PROJECT MANUAL
INCLUDING SPECIFICATIONS
FOR CONSTRUCTION

RESTROOM FACILITY
SAU Tech
Camden, Arkansas

ARCHITECT PROJECT NO. 24093
DATE: March 17, 2025

LEWIS ARCHITECTS ENGINEERS
ELLIOTT • MCMORRAN • VADEN
RAGSDALE • WOODWARD • INCORPORATED
501.223.9302 • FAX 501.223.9909 • WWW.LEMVRW.COM

11225 HURON LANE • SUITE 104 • LITTLE ROCK, AR 72211

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NOTICE TO BIDDERS

RESTROOM FACILITY
SAU TECH
CAMDEN, ARKANSAS

Sealed proposals will be received on General Contract for RESTROOM FACILITY, SAU TECH, CAMDEN, ARKANSAS. The Owner will receive sealed proposals until 1:00 p.m., April 17, 2025, at the Southern Arkansas University Tech Purchasing Office, 6251 Hussey Road, Camden, Arkansas, at which time they will be publicly read aloud. Any bids received after the stated time and opening date will be returned unopened.

The Proposed Contract Documents may be examined at the following locations:

Lewis, Elliott, McMorran, Vaden,
Ragsdale & Woodward, Inc. (Architect)
11225 Huron Lane, Suite 104
Little Rock, AR 72211

SAU Tech website:
http://www.sautech.edu/invitation-to-bid

Dodge Construction Network (DCN)
http://Dodge.construction.com

Construction Market Data, LLC
www.constructconnect.com

Southern Reprographics, Inc.
901 West 7th St.
Little Rock, AR 72201

Minority & Women Owned Business in Arkansas:
https://www.arkansasedc.com/community-resources/Minority-and-Women-Owned-Business-Enterprise-Resources/directory

General Contractors may secure copies of the Proposed Contract Documents from the Architect on the following basis:

Three sets of the Project Manual, including Specifications, plus three sets of Drawings upon payment of any costs of shipping and $600 deposit. Deposit is completely refundable if all sets are returned to the Architect in good condition within five days after bid opening. General contractors who secure plans but do not submit legitimate bids shall forfeit their deposit.

Subcontractors and material suppliers may obtain additional copies of the Project Manual, including Specifications, plus additional sets of prints of the Drawings, upon payment of $200 per set, nonrefundable.

No partial sets will be issued.

All bidders must be licensed in the State of Arkansas, as provided by Act 142 of 1967, amended by Act 293 of 1969, and Act 397 of 1971, and Act 546 of 1971, as enacted by the General Assembly of the State of Arkansas.

Bid proposals must be accompanied by a bidder's bond or cashiers check in the amount of five percent (5%) of the bid, made payable to the SAU Tech, Camden, Arkansas.

The successful bidder will be required to furnish satisfactory performance and payment bond using AIA Document A312.

The Owner reserves the right to waive any informality, or to reject any or all bids.

No bid shall be withdrawn for a period of thirty (30) days subsequent to the opening of the bids, without written consent of the Owner.

SAU Tech
Dr. Jerry Thomas, Chancellor
6415 Spellman Road
Camden, AR 71701

Lewis, Elliott, McMorran, Vaden,
Ragsdale & Woodward, Inc.
11225 Huron Lane, Suite 104
Little Rock, AR 72211
Telephone: (501) 223-9302

END OF NOTICE TO BIDDERS

INSTRUCTION TO BIDDERS

1. Securing Documents:

Copies of the proposed Contract documents are on file at the office of the Architect:

Lewis, Elliott, McMorran, Vaden,
Ragsdale & Woodward, Inc.
11225 Huron Lane, Suite 104
Little Rock, AR 72211

2. Definitions:

a. All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, are applicable to these Instructions to Bidders.

3. Examination of Drawings, Specifications, and Site of Work:

a. Before submitting a bid, each bidder shall carefully examine the Drawings, read the Specifications and all other proposed Contract Documents, and visit the site of the Work. Each Bidder shall fully inform himself prior to bidding as to all existing conditions and limitations under which the Work is to be performed, and he shall include in his bid a sum to cover all costs of all items necessary to perform the Work as set forth in the proposed Contract Documents. No allowance will be made to any bidder because of lack of such examination or knowledge. The submission of a bid will be construed as conclusive evidence that the bidder has made such examination.

b. Should the bidder find discrepancies in, or omissions from the drawings, or other bidding documents, or should he be in doubt as to their meaning, he should at once, notify the Architect, who will send a written addendum to all bidders. Neither the Owner nor the Architect will be responsible for any oral instructions. Any addenda issued during the time of bidding are to be covered in the proposal and in closing a contract, they will become a part thereof.

4. Substitutions:

a. Where a definite material is specified, it is not the intent to discriminate against any "approved equal" product of another manufacturer. It is the intent to set a definite standard.

b. Open competition is expected, but in all cases, complete data must be submitted for comparison and test when required by the Architect.

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

d. No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. Information shall be submitted in a format that compares the proposed product in a direct comparison to the specified product; line number to line number in specifications. A statement setting forth changes in other materials, equipment or other portion of the Work including changes in the work of other contracts that incorporation of the proposed substitution would require shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

e. If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

f. No substitutions will be considered after the Contract award unless specifically provided in the Contract documents.

g. No substitution shall be made unless authorized in writing, by the Architect.

h. All bidders shall base their proposals on the material or specialty specified. Any proposal for substitution shall be submitted within 30 days after the award of the contract.

i. Should a substitution be accepted and should the substitute material prove defective or otherwise unsatisfactory for the service intended within the guaranty period, the Contractor shall replace this material or equipment with that which was originally specified, without cost to the Owner.

5. Bid Bond:

a. Proposals must be accompanied by a Bidder's Bond in an amount equal to 5% of Bid, executed by a surety company approved by the Owner, and authorized to do business in the State of Arkansas. The Bidder may furnish a cashiers check, in an amount equal to 5% of Bid, drawn on National Bank or a Bank having a membership in the Federal Reserve System and signed by the President or Cashier, in lieu of bond. The successful bidder's security will be retained until he has signed the Contract and furnished the required Labor and Materials Payment and Performance Bond. The Owner reserves the right to retain the security of the next lowest bidder until the lowest bidder enters into contract or until 60 days after bid opening, whichever is shorter. All other bid security will be returned as soon as practicable. If any bidder refuses to enter into a contract, the Owner will retain his bid security as liquidated damages but not as a penalty.

