the contractor's obligations.
 - (a) Workman's Compensation - Employer's Liability Limits of \$500,000/\$500,000/\$500,000
 - (b) General Liability - \$1,000,000 Per Occurrences/\$2,000,000 Aggregate

- (c) Automobile Liability - A single combined limit for both bodily injury and property damage of \$1,000,000 or Per Person/Per Occurrence
 - (d) Commercial Umbrella Liability - \$1,000,000
 - c. 11.1.4, Add new subparagraph:
 - 1) 11.1.4.1, Furnish in triplicate certificates herein as called for and specifically set forth evidence of all coverage required by 11.1.1, 11.1.1.2, and 11.1.2 and the contractor shall furnish to the architect copies of any endorsements that are subsequently issued amending coverage or limits. Certificate of insurance shall be presented on AIA Document G-705, showing that all required insurance is in force before starting any contract work.
 - 2. OWNER'S INSURANCE
 - a. Delete Article 11.2 entirely.
 - 3. PROPERTY INSURANCE
 - a. 11.3.1 omit the word owner; replace with contractor
 - b. Builder's Risk:
 - 1) Add 11.3.1.3 as follows: The contractor shall effect and maintain Builder's Risk insurance as the interest of the owner and contractor may appear. Said insurance shall be written as an all risk coverage or special perils. The coverage shall contain no limitations for earth movement. Insurance shall include theft coverage.
 - (a) Note: Owner assumes liability for maximum of 10% deductible for earthquake coverage only.
 - 2) Limitations of flood coverage shall not include subsurface pressure or seepage. Faulty workmanship language shall not exclude ensuing loss.
 - c. 11.3.1.2 delete in its entirety.
 - d. 11.3.4 delete in its entirety.
 - e. 11.3.5 delete in its entirety.
 - 4. PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND
 - a. Refer to Section 11.1., Contractor's Insurance and Bonds
 - b. Add the following:
 - 1) 11.1.3.1, A successful bidder shall furnish a Performance and Payment bond within 10 days after receipt of the Intent to Award notice. Failure to furnish the required bonds may cause forfeiture of bid guarantee to the owner as liquidated damages.
 - (a) The Contractor shall furnish a "Performance and Payment Bond" in the amount equal to 100% of the contract price as security for the faithful performance of this contract and for payment of all indebtedness for labor and materials furnished or performed in connection with this contract. The bond shall be written by a surety company which is qualified and is authorized to do business in the State of Arkansas and must be executed by a resident local agent who shall be entitled to full commission paid local agents and who is licensed by the Insurance Commissioner to represent the surety company executing said bond and filing with said bond, his power of attorney as his authority. The mere countersigning of a bond will not be sufficient. The bond shall be written in favor of the Owner and executed. An original and two (2) copies of the bond must be furnished, with power of attorney attached to each. The contractor shall file (not record) the original with the Clerk in the Circuit Court of the County in which the work is to be performed is located. The contractor is to pay all expense incidents to the filing of the bond. The remaining two copies should be certified by the Clerk to evidence the filing of the original and these two copies submitted to the architect for distribution.
- I. ARTICLE 14 - TERMINATION OR SUSPENSION OF CONTRACT
- 1. Delete 14.1.3 entirely and insert the following:

- a. If the Owner substantially breaches an obligation in 14.1.1 or 14.1.2 of this Contract, following seven days' written notice to the Owner, the Contractor may terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, construction equipment and machinery, including reasonable overhead, profit and damages for work performed.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

DIVISION 01

GENERAL REQUIREMENTS

**SECTION 01 1100
SUMMARY OF THE WORK**

PART 1 - GENERAL

1.01 WORK COVERED BY THE CONTRACT DOCUMENTS

- A. These specifications shall cover entirely all of the labor and material requirements for the project. The General Conditions of the Contract, Supplementary Conditions, Instructions to Contractor, and any Addenda issued by the architect are hereby made a part of each division or section of these specifications as if bound, repeated, or included therein.
- B. In the interest of clarity and brevity, phrases such as "The contractor shall ..." or "The contractor shall furnish and install ..." have been omitted from these specifications.
- C. The General Construction Contract shall include all construction work required to complete the total project in accordance with requirements of the contract documents and shall include all heating, air conditioning, ventilating, electrical, and mechanical.
 - 1. Scope of individual bid packages/contracts to be as defined by the Construction Manager.
- D. Contractor's Duties:
 - 1. Except as specifically noted, provide and pay for:
 - a. Labor, materials, and equipment
 - b. Tools, construction equipment, and machinery
 - c. Water, heat, and utilities required for construction
 - d. Transportation and other facilities and services necessary for proper execution and completion of work
 - 2. Pay all legally required sales, consumer, and use taxes.
 - 3. Secure and pay for, as necessary for proper execution and completion of work, and as applicable at time of receipt of bids:
 - a. Permits
 - b. Government fees
 - c. Licenses
 - 4. Give required notices.
 - 5. Comply with laws, codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on the performance of work.
 - 6. Promptly submit written notice to the architect and engineer of observed variance of contract documents from legal requirements. It is not contractor's responsibility to make certain that drawings and specifications shall comply with codes and regulations.
 - a. Appropriate modifications to contract documents will adjust necessary changes.
 - b. Assume responsibility for work known to be contrary to such requirements without notice.
 - 7. Enforce strict discipline and good order among the employees. Do not employ on work:
 - a. Unfit persons
 - b. Persons not skilled in assigned work tasks

1.02 CONTRACTOR USE OF PREMISES

- A. Confine operations at site to areas permitted by law, ordinances, permits, and contract documents.
- B. Do not unreasonably encumber site with materials or equipment.
- C. Assume full responsibility for protection and safekeeping of products stored on premises.
- D. Move any stored products which interfere with operation of owner or other contractor.
- E. Materials may be stored in approved off-site areas when properly insured in the owner's interest.

1.03 NO SMOKING POLICY

- A. Pursuant to the Arkansas Code Annotated § 6-21-609, the School District has a No Smoking Policy on all properties owned or leased by the district.
- B. It is the policy of the Owner that all uses of tobacco and tobacco products, including smokeless tobacco, will be prohibited on all district facilities.
- C. This policy applies to all Staff Members, Visitors, General Contractors, Subcontractors, and Vendors. This policy is strictly enforced without exception.

1.04 WORK SEQUENCE / PHASING

- A. The contractor is to perform all construction and contract work within the limits of the site at the contractor's schedule.
- B. All work shall be performed at the contractor's schedule and within contract time.
- C. Any work that requires the interruption of the utility service to any existing building is to be coordinated and scheduled with the owner prior to beginning the work.
- D. Any work that is to be completed outside the site is to be coordinated with the owner prior to beginning work.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01 2300

DEDUCTIVE ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of (1) one alternate bids required.

1.02 RELATED SECTIONS

- A. Division 00 4100 - Bid Form
- B. Section 03 3000 – Cast-in-place Concrete

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 ALTERNATE BIDS

- A. Deductive Alternate No. 1
 - 1. Provide all material, labor, and associated expenses to omit **floor drain, block out and concrete slope to drain** including, but not limited to, grate, blockout of concrete slab and catch basin for future plumbing system, and concrete slope to drain.

3.02 BID INCLUSION

- A. Included deductive pricing as shown on the bid form. Deduction pricing to include all applicable taxes, etc. and include items necessary to make the deduction and totally complete the requested change.

END OF SECTION

SECTION 01 2973
SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 GENERAL

- A. Submit to the architect/engineer schedule of values, at least ten (10) days prior to submitting first Application for Payment.
- B. Upon request by architect/engineer, support values given with data that will substantiate their correctness.
- C. Submit quantities of designated materials.
- D. Payment for materials stored on site will be limited to those materials listed in Schedule of Unit Material Values.
- E. Use Schedule of Values only as basis for contractor's Application for Payment.

1.02 FORM OF SUBMITTAL

- A. Submit typewritten Schedule of Values on 8-1/2" x 11" white paper.
- B. Use Table of Contents of this specification as basis for format for listing costs of work for each of the sections from all divisions.
- C. Identify each line item with number and title as listed in Table of Contents of this specification (sections).

1.03 PREPARING SCHEDULE OF VALUES

- A. Itemize separate line item cost for each of the following general cost items:
 - 1. Performance and Payment Bonds
 - 2. Field Supervision and Layout
 - 3. Temporary Facilities and Controls
- B. Itemize separate line item cost for work required by each section of this specification.
- C. Breakdown installed cost into:
 - 1. Delivered cost of product, with taxes paid
 - 2. Installation cost
- D. For each line item which has installed value of more than 1%, break down costs to list major products or operations under each item.
- E. Round off figures to nearest dollar.
- F. Make sum of total costs of all items listed in schedule equal to total contract sum.

1.04 PREPARING SCHEDULE OF UNIT MATERIAL VALUES

- A. Submit separate Schedule of Unit Prices for materials to be stored on which progress payments will be made.
- B. Make form of submittal parallel to Schedule of Values, with each line item identified same as line item in Schedule of Values.
- C. Include in unit prices only:
 - 1. Cost of material
 - 2. Delivery and unloading at site
 - 3. Sales taxes
- D. Make sure that unit prices multiplied by quantities given equal material cost of that item in Schedule of Values.

1.05 REVIEW AND RESUBMITTAL

- A. After review by architect/engineer, revise and resubmit Schedule (and Schedule of Material Values) as required.
- B. Resubmit revised Schedule in same manner.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

**SECTION 01 2976
PROGRESS PAYMENT PROCEDURES**

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Application for payments
- B. Defect Assessment

1.02 RELATED SECTIONS

- A. Section 00 7300 - 1.02,F, 3, Payments to Contractor
- B. Section 01 2973 - Schedule of Values
- C. Section 00 6000 - Project forms

1.03 APPLICATIONS FOR PAYMENT

- A. Submit four (4) copies of each application on Owner-accepted form to Owner (all copies require original signatures in blue ink).
- B. Content and Format: Utilize Schedule of Values for listing items in Periodic Pay Estimate.
- C. Submit an updated construction schedule with each Periodic Pay Estimate.
- D. Payment Period: Progress payments to be made monthly.
- E. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question.

1.04 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Architect/Engineer and Owner it is not practical to remove and replace the Work, the Architect/Engineer will direct an appropriate remedy or adjust payment.
- C. The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner.
- D. The defective Work will be partially repaired to the instructions of the Architect/Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner.
- E. The authority of the Owner to assess the defect and identify payment adjustment is final.
- F. Non-Payment For Rejected Products: Payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

PART II—PRODUCTS

2.01 NOT USED.

PART III—EXECUTION

3.01 NOT USED.

END OF SECTION

**SECTION 01 3113
COORDINATION**

PART 1 - GENERAL

1.01 EXAMINATION

- A. Each contractor, subcontractor, or supplier shall thoroughly examine the drawings and specifications pertaining to separate contracts and include in his base bid those items for which he will be responsible and for the proper coordination of the work to be performed.

1.02 TRANSITIONS

- A. The architect accepts no responsibility for the naming of every item that may be needed to make transitions from the work of one contractor to another. All such transitions shall be the entire responsibility of the contractor, subcontractor, and materials and equipment suppliers involved.

1.03 SCHEDULES

- A. Contractor shall coordinate the scheduling of all work.

1.04 LOCATION OF WORK

- A. The contractor shall check and verify all measurements and dimensions shown on contract drawings and shop drawings of all the work as it progresses.
- B. The proper location of work of all subcontractors, including supports for equipment, shall be the final conclusive responsibility of the Contractor regardless of who is responsible for the layout of the work in the first instance.

1.05 UNLOADING AND HOISTING MATERIALS

- A. The contractor, each subcontractor, and each supplier of materials and equipment shall be responsible for the hoisting of their materials and equipment to the proper location for installation in the project.
- B. They shall also be responsible for unloading of all materials and equipment at the job site.

1.06 STORAGE OF MATERIALS

- A. Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and equipment and coordinate the storage and execution of their work with his.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

**SECTION 01 3119
PROJECT MEETINGS**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. See Section 00 2100 – Instructions to Bidders for Pre-Bid Conference.
- B. Preconstruction Meeting
- C. Progress Meetings
- D. Pre-installation Meetings

1.02 PRECONSTRUCTION MEETING

- A. Architect will schedule a meeting after Notice of Award.
- B. Attendance Required: Owner, Architect, Contractor, Contractor's Superintendent, and major subcontractors.
- C. Agenda:
 - 1. Designation of personnel representing the parties in Contract and the Architect.
 - 2. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 3. Scheduling.
 - 4. Use of premises by Owner and Contractor.
 - 5. Owner's requirements.
 - 6. Construction facilities and controls provided by Owner.
 - 7. Temporary utilities.
 - 8. Security and housekeeping procedures.
 - 9. Procedures for testing.
 - 10. Maintaining record documents.
 - 11. Inspection and acceptance of equipment put into service during construction.
- D. General Contractor is to record minutes and distribute copies within two days after meeting to participants, with two copies to Architect/Engineer, and those affected by decisions made.

1.03 PROGRESS MEETINGS

- A. The General Contractor is to schedule and administer meetings throughout progress of the Work.
 - 1. Progress meetings to be held every two weeks.
- B. Make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
- C. Attendance Required: Job superintendent, major subcontractors and suppliers, Owner, Architect/Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems which 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. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, and those affected by decisions made.

1.04 PREINSTALLATION MEETING

- A. When required in individual specification sections, the General Contractor is to convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four (4) days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of installation, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two (2) days after meeting to participants, with two copies to architect, owner, participants, and those affected by decisions made.

PART 2-PRODUCTS

NOT USED.

PART 3-EXECUTION

NOT USED.

END OF SECTION

**SECTION 01 3216
CONSTRUCTION SCHEDULES**

PART 1 - GENERAL

1.01 SCHEDULE

- A. Prepare and submit for architect's approval a projected construction schedule for the entire work.
- B. The schedule shall indicate the dates for the starting and completion of various stages and sequence of construction and shall be revised monthly. Submit with contractor's Application for Payment each month.

1.02 FORM

- A. Prepare schedule in the form of a horizontal bar chart providing:
 - 1. Separate horizontal bar column for each major specification section.
 - 2. Place in chronological order of beginning of each item of work.
 - 3. Identify each horizontal bar:
 - a. By major specification section
 - b. By distinct graphic delineation
 - 4. Horizontal time scale (weeks)
 - 5. Allow space for denoting of actual progress of the work.
 - 6. Minimum sheet size: 8-1/2" x 14"

1.03 SCHEDULE UPDATE

- A. Update schedules accurately indicating the progress to first day of each month and submit monthly with Application and Certificate for Payment. Updated schedules are to be distributed at monthly progress meetings to all attendees.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01 3223
SURVEY AND LAYOUT DATA

PART 1 – GENERAL

1.01 RELATED SECTIONS

1.02 FIELD ENGINEERING

- A. Employ a land surveyor registered in the State of Arkansas and acceptable to Architect.
- B. Contractor shall locate and protect survey control and reference points. Promptly notify architect of any discrepancies discovered.
- C. Control datum for survey is that established by Owner provided survey.
- D. Verify set-backs and easements; confirm drawing dimensions and elevations.
- E. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- F. Submit a copy of certificate signed by land surveyor that the elevations and locations of the work are in conformance with the contract documents.
- G. Maintain a complete and accurate log of control and survey work as it progresses.