END OF SECTION

STATE OF ARKANSAS

SOUTHERN ARKANSAS UNIVERSITY TECH
Purchasing Office
P.O. Box 3499
Camden, Arkansas 71711

INVITATION FOR BID

SOLICITATION DOCUMENT

SOLICITATION INFORMATION			
Solicitation Number:	SAUT/24-25/02	Solicitation Issued:	March 17, 2025
Description:	AFTA RESTROOM FACILITY CONTRACTOR		
Division/Agency:	Southern Arkansas University Tech		

SUBMISSION DEADLINE			
Bid Opening Date:	April 17, 2025	Bid Opening Time:	1:00 p.m., Central Time
Bid responses for this Invitation for Bid **must** be delivered to the SAU Tech Purchasing Office on or before the submission deadline. Bids received after the submission deadline may be rejected as untimely.			

DELIVERY OF RESPONSE DOCUMENTS	
Delivery Address and IFB Opening Location	Southern Arkansas University Tech Keisha Robinson 6251 Hussey Road Camden, Arkansas 71701 Delivery providers, USPS, UPS, and FedEx deliver mail to the delivery street address on a schedule determined by each individual provider. These providers will deliver based solely on the street address. **Prospective Contractors assume all risk for timely, properly submitted deliveries.**
Bid's Outer Packaging	Seal outer packaging and properly mark with the following information. If outer packaging of bid submission is not properly marked, the package may be opened for bid identification purposes. • Solicitation number • Date and time of bid opening • Prospective Contractor's name and return address

DEPARTMENT NAME CONTACT INFORMATION			
Buyer:	Keisha Robinson	Buyer's Direct Phone Number:	870-574-4515
Email Address:	krobinso@sautech.edu	Department's Main Number:	870-574-4515
Department Website:	https://www.sautech.edu/invitation-to-bid/		

SECTION 1 – INFORMATION AND INSTRUCTIONS

1.1 INTRODUCTION

This Invitation for Bid (IFB) is issued by Southern Arkansas University Tech by the Purchasing Department to obtain pricing and a contract for 175 sq.ft. restroom facility to including all finishes, plumbing and electrical complete.

Direct all communications regarding this Solicitation to the Buyer on page one (1) of the IFB.

1.2 BID OPENING

The bid opening will be in the SAU Tech Manning Hall Administration Conference Room on the date and time specified on page one of this solicitation document. Any proposals received after the schedule opening date and time will be immediately disqualified. All proposals shall be guaranteed and binding for a period of not less than sixty (60) days pat the proposal opening date. **Telephone, email, and/or FAX responses to this bid will not be accepted.**

The proposal opening will open to any interested party and the public. However, openings will serve only to open, read, and record the receipt of each proposal. No discussion will be entered into with any vendor as to quality or provisions.

1.3 TYPE OF CONTRACT

A. As a result of this IFB, the Department intends to award a contract to a single Contractor (see *Contractor Selection*).

B. The anticipated starting date for any resulting contract is May 5, 2025, except that the actual contract start date may be adjusted unilaterally by the State for up to three (3) calendar months. By submitting a signed bid in response to the IFB, the Prospective Contractor represents and warrants that it will honor its bid as being held open as irrevocable for this period.

C. The initial term of a resulting contract will be for 5 months. Upon mutual agreement by the Contractor and Department, the contract may be renewed by the SAU Tech for up to two (2) additional months.

1.4 DEFINITION OF TERMS

A. Unless otherwise defined herein, all terms defined in Arkansas Procurement Law have the same meaning herein.

B. The terms “Invitation for Bid,” “IFB,” and “Solicitation” are used synonymously in this document.

C. “Prospective Contractor” means a responsive and responsible bidder who submits a bid that meets the Requirements and criteria set forth in this Solicitation.

D. “Requirement” means a term, condition, provision, deliverable, Specification, or a combination thereof, that is obligated under the Solicitation, resulting contract, or both.

E. “Shall” and “must” mean the imperative and are used to identify Requirements and Specifications.

F. “Specification” means any technical or purchase description or other description of the physical or functional characteristics, or of the nature, of a commodity or service. “Specification” may include a description of any Requirement for inspecting, testing, or preparing a commodity or service for delivery.

G. “State” means the State of Arkansas. When the term “State” is used herein to reference any obligation of the State under a contract that results from this Solicitation, that obligation is limited to the Department using such a contract.

H. “SAU Tech” stands for Southern Arkansas University Tech.

1.5 CONTRACTOR SELECTION

A. Award is expected to be made to the responsive and responsible Prospective Contractor determined to have submitted the lowest bid that meets the Requirements and criteria set forth in the IFB, based on the Total Cost of the *Official Bid Price Sheet* submitted by the Prospective Contractor.

B. If the SAU Tech so chooses, negotiations may be conducted with the lowest-bidding, responsive and responsible Prospective Contractor if:

1. All bids received from responsive and responsible bidders exceed available funding; or

2. It appears that additional savings to the state may result from negotiation.

C. If negotiations fail to result in a contract, the SAU Tech may negotiate with the next lowest-bidding, responsive and responsible Prospective Contractor.

1. The negotiation process may be repeated until an acceptable lower bid price is negotiated, or until such time the State determines negotiations are no longer in the best interest of the state.

2. Negotiations are conducted at the sole discretion of the State.

D. Once the anticipated awardee has been determined, the anticipated award will be posted to the Solicitation posting, generally for a period of fourteen (14) days prior to the issuance of a contract. The postings are anticipated awards only, subject to protest.

E. A contract is not effective prior to final award being made by the State; some contracts may be subject to Legislative review prior to final award.

1.6 CLARIFICATION OF SOLICITATION

A. Submit questions regarding this Solicitation via email to the Buyer on page one (1) of the IFB at krobinso@sautech.edu and Austin Ply at aply@lemvrw.com by midnight, Central Time on or before Friday, April 11, 2025.

1. For each question submitted, Prospective Contractor should reference the specific Solicitation item number to which the question refers, as applicable.

2. Prospective Contractors' written questions will be consolidated and answered by the SAU Tech as deemed appropriate. The SAU Tech's consolidated written response is anticipated to be posted to the Solicitation posting at https://www.sautech.edu/invitation-to-bid/ by the close of business on Monday, April 14, 2025. If Prospective Contractor questions are unclear or non-substantive in nature, the SAU Tech may request clarification of a question(s) or decline to answer.

B. The Prospective Contractor should notify the Buyer of any term, condition, etc., that precludes the Prospective Contractor from submitting a Responsive Bid. Prospective Contractors should note that it is the responsibility of the Prospective Contractor to seek resolution of all such issues, including those relating to the terms and conditions of the contract, prior to the submission of a bid.

C. Prospective Contractors may contact the Buyer with non-substantive questions at any time prior to the bid opening.

D. An oral statement by Southern Arkansas University Tech will not be part of any contract resulting from this Solicitation and may not reasonably be relied on by any Prospective Contractor as an aid to interpretation unless it is reduced to writing and expressly adopted by the Department.

1.7 RESPONSE DOCUMENTS

A. All bids **must** be submitted to the delivery address and by the submission deadline on page one (1) of the IFB.

B. *Bid Response Packet*

1. Prospective Contractors **shall** utilize the *Bid Response Packet* attached to the Solicitation to submit their bids.

2. The following are bid submission Requirements and **must** be submitted as part of a Prospective Contractor's bid.

    a. Signed *Bid Signature Page*; signature may be ink or digital.

    b. Completed *Bid Response Packet*, which **must** be in English.

    c. Completed *Official Bid Price Sheet* attached to Bid Response Packet.

        i. Pricing **must** be proposed in U.S. dollars and cents.

        ii. Quantities stated are estimates only and are not guaranteed. Prospective Contractor **must** bid unit price on the estimated quantity and unit of measure specified.

            - The State may order more or less than the estimated quantity on term contracts, and the Contractor **shall** sell to the Department quantities ordered at no more than the bid price.

        iii. If pricing documents do not allow for accurate pricing, Prospective Contractor should notify the Buyer at least seventy-two (72) hours before the bid opening time.

        iv. Prices **must** be firm offers and adjustments may be negotiated at the time of contract renewal/annually/quarterly or **shall not** be subject to escalation.

        v. Discount from list bids pricing is not acceptable unless requested elsewhere in the Solicitation.

        vi. State and local sales taxes should not be included in the bid price. Trade discounts should be deducted from the unit price and the net price should be shown in the bid.

    d. Copy of Prospective Contractor's *Equal Opportunity Policy*

        i. Pursuant to Arkansas Code Annotated § 19-11-104, OSP requires a Prospective Contractor bidding on a state contract to submit a copy of the Prospective Contractor's *Equal Opportunity (EO) Policy*. Prospective Contractors not required by law to have an *EO Policy* **must** submit a written statement to that effect.

    e. *Proposed Subcontractors Form* (see SRV-1 or Standard Commodities Contract, section 14)

3. The following items, which **must** be submitted prior to a contract award to the Prospective Contractor, may also be included with the Prospective Contractor's bid response:

    a. *EO 98-04 Contract & Grant Disclosure Form* (see SRV-1 or Standard Commodities Contract, section 11)

    b. *Voluntary Product Accessibility Template* (VPAT), if applicable

4. Prospective Contractors should not include any other documents or ancillary information, such as a cover letter or promotional marketing information.

C. Prospective Contractors should not alter any language in Solicitation document(s) or *Official Bid Price Sheet* provided by the State.

D. Prospective Contractors' bids cannot be altered or amended after the bid opening except as permitted by law or rule.

E. As requested, Prospective Contractors **shall** provide clarification regarding Prospective Contractor's bid response.

F. Prospective Contractors may submit multiple bids.

SECTION 2 – SPECIFICATIONS AND REQUIREMENTS

2.1 SPECIFICATIONS

See attached specifications.

2.3 PROPOSAL SECURITY (BOND)

Performance Bond will be required if cost of project exceeds $50,000. Vendors must include a proposal security in an amount of 5% of the firm purchase price. Bid Bond may be cashier's check or Bid Bond form. The proposal security should be made out to Southern Arkansas University Tech and include the Solicitation number. All proposed securities will be returned upon contract award.

2.4 CONTRACTOR LICENSE

Arkansas contractor license is required, include license number or copy of license.

2.5 CERTIFICATE OF INSURANCE

Successful bidder must also furnish proof of Liability Insurance in the amount of $250,000.

SECTION 3 – SOLICITATION TERMS AND CONDITIONS

3.1. ACCEPTANCE OF REQUIREMENTS

A. A Prospective Contractor's past performance with the State may be used to determine if the Prospective Contractor is responsible (OSP Rule R1:19-11-235).

1. Bids submitted by Prospective Contractors determined to be non-responsible will be rejected.

B. A single Prospective Contractor **must** be identified as the prime contractor.

1. The prime Contractor **shall** be responsible for the resulting contract and jointly and severally liable with any of its subcontractors, affiliates, or agents to the State for the performance thereof.

C. By submitting a bid, the Prospective Contractor represents and warrants:

1. That the prices in the bid have been arrived at independently, without any collusion with another competing Prospective Contractor.

a. Collusion violates Arkansas Procurement Law and can lead to suspension, debarment, and can be referred to the Attorney General's office for investigation and appropriate legal action (Arkansas Code Annotated § 19-11-240 and 19-11-245).

2. That the Prospective Contractor has not retained a person to solicit or secure the resulting contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the Prospective Contractor for the purpose of securing business.

D. Qualifications, services, and commodities **must** meet or exceed the required Specifications as set forth in the Solicitation.

3.2. GENERAL TERMS AND CONDITIONS

E. The Contractor **must** be registered as a vendor to receive payment and may register by emailing a request for the New Vendor Forms to Keisha Robinson at krobinso@sautech.edu.

F. If EFT payment is wanted, the Successful Contractor represents and warrants that, before any work is done for this Solicitation, the Successful Contractor has taken or **shall** take all actions necessary to receive payment from SAU Tech through Electronic Funds Transfer (EFT) for the services and/or commodities to be provided under any such contract. This includes, without limitation, the following actions:

1. Providing all information requested by SAU Tech to set up EFT payments, including either a voided check or a letter from their financial institution that contains the following information:

a. Account holder's name

b. Account number

c. Routing number

d. Financial institution official's contact information and signature

2. Email Keisha Robinson, Procurement Manager, at krobinso@sautech.edu all EFT information requested above or mail to:

Southern Arkansas University Tech

Attn: Procurement Manager

PO Box 3499

Camden, Arkansas 71711

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3. In the event the EFT information changes, the Contractor **shall** be responsible for providing the updated information to SAU Tech at krobinso@sautech.edu. No interest or late payment penalty will apply if payment is delayed because of the Contractor's failure to initially provide or update information necessary for the State to make EFT payment.