PART 2 – PRODUCTS

2.01 NOT USED.

PART 3 – EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 3323
SUBMITTALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Project Data
- B. Shop Drawings
- C. Samples
- D. Design Data
- E. Test Reports
- F. Certificates
- G. Manufacturer's Instructions
- H. Manufacturer's Field Reports
- I. Erection Drawings

1.02 RELATED SECTIONS

- A. Section 00 6000, Project Forms

1.03 PROJECT DATA

- A. Manufacturer's standard schematic drawings:
 - 1. Modify drawings to delete information which is not applicable to project
 - 2. Supplement standard information to provide additional information applicable to project
- B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data
 - 1. Clearly mark each copy to identify pertinent materials, products, or models
 - 2. Show dimensions and clearances required
 - 3. Show performance characteristics and capacities
 - 4. Show wiring diagrams and controls

1.04 SHOP DRAWINGS

- A. Original drawings, prepared by contractor, subcontractor, supplier, or distributor, which illustrate some portion of the work; showing fabrication, layout, setting, or erection drawings.
 - 1. Prepared by a qualified detailer.
 - 2. Identify details by reference to sheet and detail numbers shown on contract document drawings.
 - 3. Minimum sheet size: 8-1/2" x 11".
 - 4. Refer to 3.02 Submission Requirements.

1.05 SAMPLES

- A. Physical examples to illustrate materials, equipment, or workmanship, and to establish standards by which completed work is judged.
 - 1. Office Samples: of sufficient size and quantity to clearly illustrate:
 - a. Functional characteristics of product or material with integrally related parts and attachment devices.
 - b. Finishes and colors.

1.06 DESIGN DATA

- A. Submit for the Architect/Engineer's knowledge as contract administrator or for the owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.

1.07 TEST REPORTS

- A. Submit for the Architect/Engineer's knowledge as contract administrator or for the owner.

- B. Submit test reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.

1.08 CERTIFICATES

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to Architect/Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect/Engineer.

1.09 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing to Architect/Engineer for delivery to Owner in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.10 MANUFACTURER'S FIELD REPORTS

- A. Submit reports for the architect/engineer's benefit as contract administrator or for the owner.
- B. Submit report in duplicate within 30 days of observation to architect/engineer for information.
- C. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.11 ERECTION DRAWINGS

- A. Submit drawings for the Architect/Engineer's benefit as contract administrator or for the Owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by the Architect/Engineer or Owner.

PART 2—PRODUCTS

2.01 Not Used.

PART 3—EXECUTION

3.01 CONTRACTOR RESPONSIBILITIES

- A. Review shop drawings, project data, and samples prior to submission.
- B. Verify:
 - 1. Field measurements.
 - 2. Field construction criteria.
 - 3. Catalog numbers and similar data.
 - 4. Conformance with contract documents.
 - 5. Coordination with other work.
- C. Coordinate each submittal with requirements of work and of contract documents.
- D. Contractor's responsibility for errors and omissions in submittals is not relieved by architect/engineer's review of submittals.
- E. Contractor's responsibility for deviations in submittals from requirements of contract documents is not relieved by architect/engineer's review of submittals, unless architect/engineer gives written acceptance and deviations are clearly marked on submittals.
- F. Notify architect/engineer in writing at time of submission of deviations in submittals from requirements of contract documents.

- G. Begin no work which requires submittals until return of submittals with architect/engineer's stamp and initials or signature indicating review.

3.02 SUBMISSION REQUIREMENTS

- A. Schedule submissions at least 14 days before dates reviewed submittals will be needed.
- B. B. Submittals shall be sent electronically to the Architect. This document will be stored electronically at the project site for Architect and Contractor access during construction. All documents shall be sent in PDF format and saved in the following method SD_03_3000_01.PDF. Each Shop Drawing shall have specification number and the submittal number for that specification section. The file above indicates specification section 03 3000 submittal number one. Upon completion of the project the contractor is to submit four copies on CD of all Shop Drawings during the project closeout phase. These shall be in PDF format.
- C. Submit number of samples specified in each of specifications sections.
- D. Accompany submittals with transmittal letter, in duplicate, containing:
 - 1. Date
 - 2. Project title and number
 - 3. Contractor's name and address
 - 4. The number of each shop drawing, project data, and sample submitted
 - 5. Notification of deviations from contract documents
 - 6. Other pertinent data
- E. Submittals shall include:
 - 1. Date and revision dates
 - 2. Project title and number
 - 3. The names of:
 - a. Architect/Engineer
 - b. Contractor
 - c. Subcontractor
 - d. Supplier
 - e. Manufacturer
 - f. Separate detailer when pertinent
 - 4. Identification of product or material
 - 5. Relation to adjacent structure or materials
 - 6. Field dimensions, clearly identified as such
 - 7. Specification selection number
 - 8. Applicable standards, such as ASTM number or Federal specification
 - 9. Identification of deviations from contract documents
 - 10. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements, and compliance with contract documents

3.03 RESUBMISSION REQUIREMENTS

- A. Shop Drawings:
 - 1. Revise initial drawings as required and resubmit as specified for initial submittal
 - 2. Indicate on drawings any changes which have been made other than those requested by architect/engineer
- B. Project Data and Samples: Submit new data and samples as required for initial submission.

3.04 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

- A. Distribute copies of shop drawings and project data which carry architect/engineer's stamp, or initialed approval, to:
 - 1. Contractor's file
 - 2. Job site file
 - 3. Record documents file
 - 4. Other prime contractors
 - 5. Subcontractors

- 6. Supplier
- 7. Fabricator

B. Distribute samples as directed.

3.05 ARCHITECT/ENGINEER'S DUTIES

- A. Review submittals with reasonable promptness.
- B. Review for:
 - 1. Design concept of project
 - 2. Information given in contract documents
- C. Review of separate item does not constitute review of an assembly in which item functions.
- D. Affix stamp, initials, or signature certifying to review of submittal.
- E. Return submittals to contractor for distribution.

END OF SECTION

SECTION 01 4000
QUALITY REQUIREMENTS

PART 1—GENERAL

1.01 SECTION INCLUDES

- A. Quality control and control of installation.
- B. Tolerances
- C. References.
- D. Testing and inspection services.
- E. Examination.
- F. Preparation.

1.02 REFERENCES

- A. ASTM E 329 - Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials used in Construction.
- B. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
- C. 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.

1.03 PRODUCT STANDARDS

- A. For products or workmanship specified by association, trade, or other consensus 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 by date of issue current on date for receiving bids, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Should specified reference standards conflict with Contract Documents, request clarification from the Architect/Engineer before proceeding.
- E. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Architect/Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.04 TESTING AND INSPECTION AGENCIES

- A. As indicated in individual specification sections, Contractor shall employ and pay for services of an independent testing agency to perform specified testing.
 - 1. Prior to start of work, submit testing laboratory name, address, and telephone number, and names of full time registered engineer and responsible officer.
 - 2. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- B. Testing agency selected must be approved by the owner/architect.
- C. Inspection Agency: Comply with requirements of ASTM D3740, ASTM E329, and ASTM C 1077.
- D. Laboratory: Authorized to operate in the State of Arkansas.
- E. Laboratory Staff: Maintain a full time registered engineer on staff to review services.
- F. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.
- G. Concrete Field Tests

1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician Grade 1, according to ACI CP-1 or an equivalent certification program.

PART II—PRODUCTS

2.01 Not Used.

PART III—EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new 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. Verify that utility services are available, of the correct characteristics, and in the correct locations.

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 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer 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. Perform Work 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, or disfigurement.

3.04 TOLERANCES

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

3.05 MANUFACTURER'S 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 instruction when necessary.
- B. Submit qualifications of observer to architect/engineer 30 days in advance of required observations.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.

- D. Refer to Section 01 3323, Shop Drawings. Project Data, and Samples, manufacturer's field reports article.

3.06 TESTING AND INSPECTION

- A. See individual specification sections for testing and inspection required.
- B. Testing Agency Duties:
1. Test samples of mixes submitted by contractor.
 2. Provide qualified personnel at site. Cooperate with Architect and contractor in performance of services.
 3. Perform specified sampling and testing of products in accordance with specified standards.
 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 5. Promptly notify Architect and contractor of observed irregularities or non-conformance of Work or products.
 6. Perform additional tests and inspections required by Architect.
 7. Attend preconstruction meetings and progress meetings.
- C. Agency Reports: After each test promptly submit two copies of report to Brackett Krennerich Architects and contractor. When requested by architect/engineer, provide interpretation of test results. 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 test.
 10. Conformance with Contract Documents.
- D. Limits on Testing/Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency may not approve or accept any portion of the Work.
 3. Agency may not assume any duties of the contractor.
 4. Agency has no authority to stop the Work.
 5. Agency has no authority to authorize additional work.
- E. Contractor's Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel, and provide access to the Work.
 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required for contractor's use beyond specified requirements.
 6. Testing and employment of testing agency or laboratory shall not relieve the contractor of obligation to perform work in accordance with requirements of the Contract Documents.
- F. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect.

- G. Re-testing required because of non-conformance to specified requirements shall be paid for by the contractor. Payment for re-testing or re-inspection will be charged to the contractor by deducting testing charges from the contract sum/price .

3.07 DEFECT ASSESSMENT

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

END OF SECTION

SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Temporary electricity.
 - 2. Temporary heating
 - 3. Temporary ventilation
 - 4. Telephone service.
 - 5. Temporary water service.
 - 6. Temporary sanitary facilities.
- B. Construction Facilities:
 - 1. Field offices and sheds.
 - 2. Project identification.
- C. Temporary Controls:
 - 1. Barriers – Provide Projection to the Public.
 - 2. Enclosures and fencing.
 - 3. Water control.
- D. Removal of utilities, facilities, and controls.

1.02 TEMPORARY ELECTRICITY

- A. The contractor is to provide and pay for power service required from utility source as needed for construction operation.
- B. The Contractor shall be responsible for hook-up of all temporary connections to electricity.

1.03 TEMPORARY HEATING

- A. The contractor is to provide and pay for heating devices and heat as needed to maintain specified conditions for construction operations.
- B. Type of heat shall be approved by the architect.

1.04 TEMPORARY VENTILATION

- A. The contractor is to ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.03 TELEPHONE/FAX SERVICE

- A. The contractor is to provide, maintain, and pay for telephone and facsimile service to field office at time of project mobilization.
- B. Cellular phone at construction site will be permitted.
 - 1. Land lines may be supplemented with a mobile phone.

1.04 TEMPORARY WATER SERVICE

- A. The owner is to provide and pay for suitable quality water service as needed to maintain specified conditions for construction operations.
- B. The contractor shall be responsible for hook-up of all temporary connections to water.

1.05 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures.
 - 1. Building rest rooms are not to be used during construction.
- B. Provide at time of project mobilization.

1.06 FIELD OFFICES AND SHEDS

- A. The contractor, at his expense, may erect such temporary structures on the site for offices, materials storage, and tool storage as may be required for his use and that of his subcontractors. Location shall be approved by the architect.

- B. The contractor shall furnish office for location of job telephone, plan rack, plan reference table, and filing cabinet for correspondence, specifications, and shop drawings. Office shall be well lighted, heated, and air conditioned.
- C. At the completion of the project, all such temporary structures shall be removed from the site.

1.07 PROJECT IDENTIFICATION

- A. Project Identification Signs:
 - 1. One printed sign, 96 square feet area minimum, bottom 3 feet above ground.
 - 2. Content:
 - a. Project title, logo and name of Owner as indicated on Contract Documents.
 - b. Names and titles of authorities.
 - c. Names and titles of Architect/Engineer.
 - d. Name of Prime Contractor.
 - 3. Graphic Design, Colors, Style of Lettering: Designated by Architect/Engineer.
 - a. Graphic Design will be issued to the Contractor in .pdf or .jpg format. It is the contractor's responsibility to for having the file converted for printing.
- B. Sign Materials:
 - 1. Structure and Framing: New wood, structurally adequate.
 - 2. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4-inch thick, standard large sizes to minimize joints.
 - 3. Paint and Primers: Exterior quality, two coats; sign background of color as selected.
 - 4. Lettering: Exterior quality paint, contrasting colors as selected.
- C. Installation:
 - 1. Install project identification signs within 15 days after date fixed by Notice to Proceed.
 - 2. Erect at location directed by the Architect.
 - 3. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
 - 4. Install signs surface plumb and level, with butt joints. Anchor securely.
 - 5. Paint exposed surfaces of signs, supports, and framing.
- D. Maintenance: Maintain signs and supports clean, repair deterioration and damage.
- E. Removal: Remove signs, framing, supports, and foundations at completion of Project and restore the area.

1.08 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

1.09 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

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

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

NOT USED.

END OF SECTION

SECTION 01 5713
TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1 GENERAL

1.01 SCOPE

- A. Under regulation of the Department of Pollution Control and Ecology, the contractor shall be responsible for implementing pollution control methods for controlling storm water run-off from the construction site.

1.02 METHODOLOGY

- A. Site of construction is less than of 1 acre and is classified as a small construction site.
- B. Best Management Practices shall be used to control sediment leaving the site.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Mulch Cover: Straw from threshed rice, oats, wheat, barley or rye; of wood excelsior; or from hay obtained from various legumes or grasses, such as lespedeza, clover, vetch, soybeans, bermuda, carpet sedge, bahia, fescue or other legumes or grasses, or a combination thereof. Mulch shall be dry and reasonably free of Johnson grass or other noxious weeds, and shall not be excessively brittle or in an advanced state of decomposition. All materials will be inspected and approved prior to use.
- B. Straw Bales: Straw for barrier bales shall consist of rice, oat, barley, wheat or rye straw or of available grasses free of an excessive amount of noxious weeds. Bales shall weigh approximately 35 lbs. Straw in an advanced state of decomposition will not be acceptable.
- C. Filter Fabric: Typar 3401, Trevira S1115, or approved equal nonwoven polypropylene or polyester fabric.

PART 3 EXECUTION

3.01 WORKMANSHIP

- A. Ensure that earthwork and final grading in area requiring erosion control have been brought to grade as required by contract documents.
- B. Straw Bale Filter: Tightly bound straw bales embedded at least 4 inches into soil and each bale held in place by 2 stakes driven at least 18 inches into ground. Bales shall tightly abut adjacent bales. Strings shall not touch the ground.
- C. Silt Fence: Fence post spaced no more than 10 feet apart and driven a minimum of 2 feet into ground. Post shall extend minimum of 2 feet above ground. Fasten metal mesh fence with 6 inch or smaller openings to fence posts to reinforce silt fence fabric. Mesh fence to extend 2 feet above grade and 4 inches into grade. Mesh may be omitted if reinforced silt fence fabric is used or in areas of low flow.
- D. Nonvegetative Soil Stabilization: Utilize temporary nonvegetative soil stabilization to provide protection against excessive soil erosion over a short period of time. Required in areas that experience high water flows and high run-off velocities and at disturbed slopes steeper than 2:1.
 - 1. Mulch: Apply at 1.5 to 2.5 tons per acre.
 - 2. Anchor by peg and twine, mulch netting, erosion control, fabric, jute matting or mulch anchoring tool.

END OF SECTION

SECTION 01 5719
ENVIRONMENT PROTECTION

PART 1 GENERAL

1.01 DEFINITIONS

- A. For the purpose of these specifications, environment protection is defined as the preservation of the environment in its preconstruction state to the greatest feasible extent throughout project construction.

1.02 QUALITY CONTROL

- A. The Contractor shall inspect all environment protection operations for compliance with the contract requirements, perform all test as required, and maintain records of his quality control for all operations, including but not limited to the following: Compliance with all Federal, State and local pollution control regulations.
 - 1. Monitoring and surveillance procedures.
 - 2. Site access, parking, and traffic control of equipment.
 - 3. Locations of temporary facilities and support activities.
 - 4. Handling, storage, use, and disposal of petroleum products, chemicals, and toxic materials.
 - 5. Solid and liquid waste disposal.
 - 6. Noise control, dust control, and pest control.
 - 7. Disposal of construction materials and other debris.
 - 8. A copy of these records, including all tests performed and corrective actions taken, shall be furnished to the architect/owner.