G. Pursuant to Arkansas State Procurement Law, the Contractor **shall** certify that, unless they offer to provide the goods or services for at least twenty percent (20%) less than the lowest certifying Prospective Contractor:

1. They are not engaged in and **shall not**, during the aggregate term of the resulting contract, engage in a boycott of Israel (Arkansas Code Annotated § 25-1-503),

2. They are not engaged in and **shall not**, during the aggregate term of the resulting contract, engage in a boycott of an Energy, Fossil Fuel, Firearms, or Ammunition Industry (Arkansas Code Annotated § 25-1-1102).

H. Pursuant to Arkansas Procurement Law, the Contractor **shall** certify that the Contractor does not knowingly employ or contract with illegal immigrants and that the Contractor **shall not** knowingly employ or contract with illegal immigrants during the aggregate term of any contract with the State or any of its departments, institutions, or political subdivisions (Arkansas Code Annotated § 19-11-105).

I. The Contractor **shall** invoice the SAU Tech as required by the Purchasing Office and should not invoice the SAU Tech in advance of delivery and acceptance of any commodities or services (Arkansas Code Annotated § 19-4-1206).

J. **The Contractor must submit an itemized invoice to SAU Tech.**. SAU Tech's purchase order number and/or the contract number should be referenced on each invoice. Invoices must be emailed to acctpay@sautech.edu and mailed to:

Southern Arkansas University Tech

Attn: Accounts Payable

PO Box 3499

Camden, Arkansas 71711

K. Payment will be made in accordance with applicable State of Arkansas accounting procedures upon acceptance of commodities and services by the Department.

L. Payment will be made only after the Contractor has successfully satisfied SAU Tech as to the reliability and effectiveness of the commodities or services purchased as a whole.

M. The Prospective Contractor **shall** certify that they are not a company owned in whole or with a majority ownership by the government of the People's Republic of China (a "Scrutinized Company") and that they do not and **shall not** during the aggregate term of the resulting contract employ a Scrutinized Company as a contractor (Arkansas Code Annotated § 25-1-1203).

N. This IFB incorporates all terms of this contract.

1. A Prospective Contractor's bid may be rejected if a Prospective Contractor takes exception to any terms, conditions, or Requirements in this IFB.

O. The Prospective Contractor agrees and **shall** adhere to all terms, conditions, and Requirements if selected as the Contractor.

1. Items may only be modified if the legal requirement is satisfied and approved by the SAU Tech during negotiations.

2.

3.3. MINORITY AND WOMEN-OWNED BUSINESS

A. A minority-owned business is defined by Arkansas Code Annotated § 15-4-303 as a business owned by a lawful permanent resident of this State who is:

- African American
- American Indian
- Asian American
- Hispanic American
- Pacific Islander American
- A Service-Disabled Veteran as designated by the United States Department of Veteran Affairs

B. A women-owned business is defined by Act 1080 of the 91st General Assembly Regular Session 2017 as a business that is at least fifty-one percent (51%) owned by one (1) or more women who are lawful permanent residents of this State.

C. The Arkansas Economic Development Commission conducts a certification process for minority-owned and women-owned businesses. If certified, the Prospective Contractor's Certification Number should be included on the *Bid Signature Page.*

3.4. PROPRIETARY INFORMATION

A. The release of public records is governed by the Arkansas Freedom of Information Act (Arkansas Code Annotated § 25-19-101 et. seq.).

B. Submission documents pertaining to the Solicitation become the property of the State and may be subject to the Arkansas Freedom of Information Act (FOIA).

C. In accordance with FOIA, and to promote maximum competition in the State competitive sealed bidding, the State may maintain the confidentiality of certain types of information described in FOIA. Such information may include trade secrets and other information exempted from public disclosure pursuant to FOIA.

D. Under no circumstances will pricing information submitted in response to an invitation for sealed bids be designated as confidential after the sealed bids have been opened.

E. Consistent with and to the extent permitted under FOIA, any Prospective Contractor may designate appropriate portions of a bid as confidential by submitting a redacted copy of the bid. By so redacting any information contained in the bid, the Prospective Contractor warrants that, after having received such necessary or proper review by counsel or other knowledgeable advisors, it has formed a good faith opinion that the portions redacted are not considered public records under FOIA.

F. If a Prospective Contractor deems part of the information contained in a response not to be a public record, the Prospective Contractor should submit one (1) complete copy of the submission documents from which any proprietary or confidential information has been redacted in their bid response. Except for the redacted information, the redacted copy **must** be identical to the original copy, reflecting the same pagination as the original and showing the space from which information was redacted.

G. The Prospective Contractor is responsible for identifying all proprietary information and for ensuring the electronic copy is protected against restoration of redacted data.

H. The redacted copy will be open to public inspection under the FOIA without further notice to the Prospective Contractor. If the State deems redacted information to be subject to a public record request under FOIA, the State will endeavor to notify the Prospective Contractor prior to release of the redacted record.

I. The State has no liability to a Prospective Contractor with respect to the disclosure of Prospective Contractor's confidential or proprietary information ordered by a court of competent jurisdiction pursuant to FOIA or other applicable law.

Contract #: _____

STATE OF ARKANSAS
SERVICES CONTRACT

Contract #		**Federal ID #**	
Service Type		**Procurement Method**	

1. **Contracting Parties**. State of Arkansas is hereinafter referred to as the Department and contractor is herein after referred to as the Contractor.

Department No. & Name	
Division	

Contractor Name			
Contractor Address			
Contractor Number		**Minority/Women Owned Business**	◯ Yes ◯ No

2. **Objectives, Scope, and Performance.** Identify, in reasonable detail, the objectives and scope of the contractual agreement and the methods the Department will use to determine whether the objectives of the contract (Contract) have been achieved. If space below is insufficient it may be supplemented with Attachment 4.

3. **Term Dates.** The original term **(Original Term)** of the Contract shall commence on _____, and shall continue until _____, unless earlier terminated or cancelled in accordance with the Contract or some other writing agreed to and signed by the parties, but in no event may the Original Term exceed a period of four (4) consecutive years from the effective date of the Original Term, unless exempt from Arkansas Code Annotated § 19-11-238(c)(1). By written agreement of the parties, the term of the Contract may be extended or renewed for additional time beyond the Original Term. This allows for a total possible term **(Total Possible Term)** beyond the Contract's Original Term, as defined in the following paragraph.

The **Total Possible Term** of the Contract is a period comprised of the Original Term plus any extensions or renewals that may be agreed to by the parties in writing, but in no event longer than a period of seven (7) consecutive years from the effective date of the **Original Term**, unless otherwise provided by law. Subject to applicable law, the terms hereof, and an appropriation of necessary funding, the Total Possible Term of this Contract expires no later than _____ (mm/dd/yyyy).

4. **Contractor's Performance Obligations.** Contractor, for the duration of the Contract and as consideration for the Department's payment as set forth below, shall provide the following to the Department:

The parties agree that this paragraph 4 of the Contract, and any incorporated attachment, fully sets forth the Contractor's performance upon which the Department's obligation to pay the Contractor is conditioned. (if the space provided is not enough to fully specify the Contractor's duty to perform and to identify the standards of satisfactory performance, the Contractor's covenant to perform must be set forth in Attachment 5 hereto, Performance Details, the terms of which, if any, are incorporated herein by reference.)

5. **Department's Payment Obligations**. Department, as consideration for the Contractor's satisfactory performance of the Contractor's Performance Obligations, as set forth above, shall pay the Contractor as follows:

The parties agree that this paragraph 5 of the Contract, and any incorporated attachment, fully sets forth all applicable rates, fees, charges, costs (transportation, per diem, subsistence, out-of-pocket allowances, and

any other costs that may apply), and items for which the Contractor is entitled to payment under the Contract as consideration for Contractor's satisfactory performance of its obligations under the Contract.

The Department shall not pay Contractor except as set forth. The parties also agree that the method(s) of determining the amount of payment corresponding to the Contractor's satisfactory performance is/are set forth in this paragraph 5 such that the total payment owed under the Contract can be determined by reference thereto. (If the space provided is not enough to fully set forth the information needed to determine proper compensation owed by the Department for Contractor's satisfactory performance under the Contract, that information must be set forth in Attachment 2, Calculation of Compensation, the terms of which, if any, are incorporated herein by reference.)

Assuming: (a) Contractor's full and satisfactory performance under the Contract for the duration of the **Original Term**, and (b) the corresponding compensation identified in paragraph 5; the maximum number of dollars that the Department may be obligated to pay to the Contractor under the terms of the Contract for the Original Term is:_____ **(Initial Contract Amount)**.

Assuming: (a) Contractor's full and satisfactory performance under the Contract for the duration of its **Total Possible Term**, and (b) the corresponding compensation identified in paragraph 5, the maximum number of dollars that the Department may be obligated to pay to the Contractor under the terms of the Contract for the Total Possible Term is: _____ **(Total Projected Contract Amount)**.

If either the **Total Projected Contract Amount** or the amount the Department may be obligated to pay the Contractor in any given year of the **Original Term,** or the **Total Possible Term** of the Contract meets or exceeds the threshold of Arkansas Code Annotated § 19-11-265, the Contract shall be submitted for legislative review prior to its effective date.

6. **Terms and Conditions of Solicitation Incorporated and Order of Precedence.** The parties agree that the agreement in this Contract memorializes and incorporates by reference any and all written representations, warranties, terms, and conditions, set forth in the underlying solicitation document and the bid or proposal that became the basis of the Contract award, which representations, warranties, terms, and conditions continue in full force and effect unless expressly amended hereby.

   Accordingly, the provisions of this memorialization of the Contract should be read as being consistent therewith and supplementary thereto to the extent reasonably possible. However, in the event of a conflict between the provisions of this memorialization and the specific provisions of the bid or proposal that was the basis of award, such conflict shall be resolved by giving priority to the documents in the order listed below, including but not limited to conflicting order of precedence provisions.

   A. This Contract, as may be amended in writing by the parties;
   B. The solicitation _____ (Solicitation number) including all Addenda;
   C. Contractor's response to the solicitation.

7. **Termination** & Cancellation Clauses.
   A. Non-Appropriation Clause Pursuant to §19-11-1012(11). In the event the State of Arkansas fails to appropriate funds or make monies available for any biennial period covered by the term of this contract for the services to be provided by the Contractor, this Contract shall be terminated on the last day of the last biennial period for which funds were appropriated or monies made available for such purposes.

   This provision shall not be construed to abridge any other right of termination the agency may have.

B. For Convenience. The Department may terminate this contract for any reason by giving the Contractor written notice of such termination no less than sixty (60) days prior to the date of termination.

C. For Cause. The Department may cancel this Contract for cause when the Contractor fails to perform its obligations under it by giving the Contractor written notice of such cancellation at least thirty (30) days prior to the date of proposed cancellation. In any written notice of cancellation for cause, the State will advise the Contractor in writing of the reasons why the State is considering cancelling the Contract and may provide the Contractor with an opportunity to avoid cancellation for cause by curing any deficiencies identified in the notice of cancellation for cause prior to the date of proposed cancellation. The parties may endeavor to agree to reasonable modifications in the Contract to accommodate the causes of the cancellation for cause and avoid the cancellation, to the extent permitted by law, and at the discretion of each party individually.

8. Non-negotiable Governing Law and Venue.

A. This contract shall be governed by and construed in accordance with the Laws of the State of Arkansas. Exclusive venue arising under this Contract is Pulaski County, Arkansas.

B. Any legislation that may be enacted subsequent to the date of this Contract, which may cause all or any part of the Contract to be in conflict with the laws of the State of Arkansas, will be given proper consideration if and when this contract is renewed or extended. At such time, the parties agree that the Contract shall be amended to comply with any applicable laws in effect.

C. Under Arkansas law, the release of public records is governed by the Arkansas Freedom of Information Act found at Section 25-19-101 et. seq. of the Arkansas Code Annotated.

9. Non-negotiable Sovereign Immunity. Nothing in this Contract shall be construed as a waiver of the State's sovereign immunity. Any claims Contractor wishes to assert against the State in connection with this Contract shall be brought in the Arkansas State Claims Commission.

10. Non-negotiable Intergovernmental/Cooperative Use. In accordance with Arkansas Code Annotated § 19-11-249, any State public procurement unit may participate in this Contract with a participating addendum signed by the Contractor and approved by the chief procurement officer of the procurement agency issuing the contract.

11. Non-negotiable Disclosure Required by Executive Order 98-04. Any contract or amendment to a contract executed by an agency which exceeds $10,000 shall require the Vendor to disclose information as required under the terms of Executive Order 98-04 and the Regulations pursuant thereto. The Vendor shall also require the subcontractor to disclose the same information. The Contract and Grant Disclosure and Certification Form shall be used for this purpose. Contracts with another government entity such as a state agency, public education institution, federal government entity, or body of a local government are exempt from disclosure requirements.