1.03 NOTIFICATION

- A. The Owner/Architect will notify the Contractor in writing of any non-compliance with any applicable Federal, State, or local laws or regulations. The Contractor shall, after receipt of such notice, immediately inform the Architect of proposed corrective action and take such action as may be approved. If the Contractor fails or refuses to comply promptly, the Owner/Architect may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time, or for excess costs or damages by the Contractor. The Architect shall be notified of any spillage of hazardous chemicals in excess of 2 gallons.

1.04 SUBCONTRACTORS

- A. Compliance with the provisions of this section by subcontractors will be the responsibility of the Contractor.

1.05 PROTECTION OF LAND RESOURCES

- A. The Contractor shall confine his construction activities to areas on the site as determined and outline at the Preconstruction Meeting.

1.06 PROTECTION OF WATER RESOURCES

A. GENERAL

- 1. The Contractor shall not pollute storm water with fuels, oil, bitumens, calcium chloride, acids, or other harmful materials. The Contractor shall investigate and comply with all applicable Federal, State, County and municipal laws concerning pollution of rivers and streams.

B. SPILLAGES

- 1. Special measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washings, and concrete drainage from entering storm water system.

C. DISPOSAL

- 1. Disposal of any materials, wastes, effluents, trash, garbage, oil grease, chemicals, etc., in areas adjacent to streams shall not be permitted. Particular attention under this provision shall be given to lubricants and fuels drained from equipment and supply tanks.

1.07 DISPOSAL OF DEBRIS

- A. All materials resulting from construction operations of such as undercut material, and debris shall be disposed of off-site by the Contractor as per Arkansas Department of Environmental Quality-Solid Waste Division regulatory requirements. The Contractor shall be responsible for compliance with all Federal, State, and local laws and regulations applicable to disposal of these materials. The contractor shall disclose the disposal site in the pre-construction conference. If private property is selected as disposal site, the property owner's written consent shall be furnished to the owner/architect.
- B. Disposal of petroleum, oil, and lubricants (POL) products, chemicals, or other hazardous or toxic components, may require EPA approval or permits from the state. Where such permits are required, the Contractor shall be responsible for obtaining such permits and shall be responsible for the payment of any fines or penalties for failure to do so.

1.08 DUST CONTROL

- A. The Contractor will be required to maintain all excavations, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust which would exceed allowable limits of the standards for air pollution.

1.09 NOISE CONTROL

- A. The Contractor will be required to comply with Federal, State and local requirements for noise control of his vehicles and equipment.

1.10 EROSION CONTROL

- A. The Contractor will be required to comply with Federal, State and local requirements for erosion control. The erosion control guidelines included with the project manual and erosion control measures as shown on the plans shall be followed throughout the construction.

PART 2 PRODUCTS

2.01 NOT USED.

PART 3 EXECUTION

3.01 NOT USED.

END OF SECTION

**SECTION 01 6000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Product substitution procedures.

1.02 RELATED SECTIONS

- A. Section 00 2100, Instructions to Bidders - Standards of Quality.

1.03 PRODUCTS

- A. Provide products of qualified manufacturers suitable for intended use. Provide products of each type by a single manufacturer unless specified otherwise.

1.04 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.05 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection. When products are stored off-site, they must be inventoried by Architect before payment can be made. Insurance certificates must name the owner as certificate holder/beneficiary.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.06 PRODUCT OPTIONS

- A. Products Specified by Reference Standards: Select any product meeting standards, by any manufacturer.
- B. Products Specified by Naming Several Products or Manufacturers: Select any product and manufacturer named.

- C. Products Specified by Naming Only One Product and Manufacturer: There is no option unless substitution is approved as specified. Products of other manufacturers shall meet minimum performance criteria specified or quality of product description.

1.07 PRODUCT SUBSTITUTION PROCEDURES

- A. Architect/Engineer will consider requests for Substitutions only within 15 days after date of Owner-Contractor Agreement.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 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 which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
- E. 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.
- F. 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 Architect will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

2.01 NOT USED.

PART 3 EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 7300
EXECUTION REQUIREMENTS

PART 1—GENERAL

1.01 SECTION INCLUDES

- A. Closeout procedures.
- B. Starting of systems
- C. Demonstration and Instructions
- D. Testing, Adjusting and Balancing
- E. Protecting installed construction.

1.02 RELATED SECTIONS

- A. Section 01 7329, Cutting and Patching
- B. Section 01 7400, Cleaning
- C. Section 01 7800, Close-out Submittals
- D. Section 01 7839, Project Record Documents

1.03 CLOSEOUT PROCEDURES

- A. 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 Architect's review.
- B. Provide submittals to Architect that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.04 STARTING OF SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect/Engineer seven (7) 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 which 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 Contractors' personnel in accordance with manufacturers' instructions.
- G. Submit a written report in accordance with Section 01300 that equipment or system has been properly installed and is functioning correctly.

1.05 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel two (2) weeks prior to date of Substantial Completion.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season.
- C. Utilize Operation and Maintenance Manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time at the site.

1.06 TESTING, ADJUSTING AND BALANCING

- A. Contractor will appoint and employ services of an independent firm to perform testing, adjusting, and balancing. Contractor shall pay for services.

- B. See mechanical specifications for specific requirements.
- C. Reports will be submitted by the independent firm to the Architect/Engineer indicating observations and results of tests and indicating compliance or non-compliance with the requirements of the Contract Documents.

1.07 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. 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.
- F. Prohibit traffic from landscaped areas.

1.08 USE OF BUILDING

- A. Contractor shall allow the owner use of the substantially completed building for placement and installation of equipment. Such use of the structure shall not signify that the owner accepts the building.

PART 2 PRODUCTS

2.01 NOT USED

PART 3 EXECUTION

3.01 NOT USED

END OF SECTION

**SECTION 01 7329
CUTTING AND PATCHING**

PART 1 GENERAL

1.01 SCOPE

- A. Execute cutting (including excavating), fitting, or patching of work required to:
 - 1. Make several parts fit properly.
 - 2. Uncover work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to the requirements of contract documents.
 - 5. Remove samples of installed work as specified for testing.
- B. Do not endanger any work by cutting or altering work or any part of it.
- C. Do not cut or alter work of another contractor without written consent of architect/engineer.

1.02 SUBMITTALS

- A. Prior to cutting which affects structural safety of project, or work of another contractor, submit written notice to architect/engineer, requesting consent to proceed with cutting, including:
 - 1. Identification of project
 - 2. Description of affected work
 - 3. Necessity for cutting
 - 4. Affect on other work, on structural integrity of project
 - 5. Description of proposed work. Designate:
 - a. Scope of cutting and patching
 - b. Contractor and trades to execute work
 - c. Products proposed to be used
 - d. Extent of refinishing
 - 6. Alternatives to cutting and patching
 - 7. Designation of party responsible for costs of cutting and patching
- B. Prior to cutting and patching done on instruction of architect/engineer, submit cost estimate.
- C. Should conditions of work, or schedule, indicate a change of materials or methods, submit written recommendation to architect/engineer, including:
 - 1. Conditions indicating change
 - 2. Recommendations for alternative materials or methods
 - 3. Submittals as required for substitutions

1.03 PAYMENT OF COSTS

- A. Costs caused by ill-timed or defective work, or work not conforming to contract documents, including costs for additional services of architect/ engineer: party responsible for ill-timed, rejected, or non-conforming work.
- B. Work done on instructions of architect/engineer, other than defective or non-conforming work: owner.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Materials for replacement of work removed shall comply with specifications for type of work to be done.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of work, including elements subject to movement or damage during:
 - 1. Cutting and patching
 - 2. Excavating and backfilling
- B. After uncovering work, inspect conditions affecting the installation of new products.

3.02 PREPARATION (PRIOR TO CUTTING)

- A. Provide shoring, bracing, and support as required to maintain structural integrity of project.
- B. Provide protection for other portions of project.

3.03 PERFORMANCE

- A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerance, finishes.
- B. Execute excavating and backfilling by methods which will prevent damage to other work and will prevent settlement.
- C. Restore work which has been cut or removed; install new products to provide completed work in accord with requirements of contract documents.
- D. Refinish entire surfaces as necessary to provide an even finish.
 - 1. Continuous surfaces: to nearest intersections
 - 2. Assembly: entire refinishing

END OF SECTION

SECTION 01 7400

CLEANING

PART 1 GENERAL

1.01 SCOPE

- A. Maintain premises and public properties free from accumulations of waste, debris, and rubbish caused by operations.
- B. At completion of work, remove waste materials, rubbish, tools, equipment, machinery, and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.

1.02 RELATED SECTIONS

- A. Section 01 5719, Environment Protection
- B. Section 01 7300, Execution Requirements

1.03 SAFETY REQUIREMENTS

- A. Standards: Maintain project in accord with governing safety and insurance standards.
- B. Hazard Control:
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes which create hazardous conditions.
 - 3. Provide adequate ventilation during use of noxious substances.
- C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on project site.
 - 2. Do not dispose of volatile wastes such as mineral spirit, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into lakes, streams, or waterways.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning materials manufacturer.

PART 3 EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute cleaning to ensure that building, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- B. At reasonable intervals during progress of work, clean site and public properties, and dispose of waste materials, debris, and rubbish.
- C. Remove waste materials, debris, and rubbish from site and legally dispose of at public or private dumping areas off owner's property.
- D. Vacuum clean interior building areas when ready to receive finish painting, and continue vacuum cleaning on as-needed basis until building is ready for substantial completion or occupancy.
- E. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly-painted surfaces.

3.02 FINAL CLEANING

- A. Employ experienced workmen or professional cleaners for final cleaning.
- B. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior surfaces so designated to shine finish.
- C. Repair, patch, and touch up marred surfaces to specified finish, to match adjacent surfaces.
- D. Broom clean paved surfaces; rake clean other surfaces of grounds.

- E. Replace air conditioning filters if units were operated during construction.
- F. Maintain cleaning until project, or portion thereof, is occupied by owner.

END OF SECTION

**SECTION 01 7700
CLOSEOUT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Required documents for final payment.

1.02 RELATED SECTIONS

- A. Section 01 7800, Closeout Submittals
- B. Section 00 6000, Project Forms
- C. Section 01 7839, Project Record Documents

1.03 REQUIRED DOCUMENTS FOR FINAL PAYMENT

- A. Contractor to notify the architect in writing that all punch list items are complete and the project is ready for acceptance by the owner.
- B. "Substantial Completion" will be issued by the architect, at which time the contractor shall submit the "Final Pay Request".

1.04 DOCUMENTS TO BE SUBMITTED WITH FINAL PAY REQUEST

- A. Consent of Surety to Final Payment.
- B. Affidavit of Payment of Debts and Claims.
- C. Affidavit of Release of Liens.
- D. Required Operation and Maintenance Data.
- E. Required Warranties.
- F. Project Record Documents

PART 2 PRODUCTS

2.01 NOT USED

PART 3 EXECUTION

3.01 NOT USED

END OF SECTION

**SECTION 01 7800
CLOSE-OUT SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Operation and Maintenance Data
- B. Manual for Materials and Finishes
- C. Manual for Equipment and Systems
- D. Product Warranties and Product Bonds

1.02 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 x 11 inch pages, two D size ring binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- E. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 - 1. Part 1: Directory, Listing names, addresses, and telephone numbers of architect/Engineer, Contractor, 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 instruction for equipment and systems.
 - f. Maintenance instruction for 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.
 - 4. Submit two sets of final volumes and two DVD's, CD's, or Flash Drive within 10 days after final inspection.
 - 5. Final pay requites will not be processed until all close-out documents are received.

1.03 MANUAL FOR MATERIALS AND FINISHES

- A. Submit two copies of manual within 10 days after final inspection. Manual to be as described in 1.02, A-E above.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
- C. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations.
- D. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

- E. **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.
- F. **Additional Requirements:** As specified in individual product specification sections.
- G. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.
- H. Final pay request will not be processed until all close-out documents are received.

1.04 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit two copies of manual within 10 days after final inspection. Manual to be as described in 1.02, A-E above.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
- C. **Each Item of Equipment and Each System:** Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
- D. **Panelboard Circuit Directories:** Provide electrical service characteristics, controls, and communications.
- E. Include color coded wiring diagrams as installed.
- F. **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.
- G. **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.
- H. Provide servicing and lubrication schedule, and list of lubricants required.
- I. Include manufacturer's printed operation and maintenance instructions.
- J. Include sequence of operation by controls manufacturer.
- K. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- L. Provide control diagrams by controls manufacturer as installed.
- M. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- N. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- O. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- P. Include test and balancing reports.
- Q. **Additional Requirements:** As specified in individual product specification sections.
- R. Provide a listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.
- S. Final pay request will not be processed until all close-out documents are received.

1.05 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.

- C. Verify that documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- F. Submit prior to final Application for Payment.
- G. Time Of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 - 2. Make other submittals within ten 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 ten days after acceptance, listing the date of acceptance as the beginning of the warranty or bond period.

1.06 NUMBER OF MANUALS

- A. Manuals required in 1.02, 1.03, 1.04 and 1.05 may be combined into one or two manuals if volume of data will permit use of D size ring binders.

PART 2 PRODUCTS

3.01 NOT USED

PART 3 EXECUTION

4.01 NOT USED

END OF SECTION

**SECTION 01 7839
PROJECT RECORD DOCUMENTS**

PART 1 - GENERAL

1.01 DOCUMENTS:

- A. Maintain at the job site, one copy of:
 - 1. Contract drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Reviewed shop drawings
 - 5. Change Orders
 - 6. Other modifications to contract
 - 7. Field test records
- B. Maintain one set of documents in clean, dry, legible condition; documents not to be used for construction purposes.
- C. Record all changes made during construction with red pencil.

1.02 RECORDING

- A. Label each document "Project Record" in 2" high printed letters.
- B. Keep record documents current.
- C. Do not permanently conceal any work until required information has been recorded.
- D. Contract Drawings: Legibly mark up to record actual construction:
 - 1. Horizontal and vertical location of underground utilities and appurtenances referred to permanent surface improvements.
 - 2. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - 3. Field changes of dimension and detail.
 - 4. Changes made by change order or field order.
 - 5. Details not on original contract drawings.
- E. Specifications and Addenda: Legibly mark up each section to record:
 - 1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 - 2. Changes made by change order or field order.
 - 3. Other matters not originally specified.
- F. Shop Drawings: Maintain as record documents; legibly annotate following drawings to record changes made after review:
 - 1. Plumbing
 - 2. Electrical

1.03 SUBMITTAL

- A. At completion of project, deliver documents to architect.
 - 1. One hard copy and one digital copy on DVD, CD, or Flash Drive.
- B. Record documents to be submitted with Final Pay Request.
- C. Final payment will be not be made until all closeout documents are received by the Architect.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

NOT USED.

END OF SECTION

DIVISION 03

CONCRETE

SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete formwork.
- B. Floors and slabs on grade.
- C. Concrete foundation walls.
- D. Concrete foundations and anchor bolts for pre-engineered building.
- E. Concrete reinforcement.
- F. Joint devices associated with concrete work.
- G. Concrete curing.

1.02 RELATED REQUIREMENTS

- A. Section 01 4000, Quality Requirements, for testing.
- B. Section 07 2600 - Vapor Retarder for under slabs on grade.
- C. Section 07 9005 - Joint Sealers.
- D. Section 31 2323 - Drainage fill under slabs-on-grade

1.03 REFERENCE STANDARDS

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2002).
- B. ACI 301 - Specifications for Structural Concrete for Buildings; American Concrete Institute International; 2005.
- C. ACI 302.1R - Guide for Concrete Floor and Slab Construction; American Concrete Institute International; 2004 (Errata 2007).
- D. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.
- E. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 1999.
- F. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 1988 (Reapproved 2002).
- G. ACI 308R - Guide to Curing Concrete; American Concrete Institute International; 2001 (Reapproved 2008).
- H. ACI 315 - Details and Detailing of Concrete Reinforcing.
- I. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; American Concrete Institute International; 2008.
- J. ASTM A185/A185M - Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete; 2007.
- K. ASTM A615/A615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2007.
- L. ASTM C33 - Standard Specification for Concrete Aggregates; 2007.