The failure of any person or entity to disclose as required under any term of Executive Order 98-04, or the violation of any rule, regulation or policy promulgated by the Department of Finance and Administration pursuant to this Order, shall be considered a material breach of the terms of the contract, lease, purchase agreement, or grant and shall subject the party failing to disclose, or in violation, to all legal remedies available to the Agency under the provisions of existing law.

12. Compliance. The Contractor shall ensure, in cooperation with the Department, that the Contract adheres

to the requirements of Arkansas procurement law, including without limitation the inclusion of any mandatory language and the submission of the contract for any required review. The signature of the Contractor on this Contract serves as an acknowledgement that the Contractor is:

A. Equally responsible with the Department for adhering to the requirements of Arkansas Procurement Law related to the content and review of the Contract; and

B. Subject to the relevant ethical provisions of § 19-11-701 et seq.

13. **Indemnity.** The Contractor shall be fully liable for the actions of its agents, employees, partners, and assigns and shall fully indemnify, defend, and hold harmless the Department, and their officers, agents, and employees from third party suits, actions, damages, and costs of every name and description, including attorney's fees to the extent arising from or relating to personal injury and damage to real or personal property, caused in whole or in part by the negligence or willful misconduct of Contractor, its agents, employees, partners, or assigns.

14. **Assignment/Subcontracting.** Contractor shall not assign, sell, transfer, subcontract or sublet rights, or delegate responsibilities under this Contract, in whole or in part, without the prior written approval of the Department.

15. **Amendments.** The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever without written approval of both parties. Any amendment that increases compensation or represents a material substantive change may require review by Legislative Council or Joint Budget Committee pursuant to Arkansas Code Annotated § 19-11-265.

16. **Records.** Financial and accounting records reasonably relevant to State of Arkansas transactions under this Contract shall be subject to examination by appropriate Arkansas government authorities for a period of five (5) years from the date of expiration, termination or cancellation and final payment under this Contract, provided, however, that such government authorities will provide thirty (30) days written notice to the Contractor of its intent to conduct such examination contemplated by this section; and provided that such examination occurs pursuant to a mutually agreed upon location, during normal business hours and subject to reasonable confidentiality obligations.

17. **Non-waiver.** The failure by one party to require performance of any provision shall not affect that party's right to require performance at any time thereafter, nor shall a waiver of any breach or default of this Contract constitute a waiver of any subsequent breach or default or a waiver of the provision itself.

18. **Severability.** If any provision of this contract is held unenforceable, all remaining provisions of this Contract shall remain in full force and effect.

19. **ACH Payment**. All payments to the Contractor under this Contract shall be made exclusively through ACH (Automated Clearing House) direct deposit or through the State's authorized VISA Procurement Card (p-card). The Contractor agrees to provide the necessary banking information, including account number, routing number, and any other details required to facilitate ACH direct deposits. The Contractor is responsible for ensuring that the provided banking information is accurate and up to date. Any delays or errors in payment caused by incorrect or outdated information provided by the Contractor shall not be the responsibility of the Department. The Department will process payments according to the agreed payment schedule, and all payments made via ACH direct deposit shall be considered as duly received upon successful transmission to the Contractor's designated bank account.

20. Attachments.

1. Certification of Contractor
2. Calculation of Compensation, as applicable;
3. Source of Funds
4. Objectives, Scope, and Performance Standards, as applicable; and
5. Performance Details, as applicable
6. Additional Attachments as applicable

A. _____

B. _____

C. _____

21. Notices.

A. Method of Notice. The parties shall give all notices and communications between the parties in writing by (i) personal delivery, (ii) a nationally-recognized, next-day courier service, (iii) first-class registered or certified mail, postage prepaid[, (iv) fax, or (v) electronic mail to the party's address specified in this Contract, or to the address that a party has notified to be that party's address for the purposes of this section.

B. Receipt of Notice. A notice given under this Contract will be effective on

i. the other party's receipt of it, or
ii. if mailed, the earlier of the other party's receipt of it and the fifth business day after mailing it.

C. Issuance of Notice. All notices and communications between the parties in writing shall be directed to the respective parties in accordance with the following:

Contact #1 – Department Representative submitting/tracking this contract

Name	Title
Telephone #	Email

Contact #2 - Department Representative with knowledge of this project (for general questions and responses)

Name	Title
Telephone #	Email

Contact #3 - Department Representative Director or Critical Contact (for time sensitive questions and responses)

Name	Title
Telephone#	Email

22. Technology Access. If the Commodities are electronic information processing hardware or software, including telecommunications hardware or software ("Information Technology"), then the Contractor represents and warrants it shall comply with federal and state law relating to accessibility by persons with visual impairments and nonvisual access standards established by the Division of Information System, which standards can be found at Technology Access Clause and are included herein by reference, as applicable.

23. SIGNATURES

DEPARTMENT SIGNATURE CERTIFIES NO OBLIGATIONS WILL BE INCURRED BY A STATE DEPARTMENT UNLESS SUFFICIENT FUNDS ARE AVAILABLE TO PAY THE OBLIGATIONS WHEN THEY BECOME DUE.

IN WITNESS WHEREOF, the Parties sign and cause this Contract to be executed. Notwithstanding verbal or other representations by the parties, the "Effective Date" of this Contract shall be the date provided in Section 3 above.

CONTRACTOR AUTHORIZED SIGNATURE	**DEPARTMENT AUTHORIZED SIGNATURE**
Printed Name	Printed Name
Title	Title
Address	Address
Signature	Signature
Date	Date

Contract #: 0

Attachment #1 CERTIFICATION OF CONTRACTOR

Sections A, B and C apply to all service contracts. Sections D and E apply to Professional and Consulting Services contracts only.

A. "I, _____ _____
(Contractor) (Title)

certify under penalty of perjury that, to the best of my knowledge and belief, no regular full-time or part- time employee of the State of Arkansas will receive any personal, direct or indirect monetary benefits as a result of the execution of this contract that would violate the law." Where the Contractor is a widely-held public corporation, the term 'direct or indirect monetary benefits' "shall not apply to any regular corporate dividends paid to a stockholder of said corporation who is also a State employee and who owns less than ten percent (10%) of the total outstanding stock of the contracting corporation."

B. List any other contracts or subcontracts Contractor has with any other state government entities. (Not applicable to contracts between Arkansas state departments. If no contracts or subcontracts, please put "Not applicable" or "None.")