- M. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2005.
- N. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2007.
- O. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2008.
- P. ASTM C150 - Standard Specification for Portland Cement; 2007.
- Q. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete; 2007.
- R. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2008a.
- S. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete; 2006.
- T. ASTM C330 - Standard Specification for Lightweight Aggregates for Structural Concrete; 2005.
- U. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2008a.
- V. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2002.
- W. ASTM C1059 - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 1999 (Reapproved 2008).
- X. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2008.
- Y. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types); 2004 (Reapproved 2008).
- Z. ASTM E1155 - Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers; 1996 (Reapproved 2008).
- AA. ASTM E1155M - Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers [Metric]; 1996 (Reapproved 2008).

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements.
- C. Design Mixes: For each concrete mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
 - 1. Indicate amounts of mix water to be withheld for later addition at Project site.
- D. Steel Reinforcement Shop Drawings: Details of fabrication, bending, and placement, prepared according to ACI 315, "Details and Detailing of Concrete Reinforcement." Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement. Include special reinforcement required for openings through concrete structures.
- E. Welding Certificates: Copies of certificates for welding procedures and personnel.
- F. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:
 - 1. Cementitious materials and aggregates.
 - 2. Form materials and form-release agents.
 - 3. Steel reinforcement and reinforcement accessories.

4. Admixtures.
 5. Curing materials.
 6. Floor and slab treatments.
 7. Bonding agents.
 8. Adhesives.
 9. Vapor retarders.
 10. Epoxy joint filler.
 11. Joint-filler strips.
 12. Repair materials.
- G. Reproduction of contract drawings, in any form, will not be accepted as shop drawings.
- H. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.
- I. Provide ACI certification documentation for all finishers who will be installing concrete prior to starting any concrete operations.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.
- B. Acquire cement from same source and aggregate from same source for entire project.
- C. Follow recommendations of ACI 305R when concreting during hot weather.
- D. Follow recommendations of ACI 306R when concreting during cold weather.
- E. Installer Qualifications: An experienced installer who has completed concrete Work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
1. Concrete flatwork shall be performed utilizing high quality techniques conforming to American Concrete Institute Standards provided for by ACI Publications CP-10, Concrete Flatwork Technician and Flatwork Finisher, ACI Publication CCS-1, Concrete Craftsman Series, Slabs on Grade.
- F. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.
1. Manufacturer must be certified according to the National Ready Mixed Concrete Association's Certification of Ready Mixed Concrete Production Facilities.
- G. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.
1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
 2. See Section 01 4000 for additional requirements.
- H. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.
- I. Welding: Qualify procedures and personnel according to AWS D1.4, "Structural Welding Code-Reinforcing Steel."
- J. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1, Section 01 3119 "Project Meetings".
1. Before submitting design mixes, review concrete mix design and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
 - a. Contractor's superintendent.

- b. Independent testing agency responsible for concrete design mixes.
- c. Ready-mix concrete producer.
- d. Concrete subcontractor.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.
 2. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.

2.02 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M Grade 60 (420).
 1. Type: Deformed billet-steel bars.
 2. Finish: Unfinished, unless otherwise indicated.
- B. Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain type.
 1. Mesh Size: 6 x 6.
 2. Wire Gage: as shown on drawings.
- C. Reinforcement Accessories:
 1. Tie Wire: Annealed, minimum 16 gage.
 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C 150, Type I - Normal, Type 1A - Air Entraining; Portland type.
- B. Fine and Coarse Aggregates: ASTM C 33.
 1. Fine Aggregate: Clean, sharp, natural or manufactured sand, free from loam, clay, lumps, or other deleterious substances.
 2. Coarse Aggregate: Clean, uncoated, processed, locally available aggregate, containing no clay, mud, loam or foreign matter; maximum size of 1-1/2" at foundations and 1" at slabs.
- C. Fly Ash: ASTM C618, Class C.
- D. Water: Clean and not detrimental to concrete.

2.04 CHEMICAL ADMIXTURES

- A. Air Entrainment Admixture: ASTM C 260.
- B. Other Admixtures: Do not use other admixtures unless approved by architect; added chlorides will not be accepted.

2.05 ACCESSORY MATERIALS

- A. Bonding Agent: ASTM C 1059, Type II acrylic non-redispersable type.
 - 1. Polyvinyl Acetate (Interior Only):
 - a. Euclid "Euco Weld"
 - b. L & M "Everweld"
 - c. Or approved equal.
 - 2. Acrylic or Styrene Butadiene:
 - a. Euclid "SBR Latex"
 - b. L & M "Everbond"
 - c. Conspec "Strongbond"
 - d. Master Builders "Acryl-Set"
 - e. Sonneborn "Sonocrete"
 - f. Or approved equal
- B. Epoxy Bonding System: ASTM C 881, type as required by project conditions.
 - 1. Conspec "Spec-Bond 100"
 - 2. Euclid "Euco Epoxy System #452 or #620"
 - 3. L & M "Epabond"
 - 4. Master Builders "Concresive Standard Liquid"
 - 5. Or approved equal
- C. Underslab Vapor Retarder: See Section 07 2600.
- D. Non-Shrink Grout: ASTM C1107/C1107M; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
 - 1. Minimum Compressive Strength at 48 Hours: 2,400 psi.
 - 2. Minimum Compressive Strength at 28 Days: 7,000 psi.
 - 3. Products:
 - a. Conspec "100 Non-Shrink Grout (non-metallic)"
 - b. Euclid "Euco N.S."
 - c. L & M "Crystex"
 - d. Master Builders "Masterflow 713"
 - e. W.R. Meadows "Sealtight Cg-86 Grout"
 - f. Or approved equal
- E. Moisture-Retaining Cover: ASTM C171; clear polyethylene or white burlap-polyethylene sheet.
- F. Curing Compound: ASTM C309, Type I, Class A
 - 1. Moisture loss not more than 0.055 gr/ sq. cm when applied at 200 sq. ft. /gal.
 - 2. Conspec "Cure & Seal"
 - 3. L & M "L & M Dress and Seal".
 - 4. W. R. Meadows "Sealtight CS-309"
 - 5. Master Builders "MasterKure"
 - 6. Euclid "Eurocure"
 - 7. Sonneborn "Kure-N-Seal"
- G. Concrete Sealer:
 - 1. Scofield Selectseal-Plus
 - 2. Or approved equal

2.06 BONDING AND JOINTING PRODUCTS

- A. Joint Filler: Nonextruding, resilient asphalt impregnated fiberboard or cork, complying with ASTM D 1751, 1/2 inch thick and full depth of slab less 1/2 inch.
- B. Construction Joint Forms: To be used on all construction joints in slabs on grade.
 - 1. Screed Key, Meadow Burke Concrete Accessories, Inc., Denver, Colorado.

- C. Expansion Joint Devices: Integral extruded plastic; 1/2 inch thick, formed to tongue and groove profile, with removable top strip exposing sealant trough, knockout holes spaced at 6 inches, ribbed steel spikes with tongue to fit top screed edge.
- D. Sealant and Primer: As specified in Section 07 9005.

2.07 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of trial mixtures, as specified in ACI 301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- C. Normal Weight Concrete:
 - 1. Compressive Strength, when tested in accordance with ASTM C 39/C 39M at 28 days: As scheduled.
 - 2. Fly Ash Content: Maximum 20 percent of cementitious materials by weight.
 - 3. Cement Content:
 - a. 3000 psi mix: 470 lbs/yd³ without air
 - b. 3000 psi mix: 470 lbs/yd³ with air
 - c. 4000 psi mix: 564 lbs/yd³ without air
 - d. 4000 psi mix: 564 lbs/yd³ with air
 - e. Water-Cement Ratio:
 - 1) 3000 psi mix: 0.53 without air
 - 2) 3000 psi mix: 0.46 with air
 - 3) 4000 psi mix: 0.44 without air
 - 4) 4000 psi mix: 0.40 with air
 - f. Total Air Content: 4 percent, determined in accordance with ASTM C 173/C 173M.
 - g. Maximum Slump: As scheduled.

2.08 MIXING

- A. Transit Mixers: Comply with ASTM C94/C94M.
 - 1. Furnish batch ticket information.
 - 2. When air temperature is between 85 and 90 degrees F., reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 degrees F., reduce mixing and delivery time to 60 minutes.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
- B. Verify that forms are clean and free of rust before applying release agent.
- C. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.
- D. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.
- E. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.

- F. Install vapor retarder under interior slabs on grade. Lap joints minimum 6 inches and seal watertight by taping edges and ends.

3.03 INSTALLING REINFORCEMENT

- A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.
- B. Install welded wire reinforcement in maximum possible lengths, and offset end laps in both directions. Splice laps with tie wire.
- C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

3.04 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.
- B. Place concrete for floor slabs in accordance with ACI 302.1R.
- C. Notify Architect not less than 24 hours prior to commencement of placement operations.
- D. Ensure reinforcement, inserts, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
- E. Repair underslab vapor retarder damaged during placement of concrete reinforcing. Repair with vapor retarder material; lap over damaged areas minimum 6 inches and seal watertight.
- F. Separate slabs on grade from vertical surfaces with joint filler.
- G. Place joint filler in floor slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- H. Extend joint filler from bottom of slab to within 1/2 inch of finished slab surface. Conform to Section 07 9005 for finish joint sealer requirements.
- I. Install joint devices in accordance with manufacturer's instructions.
- J. Install construction joint devices in coordination with floor slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- K. Apply sealants in joint devices in accordance with Section 07 9005.
- L. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- M. Place concrete continuously between predetermined expansion, control, and construction joints.
- N. Do not interrupt successive placement; do not permit cold joints to occur.
- O. Place floor slabs in checkerboard pattern indicated.
- P. Saw cut joints within 8 hours after placing; as soon as possible after initial set. Use 1/8 inch thick blade, cut into 1/4 depth of slab thickness.
- Q. Screed floors level, maintaining the following minimum F(F) Floor Flatness and F(L) Floor Levelness values when measured in accordance with ASTM E1155/ASTM E1155M.
 - 1. F(F): Specified Overall Value (SOV) of 35; Minimum Localized Value (MLV) of 24.
 - 2. F(L): Specified Overall Value (SOV) of 25; Minimum Localized Value (MLV) of 17.

3.05 CONCRETE FINISHING

- A. Repair surface defects, immediately after removing formwork.
 - 1. Small area honeycombing less than 1 inch deep may be repaired as described below for exposed form finishes.
 - 2. Honeycombing in large areas or honeycombing 1 inch deep or greater may not be repaired. Notify the architect immediately after removal of form work. Architect will determine if concrete is to be removed or the method of repair if repair is allowed by architect.
- B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.
- C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
 - 1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.
 - 2. Grout mixtures will not be allowed.
- D. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
 - 1. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI 301.1R; thin floor coverings include carpeting, resilient flooring, seamless flooring, thin set quarry tile, and thin set ceramic tile.
 - 2. Other Surfaces to Be Left Exposed: "Steel trowel" as described in ACI 302.1R, minimizing burnish marks and other appearance defects.
 - a. Prior to occupancy of building, apply one additional coat of sealer/curing compound.
- E. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1:100 nominal or as indicated on drawings.

3.06 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
 - 1. Normal concrete: Not less than 7 days.
- C. Formed Surfaces: Cure by moist curing with forms in place for full curing period.
- D. Surfaces Not in Contact with Forms:
 - 1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding or saturated burlap.
 - 2. Final Curing: Begin after initial curing but before surface is dry.
 - a. Moisture-Retaining Cover: Seal in place with waterproof tape or adhesive.
 - b. Curing Compound: Apply in two coats at right angles, using application rate recommended by manufacturer.
 - c. Slabs to be left exposed apply one additional coat of sealer prior to occupancy of building.

3.07 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000.
- B. Provide free access to concrete operations at project site and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to 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 C39/C39M. For each test, mold and cure four concrete test cylinders. Obtain test samples for every 75 cu yd or less of each class of concrete placed.
- 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 C143/C143M.

3.08 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to Architect and Contractor within 24 hours of test.
- B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- C. Repair or replacement of defective concrete will be determined by the Architect. 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 Architect for each individual area.

3.09 SCHEDULE - CONCRETE TYPES AND FINISHES

- A. Footings and Grade Beams: Proportion normal-weight concrete mix as follows:
 - 1. Compressive Strength (28 Days): 3000 psi.
 - 2. Slump Range: 3 to 5 inches.
- B. Slab-on-Grade: Proportion normal-weight concrete mix as follows:
 - 1. Compressive Strength (28 Days): 4000 psi.
 - 2. Slump Range: 5 to 7 inches.

END OF SECTION

DIVISION 05

METALS

SECTION 05 5000
METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Miscellaneous Metals:
 - 1. Structural shapes for miscellaneous beams, columns, lintels, frames for wall, roof, and floor openings, miscellaneous bracing for door and window heads, anchor plates, inserts, clip angles, etc.
 - 2. Bearing plates for beams and anchors.
 - 3. Bolts and studs.
 - 4. Miscellaneous bracing angles and support angles.
- B. Metal bollards

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.
- B. Section 09 9000 - Painting and Coating: Paint finish.

1.03 REFERENCE STANDARDS

- A. ANSI A14.3 - American National Standard for Ladders -- Fixed -- Safety Requirements; 2002.
- B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2005.
- C. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2007.
- D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2002.
- E. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2003 (Reapproved 2007).
- F. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength; 2009.
- G. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2007.
- H. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; American Welding Society; 2007.
- I. AWS D1.1/D1.1M - Structural Welding Code - Steel; American Welding Society; 2008.
- J. SSPC-Paint 15 - Steel Joist Shop Primer; Society for Protective Coatings; 1999 (Ed. 2004).
- K. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); Society for Protective Coatings; 2002 (Ed. 2004).
- L. SSPC-SP 2 - Hand Tool Cleaning; Society for Protective Coatings; 1982 (Ed. 2004).

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

1.05 QUALITY ASSURANCE

- A. All fabrication to be completed by a firm regularly engaged in metal fabrications with a minimum of three years' experience.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Steel Sections: ASTM A 36/A 36M.
- B. Steel Tubing: ASTM A 500, Grade B cold-formed structural tubing.
- C. Plates: ASTM A 283.
- D. Pipe: ASTM A 53/A 53M, Grade B Schedule 40, black finish.
- E. Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, galvanized to ASTM A 153/A 153M where connecting galvanized components.
- F. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- G. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
- H. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- E. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

- A. Ledge Angles, Shelf Angles, Channels, and Plates Not Attached to Structural Framing: For support of metal decking; prime paint or galvanized finish; see drawings.
- B. Lintels: As detailed; prime paint or galvanized finish; see drawings.
- C. Bollards: 6" round steel pipe, concrete filled, crowned cap, as detailed; prime paint finish.
 1. Bollards to extend above grade 48 inches unless otherwise shown on drawings.
 2. Bollards to extend into concrete footing a minimum of 24 inches.
- F. Miscellaneous structural framing.
 1. As required.

2.04 FINISHES - STEEL

- A. Prime paint all steel items.
 1. Exceptions: Galvanize items to be embedded in concrete or masonry and items specified for galvanized finish.

2. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing.
- B. Prepare surfaces to be primed in accordance with SSPC-SP2.
- C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- D. Prime Painting: One coat.
- E. Galvanizing of Structural Steel Members: Galvanize after fabrication to ASTM A123/A123M requirements.
- F. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

2.05 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch.
- C. Maximum Misalignment of Adjacent Members: 1/16 inch.
- D. Maximum Bow: 1/8 inch in 48 inches.
- E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Field weld components indicated.
- D. Perform field welding in accordance with AWS D1.1/D1.1M.
- E. Obtain approval prior to site cutting or making adjustments not scheduled.
- F. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

END OF SECTION

DIVISION 06

WOOD, PLASTICS AND COMPOSITES

SECTION 06 1000
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Building Lay-out.
- B. Miscellaneous framing.
- C. Miscellaneous wood nailers, furring, and grounds.

1.02 REFERENCES

- A. AWPA C2 - Lumber, Timber, Bridge Ties and Mine Ties -- Preservative Treatment by Pressure Processes; American Wood-Preservers' Association; 2002.
- B. AWPA C27 - Plywood -- Fire-Retardant Treatment by Pressure Processes; American Wood-Preservers' Association; 2002.
- C. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood Protection Association; 2010.
- D. PS 1 - Structural Plywood; 2007.
- E. SPIB (GR) - Grading Rules; Southern Pine Inspection Bureau, Inc.; 2002.
- F. WWPA G-5 - Western Lumber Grading Rules; Western Wood Products Association; 2011.

1.03 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.

1.04 QUALITY ASSURANCE

- A. Lumber: Comply with PS 20 and approved grading rules and inspection agencies.
 - 1. Acceptable Lumber Inspection Agencies: Any agency with rules approved by American Lumber Standards Committee.
 - 2. Acceptable Lumber Inspection Agencies: SPIB and WWPA.
 - 3. Lumber of other species or grades, or graded by other agencies, is acceptable provided structural and appearance characteristics are equivalent to or better than products specified.

1.05 DELIVERY, STORAGE, AND HANDLING

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

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

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

2.02 DIMENSION LUMBER

- A. Grading Agency: Southern Pine Inspection Bureau, Inc. (SPIB).
- B. Grading Agency: Western Wood Products Association (WWPA).
- C. Sizes: Nominal sizes as indicated on drawings, S4S.
- D. Moisture Content: Kiln-dry or MC15.
- E. Miscellaneous Framing:
 - 1. Species: Southern Pine, Western Cedars.
 - 2. Grade: No. 2.
- F. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.

PART 3 EXECUTION

3.01 BUILDING LAY-OUT

- A. Lay-out the building using batter boards placed not less than 4'-0" outside of building lines and left in place until all walls are above grade. No excavation shall be started until all lines have been established and dimensions are checked and finish floor elevation is checked by the architect.
- B. Carpentry work shall include full responsibility for the accurate laying out of the building and the work of all subcontractors, mechanical and electrical contractors, and to see that their work shall not interfere with the structural parts of the building.

3.02 FRAMING INSTALLATION

- A. Provide miscellaneous members as indicated or as required to support finishes, fixtures, specialty items, and trim.
 - 1. Attach to walls with screws.
 - 2. Attach to floor with Hilti anchors.

END OF SECTION

DIVISION 07

THERMAL AND MOISTURE PROTECTION

SECTION 07 2116
BLANKET INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Batt insulation and vapor retarder behind metal wall and roof panels.
- B. Miscellaneous batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

1.02 RELATED SECTIONS

- A. Section 13 3419 - Metal Building Systems

1.03 REFERENCES

- A. ASTM C 665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2001.
- B. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2005.
- C. ASTM E 136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C; 2004.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Owens Corning, Toledo, Ohio
- B. Johns Manville, Denver, Colorado
- C. Certain Teed Corporation, Valley Forge, Pennsylvania

2.02 BATT INSULATION MATERIALS

- A. Batt Insulation: ASTM C 665; preformed glass fiber batt; friction fit, conforming to the following:
 - 1. Surface Burning Characteristics: Flame spread index of 25 or less; smoke developed index of 450 or less, when tested in accordance with ASTM E 84.
 - 2. Combustibility: Non-combustible when tested in accordance with ASTM E 136, except for facing, if any.
 - 3. Provide insulation made without formaldehyde.
 - 4. Thermal Resistance: See 3.03 Schedules.
 - 5. Thickness: See 3.03 Schedules.
 - 6. Facing: Unfaced.
 - a. ASTM C 665; Federal Specification HH-1-521F, Type I.
 - 7. Facing: Vinyl faced, one side
 - a. ASTM C665, Type II, Class A, Category 1
 - b. Reinforced vinyl facing
 - c. Colors: White

PART 3 EXECUTION

3.01 BATT INSTALLATION

- A. Install insulation and vapor retarder in accordance with manufacturer's instructions.
- B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.

- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
- E. Install with factory applied vapor retarder membrane facing warm side of building spaces. Lap ends and side flanges of membrane over framing members.
- F. Secure facing flanges in place at maximum 6 inches on center.
- G. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.
 - 1. Use vinyl tape
- H. Extend vapor retarder tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape seal in place.
- I. Install layer at roof structure between metal roof purlins over metal straps.
 - 1. Metal straps to be placed no greater than 4'-0" o.c. across bottom of purlins.

3.02 PROTECTION OF FINISHED WORK

- A. Do not permit installed insulation to be damaged prior to its concealment.

3.03 SCHEDULES

- A. Behind Metal Wall and Metal Roof Panels:
 - 1. 3 inch thick, vinyl faced, R-Value R-10

END OF SECTION

SECTION 07 2600
VAPOR RETARDERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Vapor retarders under concrete floor slabs.
 - 1. All interior floor slabs.
- B. Tape to seal joints and repair vapor retarder.
- C. Pipe boots for sealing penetrations.

1.02 RELATED SECTIONS

- A. Section 03 3000 - Cast-in-Place Concrete: Slabs on grade.

1.03 REFERENCES

- A. ASTM D 882 - Tensile Properties of Thin Plastic Sheeting; 2002.
- B. ASTM D 1709 - Standard Specification for Impact Resistance of Plastic Film by the Free-Falling Dart Method; 2004.
- C. ASTM E 96 - Water Vapor Transmission of Materials; 2000.
- D. ASTM E 1643 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 1998.
- E. ASTM E 1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 1997 (Reapproved 2004).

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- 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.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage:
 - 1. Store products in manufacturer's unopened packaging until ready for installation.
 - 2. Store materials in a clean, dry area in accordance with manufacturer's instructions.
- C. Handling: Protect materials during handling and installation to prevent damage.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Stego Wrap (15 mil) Vapor Barrier by Stego Industries LLC, San Juan Capistrano, CA (877) 464-7834 www.stegoindustries.com

2.02 VAPOR RETARDERS

- A. Polyolefin Geomembrane
 - 1. Water Vapor Barrier: ASTM E 1745; meets or exceeds Class C.
 - 2. Thickness: 15 mil

3. Water Vapor Permeance: 0.01 perms when tested in accordance with ASTM E 96.
4. Tensile Strength: 79.6 lbf./in. when tested in accordance with ASTM D 882.
5. Puncture Resistance: 2326 grams when tested in accordance with ASTM D 1709.

2.03 ACCESSORIES

- A. General: Ensure accessories are from same manufacturer as reinforced vapor retarders.
- B. Self-Adhesive Repair Tape: High density polyethylene tape with pressure sensitive adhesive; 4 inches wide.
- C. Pipe Boots: Construct pipe boots from vapor barrier material and pressure sensitive tape per manufacturer's instructions.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine surfaces and areas to receive reinforced vapor retarders. Notify Architect in writing defects of work and other unsatisfactory site conditions that would cause defective installation of vapor retarders. Do not begin installation until unacceptable conditions have been corrected.
- B. Verify site dimensions.
- C. Commencement of work will imply acceptance of substrate.

3.02 INSTALLATION

- A. Install vapor retarders in accordance with manufacturer's instructions and ASTM E 1643 at concrete slabs.
- B. Install vapor retarders continuously at locations as indicated on the drawings. Ensure there are no discontinuities in vapor retarder at seams and penetrations.
- C. Install vapor retarders in largest practical widths.
- D. Ensure surface beneath vapor retarder is smooth with no sharp projections.
- E. Join sections of vapor retarder and seal penetrations in vapor retarder with mastic tape. Ensure vapor retarder surfaces to receive mastic tape are clean and dry.
- F. Immediately repair holes in vapor retarder with self-adhesive repair tape.
- G. Seal around pipes and other penetrations in vapor retarder with pipe boots in accordance with manufacturer's instructions.

3.03 PROTECTION

- A. Protect vapor retarders from damage during installation of reinforcing steel and utilities and during placement of granular materials or concrete slab.
- B. Immediately repair damaged vapor retarder in accordance with manufacturer's instructions.

END OF SECTION

SECTION 07 4213
METAL WALL PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Manufactured metal panels for walls and accessory components.

1.02 RELATED SECTIONS

- A. Section 07 9005 - Joint Sealers.

1.03 REFERENCES

- A. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2004a.
- B. ASTM A 792/A 792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2003.

1.04 DESIGN REQUIREMENTS

- A. Components: Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall as calculated in accordance with the Arkansas Fire Prevention Code.
- B. Maximum Allowable Deflection of Panel: 1/90 of span.
- C. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement within system; movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
- D. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.

1.05 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Shop Drawings: Indicate dimensions, layout, joints, construction details, and methods of anchorage.
- C. Samples: Submit two samples of wall panel 12 inch by 12 inch in size illustrating finish color, sheen, and texture.

1.06 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum five (5) years of experience.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
- B. Store prefinished material off ground and protected from weather. Prevent twisting, bending, or abrasion, and provide ventilation to stored materials. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials that may cause discoloration or staining of products.

1.08 PROJECT CONDITIONS

- A. Coordinate the Work with installation of roofing components and soffit materials.

1.09 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Substantial Completion for degradation of panel finish, including color fading caused by exposure to weather.
- C. Correct defective Work within a five year period after Substantial Completion, including defects in water tightness and integrity of seals.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. American Buildings Company: www.americanbuildings.com
 - 1. Metal Wall Panel: Equal to "Long Span III" wall panel as manufactured by American Buildings Company.
- B. Other Acceptable Manufacturers: www.ametalsystems.com
 - 1. MBCI: www.mbc.com
 - 2. Firestone Building Products: www.firestonebpc.com
 - 3. Architectural Metal Systems: www.ametalsystems.com
 - 4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 MANUFACTURED METAL PANELS

- A. Wall Panel System: Preformed and prefinished metal panel system; site assembled; with subgirt framing assembly.
- B. Materials - Wall Panels
 - 1. Steel Sheet: Hot-dipped galvanized steel sheet, ASTM A 653/A 653M, SS Grade 80/550, with G90/Z275 Coating. 26 gage.
 - 2. Kynar 500 finish; color to be selected.
 - 3. Panels to be at a length as to avoid end-to-end joints.
 - 4. Provide factory applied strippable plastic film for protection during fabrication and installation.

2.03 ACCESSORIES

- A. Provide all trim to make a complete installation as shown on the drawings.
- B. Fasteners:
 - 1. Per manufacturer's recommendations.
- C. Field Touch-up Paint: As recommended by panel manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that wall sheathing and metal building is ready to receive panels.

3.02 INSTALLATION

- A. Install panels on walls in accordance with manufacturer's instructions.
- B. Fasten panels to sheathing; aligned, level, and plumb.
- C. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

3.03 TOLERANCES

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch.
- B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch.

3.04 CLEANING

- A. Remove site cuttings from finish surfaces.
- B. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.

END OF SECTION

SECTION 07 6100
SHEET METAL ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pre-finished galvanized sheet steel roofing.
- B. Flashings and trim
- C. Integral fascia

1.02 RELATED REQUIREMENTS

- A. Section 07 6200 - Sheet Metal Flashing and Trim
- B. Section 07 7123 - Manufactured Gutters and Downspouts.
- C. Section 13 3419 - Metal Building Systems

1.03 REFERENCE STANDARDS

- A. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels; 2005.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2007.
- C. ASTM E 283 - Standard Test Method for Determining Air Leakage.
- D. ASTM E 331 - Standard Test Method for Water Penetration
- E. UL 580 and UL 90 - Test for Wind-Uplift Resistance of Roof Assemblies.
- F. SMACNA (ASMM) - Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2003.

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- C. Product Data: Provide data on metal types, finishes, characteristics.
- D. Submit two samples 4 x 4 inch in size illustrating metal finish color.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise noted.
- B. Manufacturer's Qualifications:
 - 1. The manufacturer has been regularly engaged in the fabrication of metal standing seam roof systems for at least ten (10) years and is an American Owned Company, regardless of name change. A brief list of similar projects shall be submitted with the shop drawings.
 - 2. The manufacturer maintains a CERTIFIED installer program for its products and maintains an up-to-date authorized roofing contractor list.
 - 3. The manufacturer has a written warranty covering durability, color and weather tightness of its roof system. Sample warranties shall be provided to the architect prior to contract award.

4. Manufacturer shall be recognized as: A manufacturer that will provide fixed equipment, operated by manufacturer employee and not a portable on site roll former. Portable roll forming may be utilized only for radius materials. All standing seam panels shall be run on fixed equipment utilizing tension stabilization. Liability of finished product shall fall to single source manufacturer. Manufacturer shall be capable of producing panel lengths of 45 feet or longer.
 5. Manufacturer shall maintain a dedicated staff of engineers, estimators and designers. Engineers and estimators are identified as roofing specialists, providing design, engineering services as full time employees of the manufacturer.
 6. Manufacturer shall be identified as a provider of standing seam metal products, have sales in excess of 25 million dollars annually and provide proof of financial strengths against warranty liabilities.
- C. Installer Qualifications: Company specializing in performing sheet metal roof installations with minimum 3 years of experience.
1. Installation of the standing seam metal roofing panel and roof related accessories shall be performed by roofers, PREFERRED & AUTHORIZED by the manufacturer as trained and qualified to erect the manufacturer's product.
 2. Roofing contractor must submit, as part of the submittal package, a letter from the manufacturer of the standing seam metal roofing system, certifying the date of authorization to install, from the manufacturer.
 3. Maintain a minimum of \$1,000,000 general liability coverage for each loss.
 4. Maintain sufficient worker's compensation coverage as mandated by law.
 5. Have no viable claims pending, regarding negligent acts, defective workmanship on previously performed or current projects.
 6. Have not filed for protection from creditors under any state or federal insolvency or debtor relief statues or codes.
 7. Have installed five (5) projects of similar scope and magnitude that have been in service for minimum of 2 years with satisfactory performance of the entire roof system.
 8. Installer must execute 100% of roof system installation, utilizing employees that are confirmed as full time employees of the contractor. Second and third tier sub-contractors for the installation of work in this section shall not be permitted.
 9. Installer shall be identified as "primary source of business" for standing seam metal roof systems.

1.06 PRE-INSTALLATION MEETING

- A. Convene one week before starting work of this section.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver metal roofing to job site packaged to provide protection against transportation damages.
- B. Stack material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Store under water-proof covering.
- D. Prevent contact with materials that could cause discoloration or staining.
- E. Provide ventilation to prevent condensation build-up between each panel or trim/flushing component.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Provide twenty year manufacturer warranty for weather tightness. Warranty shall include degradation of metal finish.
- C. Warranty is to include all flashings, trim, roof curbs, gutters, and other roof components.

- D. Installer Warranty: Provide two year contractor warranty on materials and workmanship.