C. Is Contractor currently engaged in any legal controversies with any state agencies or representing any clients engaged in any controversy with any Arkansas state department? If no controversies, please put "Not applicable" or "None.")

D. Contractor shall list below, or on an attachment hereto, names, addresses, and relationship of those persons who will be supplying services to the State at the time of the execution of the contract. If the names are not known at the time of the execution of the contract, the Contractor shall submit the names along with the other information as they become known. Such persons shall, for all purposes, be employees or independent contractors operating under the control of the Contractor (sub- contractors), and nothing herein shall be construed to create an employment relationship between the departments and the persons listed below.

Name	Address	Relationship

CERTIFICATION OF CONTRACTOR CONT'D

E. The State has no managerial responsibilities over the Contractor or Contractor's employees. In carrying out this contract, Contractor understands and represents that there is no employment relationship between the contracting parties.

Pursuant to Arkansas law, a vendor must certify as specified below and as designated by the applicable laws.

1. **Israel Boycott Restriction**: For contracts valued at $1,000 or greater.

   A public entity shall not contract with a person or company (the "Contractor") unless the Contractor certifies in writing that the Contractor is not currently engaged in a boycott of Israel. If at any time after signing this certification the Contractor decides to boycott Israel, the Contractor must notify the contracting public entity in writing. See Arkansas Code Annotated § 25-1-503.

2. **Illegal Immigrant Restriction**: For contracts valued at $25,000 or greater.

   No state agency may contract for services with a Contractor who knowingly employs or contracts with an illegal immigrant. The Contractor shall certify that it does not knowingly employ, or contract with, illegal immigrants. See Arkansas Code Annotated § 19-11-105.

3. **Energy, Fossil Fuel, Firearms, and Ammunition Industries Boycott Restriction**: For contracts valued at $75,000 or greater.

   A public entity shall not contract unless the contract includes a written certification that the Contractor is not currently engaged in and agrees not to engage in, a boycott of an Energy, Fossil Fuel, Firearms, or Ammunition Industry for the duration of the contract. See Arkansas Code Annotated § 25-1-1102.

4. **Scrutinized Company Restriction**: Required with bid or proposal submission.

   A state agency shall not contract with a Scrutinized Company or a company that employs a Scrutinized Company as a subcontractor. A Scrutinized Company is a company owned in whole or with a majority ownership by the government of the People's Republic of China. A state agency shall require a company that submits a bid or proposal for a contract to certify that it is not a Scrutinized Company and does not employ a Scrutinized Company as a subcontractor. See Arkansas Code Annotated § 25-1-1203.

   By signing this form, the Contractor agrees and certifies they are in compliance with the certification requirements listed above that are relevant to this contract and will remain so for the aggregate term of any resultant contract.

Contract #: 0

Attachment #2 Calculation of Compensation

Calculation of Compensation (for Professional & Consulting Service Contracts Only):

A. In the table below, provide the various levels of expertise, the number of personnel for each level, the compensation rate, and total for each level, as applicable.

Level of Personnel	Number	Compensation Rate	Total for Level
TOTAL COMPENSATION EXCLUSIVE OF EXPENSE REIMBURSEMENT(S)			$ 0.00

B. In the table below, provide any allowable reimbursable expenses, estimated rates, and a total for each level.

Reimbursable Expense Items (Specify)	Estimated Rate of Reimbursement	Total
TOTAL REIMBURSABLE EXPENSES		$ 0.00

Total compensation inclusive of expenses reimbursement: $ 0.00

Annual Contract Amount:

Calculation of Services and Commodities (for Technical & General Service Contracts Only):

A. In the table below, as applicable, provide the various services to be rendered, the quantity, cost per item, and total cost.

Services	Quantity	Cost Per Item	Total Cost
		TOTAL SERVICES	$ 0.00

B. In the table below, as applicable, provide the various commodities, quantity, cost per item, and total cost

Commodities	Quantity	Cost Per Item	Total Cost
		TOTAL COMMODITIES	$ 0.00

Total services inclusive of commodities: $ 0.00

Annual Contract Amount:

Contract #: 0

Attachment #3 Source of Funds

Source of Funds the Department intends to draw on. This is provided for informational purposes only. It is required under Arkansas Procurement Law and is not a performance obligation of the Department or an unconditional promise to pay from the sources identified.

Fund Source	Identify Source of Funds*	Fund	Fund Center	Amount of Funding	% of Total Contract Cost
					%
					%
					%
					%
					%
					%
			TOTALS	$ 0.00	0.00 %

Identify whether State general revenue funds (GRF), special revenue funds (SRF), federal funds (FED), or other public funds (Other) are the source. Identify each specific source of SRF, such as special taxes or fees, in the "Identify Source of Funds" column. Similarly, if Other public funds, such as tobacco funds, general improvement funds, etc., are being used to pay the Contractor, these should be specified in the "Identify Source of Funds" column.

REQUIRED CONTRACT FORMS

The following are the construction document forms that, where required by the Architect, will be used during this project. These documents are either furnished in the project manual or available for inspection at the Architect's office:

Lewis, Elliott, McMorran, Vaden,
Ragsdale & Woodward, Inc.
11225 Huron Lane, Suite 104
Little Rock, AR 72211

Bid Form.	As furnished in Project Manual
*Form of Agreement Between Owner & Contractor	AIA Document A101
Contractors Qualification Statement	AIA Document A305
Bid Bond	AIA Document A310 or Cashier's Check
Performance Bond and Labor and Material Payment Bond	AIA Document A312
Insurance and Bonds	AIA Document A101 – 2017 Exhibit A
*Change Order.	AIA Document G701
Application and Certificate for Payment	AIA Document G702 and G703
*Certificate of Substantial Completion.	AIA Document G704
Certificate of Insurance	Acord Form (See sample furnished)
Contractor's Affidavit of Payment of Debts and Claims.	AIA Document G706
Lien Waiver Form (Builder's or Contractor's Affidavit)	As furnished in Project Manual
Consent of Surety - to Reduction or Partial Releases of Retainage	AIA Document G707A
Consent of Surety Company to Final Payment	AIA Document G707
*Architect's Supplemental Instructions.	AIA Document G710
Proposal Request.	AIA Document G709
Construction Change Directive	AIA Document G714
Project Team Directory.	AIA Document G808

*Indicates forms furnished and procedures initiated by the Architect.