PART 2 PRODUCTS

2.01 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide sheet metal roofing which has been manufactured, fabricated and installed to withstand structural and thermal movement, wind loading and weather exposure to maintain manufacturer's performance criteria without defects, damage, failure of infiltration of water.
1. Wind-Uplift: Roof panel assembly shall comply with UL 580 for UL 90 rated assemblies.
 2. Static Air Infiltration: Completed roof system shall have a maximum of .06 cfm/sf with 6.24 kPa air pressure differential as per ASTM E283.
 3. Water Infiltration: No evidence of water penetration at an inward static air pressure differential of not less than 7.24 psf (43 kPa) and not more than 12.0 psf (83 kPa) as per ASTM E331.
- B. Design Criteria:
1. The following standards and criteria shall be used where covered by this specification:
 - a. Manual of Steel Construction, American Institute of Steel Construction - current Edition;
 - b. Cold Formed Steel Design Manual, American Iron and Steel Institute 1996 Edition.
 - c. Low Rise Metal Building Systems Manual, American Iron and Steel Institute - 1996 Edition.

2.02 SHEET MATERIALS

- A. Pre-Finished Galvanized Steel Sheet: ASTM A 653/A 653M, with G90/Z275 zinc coating; 24 gage core steel, shop pre-coated with Galvalume coating.
1. Minimum Yield Stress: 50 ksi
 2. 3 inch high trapezoidal rib panel
 3. 18 inch wide panels.
 4. Standing seam roof system

2.03 MANUFACTURERS

- A. MBCI: Double Lock 18"
- B. Or Equal
- C. See Section 01 6000 - Product Requirements, for substitution procedures.

2.04 ACCESSORIES

- A. Fasteners: Non-corrosive, per manufacturer's recommendation to meet UL-90 rated assemblies.
- B. Roof Penetrations:
1. All pipe penetrations through roof are to be flashed with EPDM rubber sized to pipe with ductile aluminum reinforcing ring bonded to rubber flange on base of flashing units equal to those manufactured by "Dektite". Acceptable substitutes are "Willard", "Mayco", and "Neverleak".
- C. Trim and Flashings:
1. Trim and Flashings: Fabricate trim and flashings from same material as roof system material.
 2. Trim and flashings are a part of the roofing warranty.
- D. Clips: Manufacturer's standard clips for concealed securement of panels. Clips must accommodate for movement of panels.
- E. Closures: Provide neoprene closers at panel ends
- F. Seam: To have factory applied sealant.

- G. Source Quality: All materials are to be from a single manufacturer.
- H. Sealant: Permanently elastic, non-sagging, non-toxic, non-staining tape sealant approved by the panel manufacturer.

2.05 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Fabricate starter strips, interlockable with sheet.
- C. Form pieces in longest practical lengths.
 - 1. No end laps allowed.
- D. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- E. Form material with standing seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate is ready to receive roofing.

3.02 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Back paint concealed metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to a minimum dry film thickness of 15 mil.

3.03 INSTALLATION - GENERAL

- A. Comply with manufacturer's product data, recommendations, and installation instructions.

3.04 INSTALLATION - STANDING SEAM ROOFING

- A. Conform to SMACNA Architectural Sheet Metal Manual details.
- B. Space standing seams at 18 inch on center.
- C. Lay sheets with long dimension perpendicular to eaves. Apply pans beginning at eaves.
- D. Lock cleats into seams and flatten.
- E. End laps are not allowed.
- F. At eaves and gable ends, terminate roofing by hooking over edge strip.
- G. Seams to be machine seamed with motorized seamer.

3.05 INSTALLATION - FLASHINGS

- A. Conform to SMACNA Architectural Sheet Metal Manual.
- B. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- C. Cleat and seam all joints.
- D. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Seal metal joints watertight.

3.06 PROTECTION

- A. Do not permit traffic over unprotected roof surface.

END OF SECTION

SECTION 07 6200

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, fascias, and trim.
- B. Metal wall panel trim and flashing.

1.02 RELATED REQUIREMENTS

- A. Section 07 6100 - Sheet Metal Roofing
- B. Section 07 7123 - Manufactured Gutters and Downspouts.
- C. Section 07 9005 - Joint Sealers.
- D. Section 13 3419 - Metal Building Systems

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2007.
- B. SMACNA (ASMM) - Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2003.

1.04 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise indicated.
- B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

1.06 WARRANTY

- A. All roof trim, fascias, flashing, gutters, and downspouts are to be a part of the sheet metal roofing weather tightness warranty. See Section 07 6100.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Pre-Finished Galvanized Steel: ASTM A 653/A 653M, with G90/Z275 zinc coating; minimum 24 gauge thick base metal, shop pre-coated with Kynar 500 coating.

2.02 ACCESSORIES

- A. Fasteners: Lapped and riveted.
- B. Provide all accessories essential to completeness of installation.
- C. Sealant: Type as specified in Section 07 9005.

2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.

- B. Form pieces in longest possible lengths.
- C. Metal flashings shall lap a minimum of 6 inches each joint and shall lap over a bead or brushing of non-setting caulking compound and be riveted.
- D. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- E. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- B. Seal metal joints watertight.
- C. Install metal reglet and flashing system per manufacturer's recommendations with manufacturer approved fasteners.

END OF SECTION

SECTION 07 7123

MANUFACTURED GUTTERS AND DOWNSPOUTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pre-finished metal gutters and downspouts.

1.02 RELATED REQUIREMENTS

- A. Section 07 6100 - Sheet Metal Roofing.
- B. Section 07 6200 - Sheet Metal Flashing and Trim.

1.03 REFERENCE STANDARDS

- A. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels; 2005.
- B. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2007.
- C. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric]; 2007.
- D. CDA A4050 - Copper in Architecture - Handbook; Copper Development Association, Inc.; current edition.
- E. SMACNA (ASMM) - Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2003.

1.04 DESIGN REQUIREMENTS

- A. Conform to SMACNA Architectural Sheet Metal Manual for sizing components for rainfall intensity determined by a storm occurrence of 1 in 5 years.
- B. Conform to applicable code for size and method of rain water discharge.
- C. Maintain one copy of each document on site.

1.05 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details.
- C. Product Data: Provide data on prefabricated components.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope to drain.
- B. Prevent contact with materials that could cause discoloration, staining, or damage.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Metal gutters and downspouts to be same material as used for standing seam metal roofing and metal flashings. See Sections 07 6100 and 07 6200.

2.02 COMPONENTS

- A. Gutters: CDA rectangular style profile.

- B. Downspouts: CDA Rectangular profile.
- C. Anchors and Supports: Profiled to suit gutters and downspouts.
 - 1. Anchoring Devices: In accordance with CDA requirements.
 - 2. Gutter Supports: Brackets.
 - 3. Downspout Supports: Brackets; minimum three (3) per downspout.

2.03 FABRICATION

- A. Form gutters and downspouts of profiles and size indicated.
- B. Fabricate with required connection pieces.
- C. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints.
- D. Hem exposed edges of metal.

2.04 FACTORY FINISHING

- A. Factory finished, Kynar 500
- B. Color to be selected.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that surfaces are ready to receive work.

3.02 PREPARATION

- A. Paint concealed metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to a minimum dry film thickness of 15 mil.

3.03 INSTALLATION

- A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.
- B. Sheet Metal: Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts and accessories.

END OF SECTION

SECTION 07 9005

JOINT SEALERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sealants and joint backing.
- B. Precompressed foam sealers.
- C. Hollow gaskets.

1.02 RELATED REQUIREMENTS

1.03 REFERENCE STANDARDS

- A. ASTM C 510 - Standard Test Method for Staining and Color Change of Single or Multicomponent Joint Sealers
- B. ASTM C 719 - Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cucklick Movement (Hockman Cycle).
- C. ASTM C 794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants.
- D. ASTM C834 - Standard Specification for Latex Sealants; 2005.
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2005.
- F. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2009.
- G. ASTM D1056 - Standard Specification for Flexible Cellular Materials--Sponge or Expanded Rubber; 2007.
- H. ASTM D1667 - Standard Specification for Flexible Cellular Materials--Poly(Vinyl Chloride) Foam (Closed-Cell); 2005.

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal requirements.
- B. Product Data: Provide data indicating sealant chemical characteristics.
- C. Manufacturer's Installation Instructions: Indicate special procedures.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum ten years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section with minimum three years experience.

1.06 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.
 - 1. Install only when atmosphere temperature or joint surface temperature is above 40 degrees F.

1.07 COORDINATION

- A. Coordinate the work with all sections referencing this section.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

- B. Correct defective work within a three year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Sealants
 - 1. Tremco, Sealant/Weatherproofing Division, Beachwood, Ohio. www.tremcosealants.com
 - 2. Dow Corning Corporation, Midland, Michigan
 - 3. Degussa Building Systems/Sonneborn; www.chemrex.com
 - 4. Bostik, Inc.; www.bostik-us.com
 - 5. Pecora Corporation; www.pecora.com

2.02 SEALANTS

- A. Type A - Exterior Metal Lap Joint Sealant: Butyl or polyisobutylene, nondrying, nonskinning, noncuring.
 - 1. Product: Butyl Sealant manufactured by Tremco.
 - 2. Applications: Use for:
 - a. Concealed sealant bead in sheet metal work.
- B. Type B - General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, Type OP, Grade NF single component, paintable.
 - 1. Color: Standard colors matching finished surfaces.
 - 2. Product: Trademate manufactured by Dow Corning.

2.03 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50 percent larger than joint width; "Rescor" manufactured by W. R. Meadows.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.
- E. Sealant System Backing: "Backer-Rod" as manufactured by W. R. Meadows.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.
- B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Protect elements surrounding the work of this section from damage or disfigurement.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve the following, unless otherwise indicated:
 - 1. Width/depth ratio of 2:1.
 - 2. Neck dimension no greater than 1/3 of the joint width.
 - 3. Surface bond area on each side not less than 75 percent of joint width.
- D. Install bond breaker where joint backing is not used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- G. Tool joints concave.
- H. Apply caulking compound with hand gun having proper sized nozzles to fit joints and with sufficient pressure to completely fill voids and joints.

3.04 CLEANING

- A. Clean adjacent soiled surfaces.

3.05 PROTECTION

- A. Protect sealants until cured.

3.06 SCHEDULE

- A. Lap Joints in Exterior Sheet Metal Work: Type A.
- B. Under Exterior Door Thresholds: Type A.
- C. Interior Joints for Which No Other Sealant is Indicated: Type B; colors as selected.
- D. Any location not listed: According to manufacturer's recommendations.

END OF SECTION

DIVISION 08

OPENINGS

SECTION 08 1113

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated steel frames.
- B. Non fire-rated steel doors.
- C. Thermally insulated steel doors.
- D. Accessories

1.02 RELATED REQUIREMENTS

- A. Section 08 7100 - Door Hardware.
- B. Section 09 9000 - Painting and Coating: Field painting.

1.03 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2003.
- B. ANSI A250.3 - Test Procedure and Acceptance Criteria for Factory-Applied Finish Painted Steel Surfaces for Steel Doors and Frames; 2007.
- C. ANSI A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames; 2003.
- D. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 1998 (R2004).
- E. ASTM C236 - Standard Test Method for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box; 1989 (Reapproved 1993).
- F. ASTM C1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus; 2005.
- G. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames; 2006.
- H. DHI A115 Series - Specifications for Steel Doors and Frame Preparation for Hardware; Door and Hardware Institute; 2000 (ANSI/DHI A115 Series).
- I. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers; 2007.
- J. NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association; 2007.
- K. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.
- L. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; 1998.

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced grade standard.

- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.

1.05 QUALITY ASSURANCE

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

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store in accordance with NAAMM HMMA 840.
B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Steel Doors and Frames:
1. Ceco Door Products: www.cecodoor.com.
2. Republic Doors: www.republicdoor.com.
3. Steelcraft: www.steelcraft.com.
4. Amweld Building Products, Garrettsville, Ohio.

2.02 DOORS AND FRAMES

- A. Requirements for All Doors and Frames:
1. Accessibility: Comply with ANSI/ICC A117.1.
2. Door Top Closures: Flush with top of faces and edges.
3. Door Edge Profile: Beveled on both edges.
4. Door Texture: Smooth faces.
5. Hardware Preparation: In accordance with BHMA A156.115, with reinforcement welded in place, in addition to other requirements specified in door grade standard.
6. Finish: Factory primed, for field finishing.

2.03 STEEL DOORS

- A. Exterior Doors Non-Fire Rated:
1. Grade: ANSI A250.8 Level 3, physical performance Level B, Model 2, seamless.
a. 14 gauge
b. Thickness: 1-3/4"
2. Core: Polystyrene foam.
3. Top Closures for Outswinging Doors: Flush with top of faces and edges.
4. Provide styles as shown on the drawings.
5. Texture: Smooth faces.
6. Weatherstripping: Separate, see Section 08 7100.
7. Finish: Factory primed, for field finishing.

2.04 STEEL FRAMES

- A. General:
1. Comply with the requirements of grade specified for corresponding door, except:
a. Exterior Metal Doors: ANSI A250.8, Level 2, 14 gage frames.
2. Finish: Same as for door.
B. Exterior Door Frames: Face welded, seamless with joints filled.

2.05 ACCESSORY MATERIALS

- A. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.
B. Temporary Frame Spreaders: Provide for all factory- or shop-assembled frames.

2.06 FINISH MATERIALS

- A. Primer: Rust-inhibiting, complying with ANSI A250.10, door manufacturer's standard.
- B. Bituminous Coating: Asphalt emulsion or other high-build, water-resistant, resilient coating.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.

3.02 INSTALLATION

- A. Install in accordance with the requirements of the specified door grade standard and NAAMM HMMA 840.
- B. Coordinate frame anchor placement with wall construction.
- C. Coordinate installation of hardware.

3.03 TOLERANCES

- A. Clearances Between Door and Frame: As specified in ANSI A250.8.
- B. Maximum Diagonal Distortion: 1/16 in measured with straight edge, corner to corner.

3.04 ADJUSTING

- A. Adjust for smooth and balanced door movement.

3.05 SCHEDULE

- A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

SECTION 08 3613
SECTIONAL DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Overhead sectional doors, electrically operated.
- B. Operating hardware and supports.
- C. Electrical controls.

1.02 RELATED REQUIREMENTS

- A. Section 07 9005 - Joint Sealers: Perimeter sealant and backup materials.
- B. Section 09 9000 - Painting and Coating: Finish painting.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2007.
- B. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2008.
- C. DASMA 102 - American National Standard Specifications for Sectional Overhead Type Doors; Door & Access Systems Manufacturers' Association, International; 2004.
- D. NEMA MG 1 - Motors and Generators; National Electrical Manufacturers Association; 2007.
- E. NFPA 70 - National Electrical Code; National Fire Protection Association; 2008.

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
- C. Product Data: Show component construction, anchorage method, and hardware.
- D. Manufacturer's Installation Instructions: Include any special procedures required by project conditions.
- E. Operation Data: Include normal operation, troubleshooting, and adjusting.
- F. Maintenance Data: Include data for motor and transmission, shaft and gearing, lubrication frequency, spare part sources.
- G. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum five years of experience.
- C. Conform to applicable code for motor and motor control requirements.
- D. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified.

1.06 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for electric motor and transmission.
- D. Provide five year manufacturer warranty for electric operating equipment.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Raynor Garage Doors; www.raynor.com
- B. Other Acceptable Manufacturers:
 - 1. Overhead Door Corporation; www.overheaddoor.com
 - 2. Fimbel Door Co: www.fimbeldoor.com.
 - 3. Clopay Corporation: www.clopaydoor.com.
 - 4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 SECTIONAL RIBBED PAN DOOR

- A. SteelForm as manufactured by Raynor Garage Doors:
 - 1. Doors
 - a. Operation
 - 1.) Provide doors designed for electric motor operation
 - b. Jamb Construction
 - 1.) Steel jambs with self-tapping fasteners.
 - 2. Sections:
 - a. SteelForm S24 (Standard)
 - 1.) Section end stiles and center stiles to be minimum 16 gauge galvanized steel. End stiles and center stiles to be riveted to outside face with stainless steel rivets and resistance welded to interior rail.
 - 2.) Material: Steel pan construction, 2 inches thick, roll-formed from 24 gauge commercial quality, hot-dipped galvanized (G60) steel complying with ASTM A 653. Exterior of door to have two deep ribs, four pencil grooves, and roll-formed tongue-and-groove joints for weathertight closure.
 - 3.) Finish: Exterior skin to have two coats of paint, one primer coat and one finish coat.
 - a.) Color: Kynar finish; color to be determined
 - b. Seals: Bottom of door to have flexible U-shaped vinyl seal retained in aluminum rail.
 - 3. Mounting: Sections mounted in door opening using:
 - a. Lap Jamb Angle Mounting: Section overlap door jambs by 1 inch on each side of door opening.
 - 4. Track:
 - a. Material: Hot-dipped galvanized steel (ASTM A 653), fully adjustable for adequate sealing of door to jamb.
 - b. Configuration Type: Incline
 - c. Track Size: 2 inches
 - d. Mounting:
 - 1.) Floor-to-header angle mount consisting of continuous angle extending from the floor up to the door header.

5. Counterbalance:
 - a. Counterbalance System: Provided with aircraft-type, galvanized steel lifting cables with minimum safety factor of 5. Torsion Springs consisting of heavy-duty oil-tempered wire torsion springs on a continuous ball-bearing cross-header shaft.
 - 1.) Spring Cycle Requirements: High Cycle: 10,000 cycles.
 6. Hardware:
 - a. Hinges and Brackets: Fabricated from galvanized steel
 - b. Track Rollers: 2 inches diameter consistent with track size.
 - c. Perimeter Seal: Provide complete weather stripping system to reduce air infiltration.
- B. Control Hoist as manufactured by Raynor Garage Doors:
1. Model:
 - a. Control Hoist Standard model
 - 1.) Jack-shaft type electric operator, solid state logic with (1) three button control station and auxiliary hand chain. Transmission to be belt-drive with roller chain / sprocket reduction.
 - 2.) Motor: ½ H.P. Voltage: 115 Phase: SINGLE
 - 3.) Control Wiring: Solid state circuitry with provisions for connection of safety edge to reverse, external radio control hook-up and maximum run timer. Provisions for timers to close, monitored reversing devices, mid stop and lock bar sensor capability.
 - a.) Provide three button momentary contact "open-stop", constant pressure on close (can be changed to momentary to close).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
- B. Verify that electric power is available and of the correct characteristics.

3.02 PREPARATION

- A. Prepare opening to permit correct installation of door unit to perimeter air and vapor barrier seal.

3.03 INSTALLATION

- A. Install door unit assembly in accordance with manufacturer's instructions.
- B. Anchor assembly to wall construction and building framing without distortion or stress.
- C. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- D. Fit and align door assembly including hardware.
- E. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.
- F. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07 9005.
- G. Install perimeter trim.

3.04 TOLERANCES

- A. Maximum Variation from Plumb: 1/16 inch.
- B. Maximum Variation from Level: 1/16 inch.

- C. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch from 10 ft straight edge.
- D. Maintain dimensional tolerances and alignment with adjacent work.

3.05 ADJUSTING

- A. Adjust door assembly for smooth operation and full contact with weather-stripping.
- B. Have manufacturer's field representative present to confirm proper operation and identify adjustments to door assembly for specified operation.

3.06 PROTECTION

- A. Protect installed products from damage during subsequent construction.
- B. Clean doors and frames.
- C. Remove temporary labels and visible markings.
- D. Do not permit construction traffic through overhead door openings after adjustment and cleaning.

3.07 SCHEDULE

- A. Sectional Doors with Electric Operation
 - 1. Door #100C, #100D

END OF SECTION

SECTION 08 7100 DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for hollow steel doors.
- B. Thresholds.
- C. Weatherstripping and door gaskets.
- D. Includes screws, special screws, bolts, special bolts, expansion shields, and other devices for proper application of hardware.

1.02 RELATED REQUIREMENTS

- A. Section 08 1113 - Hollow Metal Doors and Frames.

1.03 REFERENCES

- A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; latest issue.
- B. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute; 2001.
- C. IBC 2012 - International Building Code.

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Shop Drawings:
 - 1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts.
 - 2. No templates are to be distributed until all Hardware Schedule has been approved by the architect.
 - 3. Approval of the schedule will not relieve the contractor of the responsibility of furnishing all necessary hardware.
 - 4. Copies of the approved schedule with necessary templates are to be furnished by the hardware suppliers to other affected subcontractor or material supplier.
 - 5. Include with each schedule a door index, list of related information to facilitate checking by architect.
 - 6. Hardware Schedule shall clearly indicate architect's hardware group and manufacturer of each item proposed.
- C. The schedule shall be reviewed prior to submission by a certified Architectural Hardware Consultant (AHC), who shall affix his or her seal attesting to the completeness and correctness of the schedule.
 - 1. Provide 2 copies of illustrations from manufacturer's catalogs and data in brochure form.
 - 2. Check specified hardware for suitability and adaptability to details and surrounding conditions. Indicate unsuitable or incompatible items and proposed substitutions in hardware schedule.
 - 3. Provide listing of manufacturer's template numbers for each item of hardware in hardware schedule.
 - 4. Furnish other Contractors and Subcontractors concerned with copies of final approved hardware schedule. Submit necessary templates and schedules as soon as possible to hollow metal door fabricators in accordance with schedule they require for fabrication.
 - 5. Samples: Lever design or finish sample: Provide 3 samples if requested by architect.
- D. Installation Instructions: Provide manufacturer's written installation and adjustment instructions for finish hardware. Send installation instructions to site with hardware.

- E. **Templates:** Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.
- F. **Contract Closeout Submittals:** Comply with Section 01 7800 including specific requirements indicated below.
 - 1. **Operating and maintenance manuals:** Submit 3 sets containing the following:
 - 2. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
 - 3. Catalog pages for each product.
 - 4. Name, address, and phone number of local representative for each manufacturer.
 - 5. Parts list for each product.
 - 6. Copy of final approved hardware schedule, edited to reflect "As installed".
 - 7. Copy of final keying schedule.
 - 8. One complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- G. **Warranty:** Submit manufacturer's warranty and ensure that forms have been completed in Owners name and registered with the manufacturer.

1.05 QUALITY ASSURANCE

- A. **Supplier:** Recognized architectural finish hardware supplier, with warehousing facilities, who has been providing hardware for period of not less than 3 years. The supplier shall be, or employ, a certified Architectural Hardware Consultant (AHC) The hardware schedule shall be prepared and signed by a certified AHC.
- B. **Installer:** Firm with 3 years experience in installation of similar hardware to that required for this project, including specific requirements indicated.
- C. **Regulatory Label Requirements:** Provide nationally recognized testing agency label or stamp on hardware for labeled openings. Where UL requirements conflict with drawings or specifications, hardware conforming to UL requirements shall be provided. Conflicts and proposed substitutions shall be clearly indicated in hardware schedule.
- D. **Handicapped Requirements:** Doors to loading platforms, boiler rooms, stages and doors serving other hazardous locations shall have knurled or other similar approved marking of door lever handles or cross bars in accordance with local building codes.
- E. **Pre-Installation Conference:** Prior to the installation of hardware, arrange and hold a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective products.
- F. **Source Limitations:** Obtain each type and variety of Door Hardware specified in this Section from a single source, qualified supplier unless otherwise indicated.
- G. **Regulatory Requirements:** Comply with NFPA 70, NFPA 80, NFPA 101 and ANSI A117.1 requirements and guidelines as directed in the model building code including, but not limited to, the following:
 - 1. Where indicated to comply with accessibility requirements, comply with Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)," ANSI A117.1 as follows:
 - a. **Handles, Pulls, Latches, Locks, and other Operating Devices:** Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
 - b. **Door Closers:** Comply with the following maximum opening-force requirements indicated:
 - 1) **Interior Hinged Doors:** 5 lbf applied perpendicular to door.
 - c. **Thresholds:** Not more than 1/2 inch high. Bevel raised thresholds with a slope of not more than 1:2.
 - 2. **NFPA 101:** Comply with the following for means of egress doors:

- a. Latches, Locks, and Exit Devices: Not more than 15 lbf to release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
 - b. Thresholds: Not more than 1/2 inch high.
- H. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- I. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
1. Function of building, purpose of each area and degree of security required.
 2. Plans for existing and future key system expansion.
 3. Requirements for key control storage and software.
 4. Installation of permanent keys, cylinder cores and software.
 5. Address and requirements for delivery of keys.
- J. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
1. Prior to installation of door hardware, arrange for manufacturers' representatives to hold a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware for aluminum and hollow metal doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 2. Review sequence of operation narratives for each unique access controlled opening.
 3. Review and finalize construction schedule and verify availability of materials.
 4. Review the required inspecting, testing, commissioning, and demonstration procedures
- K. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule

1.06 DELIVERY, STORAGE AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.07 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

1.08 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 1. Structural failures including excessive deflection, cracking, or breakage.

2. Faulty operation of the hardware.
 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
1. Ten years for mortise locks and latches.
 2. Ten years for extra heavy duty cylindrical (bored) locks and latches.
 3. Seven years for heavy duty cylindrical (bored) locks and latches.
 4. Five years for standard duty cylindrical (bored) locks and latches.
 5. Five years for exit hardware.
 6. Twenty five years for manual door closers.

1.09 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- B. Continuing Service: Beginning at Substantial Completion, and running concurrent with the specified warranty period, provide continuous (6) months full maintenance including repair and replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door opening operation. Provide parts and supplies as used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.01 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
1. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
 - a. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
 - B. Substitutions: Requests for substitution and product approval for inclusive mechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.02 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
1. Quantity: Provide the following hinge quantity, unless otherwise indicated:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.

- b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
- 4. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the following applications:
 - 1) Out-swinging exterior doors.
 - 2) Out-swinging access controlled doors.
- 5. Acceptable Manufacturers:
 - a. Stanley (ST).
 - b. Hager Companies (HA).
 - c. McKinney Products (MK).

2.03 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified automatic, self-latching, and manual flush bolts and surface bolts. Manual flush bolts to be furnished with top rod of sufficient length to allow bolt location approximately six feet from the floor. Furnish dust proof strikes for bottom bolts. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
 - 1. Acceptable Manufacturers:
 - a. Rockwood Manufacturing (RO).
 - b. Hager Companies (HA).
 - c. Trimco

2.04 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 - 1. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
 - 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
- D. Keying System: Each type of lock and cylinders to be factory keyed. Conduct specified "Keying Conference" to define and document keying system instructions and requirements. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner. Incorporate decisions made in keying conference, and as follows:
 - 1. Master Key System: Cylinders are operated by a change key and a master key.
 - 2. Grand Master Key System: Cylinders are operated by a change key, a master key, and a grand master key.
 - 3. Existing System: Master key or grand master key locks to Owner's existing system.
 - a. Provide Sargent "LC" keyway for all cylinders and lock cores to match
 - 1) the owner's existing key system.
 - 4. Keyed Alike: Key all cylinders to same change key.
- E. Key Quantity: Provide the following minimum number of keys:
 - 1. 1 each Grand Masterkeys
 - 2. 4 each Masterkeys
 - 3. 2 each Change keys each keyed core
 - 4. 2 each Construction Control keys

- F. Key Registration List: Provide keying transcript list to Owner's representative in the proper format for importing into key control software.

2.05 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified mortise locksets furnished in the functions as specified in the Hardware Sets. Locksets to be manufactured with a corrosion resistant, stamped 12 gauge minimum formed steel case and be field-reversible for handing without disassembly of the lock body. Lockset trim (including knobs, levers, escutcheons, roses) to be the product of a single manufacturer. Furnish with standard 2 3/4" backset, 3/4" throw anti-friction stainless steel latchbolt, and a full 1" throw stainless steel bolt for deadbolt functions.
1. Acceptable Manufacturers:
 - a. Sargent 8200
 - b. No Substitution - Facility Standard.
 - B. Cylindrical Locksets, Grade 2: ANSI/BHMA A156.2, Series 4000, Grade 2 certified cylindrical (bored) locksets furnished in the functions as specified in the Hardware Sets. Lock chassis fabricated of heavy gauge steel, zinc dichromate plated, with through-bolted application. Furnish with solid cast levers, standard 2 3/4" backset, 1/2" (3/4" at rated paired openings) throw brass or stainless steel latchbolt. Locks are to be non-handed and fully field reversible.
 1. Acceptable Manufacturers:
 - a. Sargent 7 Line
 - b. No Substitution - Facility Standard.
 - C. Lock Trim Design: As specified in Hardware Sets.
 - a. Yale

2.06 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
- B. Standards: Comply with the following:
1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 2. Strikes for Bored Locks and Latches: BHMA A156.2.

2.07 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 3. Flush End Caps: Provide heavy weight impact resistant flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.
 4. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty trim with cold forged escutcheons, beveled edges, and four threaded studs for thru-bolts.

- a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets. Provided free-wheeling type trim where indicated.
5. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Mounting rails to be formed from smooth stainless steel, brass or bronze architectural materials no less than 0.072" thick, with push rails a minimum of 0.062" thickness. Painted or aluminum metal rails are not acceptable. Exit device latch to be investment cast stainless steel, pullman type, with deadlock feature.
 1. Acceptable Manufacturers:
 - a. Sargent 30 Series
 - b. No Substitutions – Facility Standard

2.08 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
 1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
 2. Standards: Closers to comply with UL-10C and UBC 7-2 for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
 4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 - a. Where closers are indicated to have mechanical dead-stop, provide heavy duty arms and brackets with an integral positive stop.
 - b. Where closers are indicated to have mechanical hold open, provide heavy duty units with an additional built-in mechanical holder assembly designed to hold open against normal wind and traffic conditions. Holder to be manually selectable to on-off position.
 - c. Where closers are indicated to have a cushion-type stop, provide heavy duty arms and brackets with spring stop mechanism to cushion door when opened to maximum degree.
 - d. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics. Provide drop plates or other accessories as required for proper mounting.
 5. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates, and through-bolt or security type fasteners as specified in the door Hardware Sets.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 certified surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
 1. Acceptable Manufacturers:
 - a. Norton 8000
 - b. LCN 4040 ZP

2.09 ARCHITECTURAL TRIM

- A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Metal Protection Plates: ANSI/BHMA A156.6 certified metal protection plates (kick, armor, or mop), fabricated from the following.
 - a. Stainless Steel: 050-inch thick.
 - b. Brass or Bronze: 050-inch thick.
 - c. Laminate Plastic or Acrylic: 1/8-inch thick.
4. Fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets.
5. Acceptable Manufacturers:
 - a. Rockwood Manufacturing (RO).
 - b. Hager Companies (HA).

2.10 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 1. Acceptable Manufacturers:
 - a. Rockwood Manufacturing (RO).
 - b. Hager Companies (HA).

2.11 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- D. Acceptable Manufacturers:
 1. Pemko Manufacturing (PE).
 2. Hager Companies (HA).

2.12 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.02 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

3.03 INSTALLATION

- A. Install each item of mechanical hardware to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 3. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.04 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.05 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.06 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.

- C. Clean operating items as necessary to restore proper finish, and provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.07 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical door hardware.

3.08 DOOR HARDWARE SCHEDULE

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

Manufacturer's Index:

H..... HAGER
 NO NORTON
 SA..... SARGENT

Abbreviations: Alum = Clear / Mill Aluminum
 DW = Door Width
 DH = Door Height
 DOW = Door Opening Width
 DOH = Door Opening Height
 TBD = To Be Determined

Finish List: AL = Aluminum / Clear Aluminum
 CRM = Chrome Plated
 NP = Nickel Plated
 US10B = Oil Rubbed Bronze
 690 = Painted- Bronze
 628 = Aluminum / Clear Anodized
 630 = Stainless Steel – Satin
 US32D = Stainless Steel – Satin
 689 = Painted - Aluminum

SET 1		Door(s) 100.1, 100.6	
<i>Each To Have:</i>			
HA	3 ea	Hinge	BB1279 4.5" x 4.5" NRP US26D
SA	1 ea	Mortise Lockset	8255 LE1-L x US26D
HA	1 ea	Latch Guard	342D x US2C
NO	1 ea	Door Closer	UNI 8501 x 689
HA	1 ea	Kick Plate	190S (10" x DW – 2") US32D
HA	1 ea	Drip	810S (DOW + 4") Alum
HA	1 ea	Weatherstrip	891SV (DOW x DOH) Alum
HA	1 ea	Threshold	412S x DOW x Alum
HA	1 ea	Sweep	756SV x DW x Alum

SET 2	Door(s)	100C, 100D
<i>Each To Have:</i>		

- ALL HARDWARE BY OVERHEAD DOOR SUPPLIER

Note: Door thresholds and closers must meet ADA requirements.

END OF SECTION

DIVISION 09

FINISHES

SECTION 09 9000
PAINTING AND COATING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints 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:
- 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. Floors, unless specifically so indicated.
 - 6. Metal Building Components.
 - 7. Concealed pipes, ducts, and conduits.
- E. See Schedule - Surfaces to be Finished, at end of Section.

1.02 RELATED REQUIREMENTS

- A. Section 05 5000 - Metal Fabrications: Shop-primed items.
- B. Section 08 1113 – Hollow Metal Doors and Frames

1.03 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

1.04 DEFINITIONS

- A. Conform to ASTM D 16 for interpretation of terms used in this section.

1.05 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Product Data: Provide data on all finishing products, including VOC content.

1.06 QUALITY ASSURANCE

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

1.07 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.

1.08 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 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. Sherwin-Williams Paints
 - 2. Pratt & Lambert
 - 3. Sterling Paint
 - 4. Farrell-Calhoun
 - 5. Approved Equals

2.02 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. Supply each coating material in quantity required to complete entire project's work from a single production run.
 - 3. 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.
- D. All materials to be first line, best quality, of the manufacturer.
- E. 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.

2.03 PAINT SYSTEMS - EXTERIOR

- A. Ferrous Metals, Unprimed, Alkyd, 3 Coat:
 1. One coat of acrylic primer. SW Pro-Cryl Universal Primer B66A00310
 2. Two coats of waterbased alkyd urethane enamel; SW B53-1150 Series, Semi-gloss.
- B. Ferrous Metals, Primed, Alkyd, 3 Coat:
 1. One coat of acrylic primer. SW Pro-Cryl Universal Primer B66A00310
 2. Two coats of waterbased alkyd urethane enamel; SW B53-1150 Series, Semi-gloss.
- C. Galvanized Metals, Alkyd, 3 Coat:
 1. One coat of acrylic primer. SW Pro-Cryl Universal Primer B66A00310
 2. Two coats of waterbased alkyd urethane enamel; SW B53-1150 Series, Semi-gloss.
 2. Second and Third Coats: SW Loxon Exterior Masonry Acrylic Top Coat

2.04 PAINT SYSTEMS - INTERIOR

- A. Ferrous Metals, Unprimed, Alkyd, 3 Coat:
 1. One coat of acrylic primer. SW Pro-Cryl Universal Primer B66A00310
 2. Two coats of waterbased alkyd urethane enamel; SW B53-1150 Series, Semi-gloss.
- B. Ferrous Metals, Primed, Alkyd, 3 Coat:
 1. One coat of acrylic primer. SW Pro-Cryl Universal Primer B66A00310
 2. Two coats of waterbased alkyd urethane enamel; SW B53-1150 Series, Semi-gloss.

2.05 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. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

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 surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Surfaces: Correct defects and clean surfaces which affect work of this section.
- E. Seal surfaces that might cause bleed through or staining of topcoat.

- F. Uncorroded Uncoated Steel and Iron Surfaces to be Painted: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Prime paint entire surface; spot prime after repairs.
- G. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
- H. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- 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 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. Reinstall electrical, hardware, escutcheons, and fittings removed prior to finishing.

3.04 FIELD QUALITY CONTROL

- A. The painting contractor shall be responsible for any damage done to the work of other contractors, repairing same to the satisfaction of the architect. At the completion of work, this contractor shall clean off all paint spots, oil, and stain from floors, woodwork, glass, hardware, etc., and leave the entire building in satisfactory condition as far as his work is concerned.
- B. All work shall be performed by skilled mechanics. Provide drop clothes and protections for all surfaces not to be painted. All paints, stains, varnishes, and other finishes shall be evenly spread and flowed on and shall be free of runs, sags, and other defects. Each coat shall be thoroughly dry before applying succeeding coats. To product smooth and even finishes, all enamel or varnish applied to wood or metals shall be sanded between coats with fine sand paper. No exterior painting will be allowed during rainy, damp, or freezing weather. No interior painting will be permitted when temperature is below 50 degrees F. No painting will be permitted until all surfaces to be painted are dry.

3.05 CLEANING

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

3.06 SCHEDULE - SURFACES TO BE FINISHED

- A. Do Not Paint or Finish the Following Items:
 - 1. Items fully factory-finished unless specifically noted.
- B. Paint the surfaces described below under Schedule - Paint Systems and as indicated in the Finish Schedule on the drawings.

3.07 SCHEDULE - PAINT SYSTEMS

- A. Steel Doors and Frames: Finish all surfaces.
- B. Galvanized Steel: Finish all surfaces exposed to view.
- C. Shop-Primed Metal Items: Finish all surfaces exposed to view.

3.08 SCHEDULE - COLORS

- A. A complete Color Schedule will be issued by the architect.

END OF SECTION

DIVISION 10

SPECIALTIES

SECTION 10 4400
FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fire extinguishers.

1.02 REFERENCE STANDARDS

- A. NFPA 10 - Standard for Portable Fire Extinguishers; National Fire Protection Association; 2007.

1.03 PERFORMANCE REQUIREMENTS

- A. Conform to NFPA 10.
- B. Provide extinguishers classified and labeled by Underwriters Laboratories Inc. for the purpose specified and indicated.

1.04 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Product Data: Provide extinguisher operational features.

1.05 FIELD CONDITIONS

- A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fire Extinguisher Cabinets and Accessories:
 - 1. JL Industries, Inc.: www.jlindustries.com.
 - 2. Larsen's Manufacturing Co: www.larsensmfg.com.
 - 3. Potter-Roemer: www.potterroemer.com.

2.02 FIRE EXTINGUISHERS

- A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
 - 1. Provide extinguishers labeled by Underwriters Laboratories Inc. for the purpose specified and indicated.
- B. Dry Chemical Type: Painted steel tank, with pressure gage.
 - 1. Class: A, B, C.
 - 2. Size 10.
 - 3. Finish: Baked enamel.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify rough openings for cabinet are correctly sized and located.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Secure rigidly in place.
- C. Contractor is responsible for filling and servicing extinguishers ready for building occupancy.

3.03 SCHEDULES

- A. Provide two (2) fire extinguishers with standard wall bracket located on the drawings and shown as "F.E."

END OF SECTION

DIVISION 13

SPECIAL CONSTRUCTION

**SECTION 13 3419
METAL BUILDING SYSTEMS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pre-engineered, shop-fabricated structural steel building frame.

1.02 RELATED REQUIREMENTS

- A. Section 07 2116 – Blanket Insulation
- B. Section 07 4213 - Metal Wall Panels
- C. Section 07 9005 - Joint Sealers
- D. Section 07 6100 - Sheet Metal Roofing
- E. Section 07 6200 - Sheet Metal Flashing and trim.
- F. Section 07 7123 - Manufactured Gutters and Downspouts

1.03 REFERENCE STANDARDS

- A. AISC 360 - Specification for Structural Steel Buildings; American Institute of Steel Construction, Inc.; 2016.
- B. AISC S350L - Load and Resistance Factor Design Specification for Structural Steel Buildings; American Institute of Steel Construction, Inc.; 1999, with Supplement No.1 in 2001.
- C. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016A.
- D. ASTM A 307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength; 2014e1.
- E. ASTM A 325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength; 2014.
- F. ASTM A 500/A 500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013.
- G. ASTM A 529/A 529M - Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality; 2014.
- H. ASTM A 572/A 572M - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel; 2015.
- I. ASTM C 1107/C 1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2014a.
- J. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); Society for Protective Coatings; 2002 (Ed. 2004).

1.04 DESIGN REQUIREMENTS

- A. Design members to withstand dead load, applicable snow load, and design loads due to pressure and suction of wind calculated in accordance with Arkansas Fire Prevention code; IBC 2012.
- B. See structural notes on drawings.

1.05 DESIGN LOADS

- A. The basic loads shall include wind and seismic loads in addition to gravity loads. All other design loads, whether they be of static, dynamic or kinetic nature, shall be considered auxiliary loads.
- B. Roof Loads:
 - 1. Roof Dead Load: Actual weight of roof plus hanging ceilings, lights, ducts, piping, mechanical equipment, etc. (7 psf minimum collateral dead load. Include actual weight of

- suspended metal stud and gypsum board framing, suspended mechanical equipment, suspended duct 24" and larger and suspended piping 6" and larger.) (3psf minimum collateral dead load may be used at maintenance building. Include actual weight of suspended equipment).
2. Roof Live Load: 20 psf (purlins and frames). Live load reductions for frames or purlins will not be allowed.
- C. Deflection:
1. Maximum purlin live load deflection for purlins not supporting ceiling shall not exceed span/180.
 2. Maximum frame live load deflection shall not exceed span/360 or 1" (whichever is smaller) in areas supporting ceilings. Maximum frame live load deflection for purlins not supporting ceiling shall not exceed span/180.
 3. Maximum girt lateral deflection from wind or seismic loads shall not exceed span/240 for girts providing lateral support for metal siding only. Maximum girt lateral deflection from wind or seismic loads shall not exceed span/360 for girts providing lateral support for masonry.
 4. Maximum building sidesway (drift) from wind or gravity loads shall not exceed wall height/240. Seismic drift shall be within the limits described in ASCE 7, Table 12.12.-1 with actual drift determined per section 12.8.6.
- D. Wind Loads: 115 mph per 2012 Arkansas Fire Prevention Code and MBA Metal Building Systems Manual (latest edition).
- E. Seismic Loads: The entire structure shall be designed for seismic Zone 3 in accordance with Act 1100, 1991 Arkansas Legislature.
1. Building Risk Category 11
 2. Site Class D
 3. Seismic Design Category D
 4. See structural notes on drawings.
- F. Auxiliary (Additional Collateral) Loads:
1. Other superimposed static loads shall be considered as part of the design requirements and combined with the normal design (live and/or wind) loads.
 2. Magnitude and location of all auxiliary loads are as shown on the drawings.
- G. Combination of Loads: The combining of normal loads and auxiliary loads for design purpose shall be as required by the 2012 Arkansas Fire Prevention Code.

1.06 SUBMITTALS

- A. See Section 01 3323 - Submittals, for submittal procedures.
- B. Product Data: Provide data on profiles, component dimensions, fasteners.
- C. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections; wall and roof system dimensions, panel layout, general construction details, anchorages and method of anchorage, installation; framing anchor bolt settings, sizes, and locations from datum, foundation loads; indicate welded connections with AWS A2.4 welding symbols; indicate net weld lengths; provide professional seal and signature.
 1. Shop drawings to certify that seismic loads have been included.
- D. A letter of certification shall be submitted. This letter shall certify that the building conforms to these specification requirements and shall state specified design loads. The letter shall be signed and sealed by a registered engineer licensed to practice in the State of Arkansas.
- E. Manufacturer's Instructions: Indicate preparation requirements, anchor bolt placement.
- F. Erection Drawings: Indicate members by label, assembly sequence, and temporary erection bracing.
- G. Project Record Documents: Record actual locations of concealed components and utilities.

1.07 QUALITY ASSURANCE

- A. Design structural components, develop shop drawings, and perform shop and site work under direct supervision of a Professional Structural Engineer experienced in design of this Work.
 - 1. Design Engineer Qualifications: Licensed in Arkansas.
 - 2. Conform to applicable code for submission of design calculations as required for acquiring permits.
 - 3. Cooperate with regulatory agency or authority and provide data as requested.
- B. Perform work in accordance with AISC 360 - Specification for Structural Steel Buildings or Elastic Design.
- C. Perform welding in accordance with AWS D1.1.
- D. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- E. Erector Qualifications: Company specializing in performing the work of this section with minimum three years experience.
- F. All items in Sections 07 6100 and 13 3419 to be by same manufacturer.

1.08 PRE-INSTALLATION MEETING

- A. Convene one week before starting work of this section.

1.09 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty for Pre-Engineered Building Systems.
 - 1. Include coverage for exterior pre-finished surfaces to cover pre-finished color coat against chipping, cracking or crazing, blistering, peeling, chalking, or fading. Include coverage for weather tightness of building enclosure elements after installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Pre-Engineered Buildings:
 - 1. Nucor, Blytheville, Arkansas
 - 2. VP Buildings: www.vp.com.
 - 3. Star Building Systems

2.02 PRE-ENGINEERED BUILDING

- A. Single span and multiple span rigid frame as shown on drawings.
 - 1. Wind bracing by portal frames and cross bracing as indicated.
 - 2. Straight leg columns required at portal frames.
- B. Bay Spacing: As shown on drawings.
- C. Primary Framing: Rigid frame of rafter beams and columns, and wind bracing.
- D. Secondary Framing: Purlins, and other items detailed.
- E. Roof System: See Section 07 6100.
- F. Roof Slope: See drawings.

2.03 MATERIALS - FRAMING

- A. Structural Steel Members: ASTM A 572/A 572M, Grade 50.
- B. Structural Tubing: ASTM A 500, Grade C cold-formed.
- C. Plate or Bar Stock: ASTM A 529/A 529M, Grade 50.
- D. Anchor Bolts: ASTM A 307, galvanized to ASTM A 153/A 153M.

- E. Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, galvanized to ASTM A 153/A 153M, Class C.
- F. Welding Materials: Type required for materials being welded.
- G. Primer: SSPC - Paint 20, zinc rich
- H. Grout: ASTM C 1107/C 1107M, Non-shrink type, premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents, capable of developing minimum compressive strength of 2400 psi in two days and 7000 psi in 28 days.

2.04 FABRICATION - FRAMING

- A. Fabricate members in accordance with AISC Specification for plate, bar, tube, or rolled structural shapes.
- B. Anchor Bolts: Formed with bent shank, assembled with template for casting into concrete.

2.05 FINISHES

- A. Framing Members: Clean, prepare, and shop prime. Do not prime surfaces to be field welded.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that foundation, floor slab, mechanical and electrical utilities, and placed anchors are in correct position

3.02 ERECTION - FRAMING

- A. Erect framing in accordance with AISC 360 - Specification for Structural Steel Buildings.
- B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent bracing. Locate braced bays as indicated.
- C. Set column base plates with non-shrink grout to achieve full plate bearing.
- D. Do not field cut or alter structural members without approval.
- E. After erection, prime welds, abrasions, and surfaces not shop primed.

3.03 TOLERANCES

- A. Framing Members: 1/4 inch from level; 1/8 inch from plumb.

END OF SECTION