END OF REQUIRED CONTRACT FORMS

SAMPLE OF LIABILITY
INSURANCE FORM

GENERAL:

The Contractor's insurance carrier shall supply the "Acord Certificate of Insurance" form exactly as shown on the sample form furnished in this Project Manual, and a notarized letter of endorsement "Specifically permitting the waiver of rights provision in Article 11.1.2.7 of the General Conditions of the Contract for Construction, AIA Document A201, as amended by the Supplementary Conditions and bound into this Project Manual".

END OF SECTION

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/11/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Agency Contact Person	
ABC Insurance Agency Mailing Address City ST 11111	PHONE (A/C, No, Ext): (111) 111-1111	FAX (A/C, No): (111) 111-1111
	E-MAIL ADDRESS: agent@emailaddress.com	

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Insurance Company	11111
INSURER B : Insurance Company	11111
INSURER C : Insurance Company	11111
INSURER D : Insurance Company	11111
INSURER E : Insurance Company	11111
INSURER F :	

INSURED
ABC Construction Company
Mailing Address
City ST 11111

COVERAGES **CERTIFICATE NUMBER:** 2024 Sub Sample Cert **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:	Y	Y	Policy Number	12/10/2024	12/10/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 1,000,000 $ 1,000,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			Policy Number	12/10/2024	12/10/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
C	[X] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 10,000	Y	Y	Policy Number	12/10/2024	12/10/2025	EACH OCCURRENCE AGGREGATE 	$ 1,000,000 $ 1,000,000 $
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	Policy Number	12/10/2024	12/10/2025	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
E	Builders Risk Property Insurance			Policy Number	12/10/2024	12/10/2025		

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Project Name

CERTIFICATE HOLDER

SAMPLE CERTIFICATE

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

AGENCY CUSTOMER ID: 00002879

LOC #:

ADDITIONAL REMARKS SCHEDULE

AGENCY	NAMED INSURED
ABC Insurance Company	Lewis, Elliott, McMorran,Vaden, Ragsdale And Woodward Inc.
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** Certificate of Liability Insurance: Notes

Attach policy forms regarding Additional Insured, Blanket Waiver of Subrogation, Notice of Cancellation, Primary/Non-Contributory status, etc that are applicable to the policies listed on this certificate:

General Liability:
*Owner & Architect shall be named as an Additional Insured or included in Blanket Additional Insured policy form
*Per Project Aggregate Limit of Liability
*Primary Non-contributory endorsement
*Waiver of Subrogation in favor of Certificate Holder
*30 Day Notice of Cancellation in favor of Certificate Holder

Workers Compensation:
*Waiver of Subrogation in favor of Certificate Holder

Umbrella:
*Confirmation of Following Form for Additional Insured & Waiver of Subrogation on underlying policies

LIEN WAIVER FORM

STATE OF ARKANSAS

COUNTY OF_____

_____of_____
(Name) (Address)

being first duly sworn deposes and says:

That he is the sub-contractor and/or material supplier who worked on or furnished material to be used in the construction and improvements on the property located in _____, more particularly described as follows:

Affiant further states that all material used therein was of the quality prescribed in plans and specifications approved by the architects, Owner, or both, that all laws, ordinances, building codes and civic regulations concerning construction or repair of building(s) have been complied with and that the Owner has inspected said improvements and accepted same as being complete and satisfactory.

Affiant further states that all charges and costs for labor performed, material furnished, and fixtures installed on said premises have been fully paid; that said premises are free and clear of all lienable claims whatsoever arising under and by virtue of said construction, and warrants and guarantees to hold Owner, and those claiming under the Owner, including any mortgagee or title insurance company, free and immune from any liability therefore.

The release is given in order to induce payment in the amount of _____ and on receipt of this amount due, this release may be recorded, becomes valid, enforceable and of full effect.

Affiant further states that said construction began on the_____day of_____2025 and was completed on or before the _____day of _____2025, and he acknowledges receipt of all monies due him in connection therewith.

_____
Sub-Contractor/Material Supplier

STATE OF ARKANSAS
COUNTY OF_____

Subscribed and sworn to before me this_____day of_____, 2025.

_____
Notary Public

My commission expires:
_____ Seal

"THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", STANDARD FORM OF THE AMERICAN INSTITUTE OF ARCHITECTS, 2017 EDITION, A.I.A. DOCUMENT, A201, ARTICLES 1 THROUGH 15 INCLUSIVE, CONSISTING OF THIRTY NINE PRINTED PAGES, ARE HEREBY INCORPORATED AS A PART OF THE PROJECT MANUAL AND SHALL BE AS THOUGH THEY WERE ATTACHED HERETO. THE GENERAL CONDITIONS ARE ON FILE FOR PUBLIC INSPECTION AT THE OFFICE OF LEWIS, ELLIOTT, MCMORRAN, VADEN, RAGSDALE & WOODWARD, INC., 11225 HURON LANE, SUITE 104, LITTLE ROCK, ARKANSAS."

SUPPLEMENTARY
CONDITIONS

1. The "General Conditions of the Contract for Construction", AIA Document A201, 2017, Articles 1 through 15 inclusive, is a part of this Contract.

2. The following supplements shall modify, delete, and/or add to the General Conditions. Where any article, paragraph, or subparagraph in the General Conditions is supplemented by one of the following paragraphs, the provisions of such article, paragraph, or subparagraph shall remain in effect and the supplemental provisions shall be considered an added thereto. Where any article, paragraph, or subparagraph in the General Conditions is amended, voided, or superseded by any of the following paragraphs, the provisions of such article, paragraph, or subparagraph not so amended, voided, or superseded shall remain in effect.

3. Add subparagraph 1.1.9:

"The word "Provide" shall mean to furnish and install, complete in place, operating, tested and approved".

4. Add subparagraph 1.1.10:

"The word "Product(s)" refers to the materials, systems, and equipment provided by the Contractor".

5. In subparagraph 3.4.3, add: "Any person whose work is unsatisfactory to the Owner or the Architect shall be removed from the work upon receipt of written notice from the Architect".

6. Add subparagraph 3.4.4:

"All Contractors and Subcontractors engaged in the Work shall conform to the labor laws of the State of Arkansas, and the various acts amendatory and supplementary thereto, and to all other laws, ordinances, and legal requirements applicable there to".

7. Add subparagraph 3.7.6:

"The Contractor shall be licensed contractor as provided by the Act Number 124 of the 1939 Act Number 217 of 1945 and Act Number 153 of 1951 and Act Number 150 of 1965 as enacted by the General Assembly of the State of Arkansas".

8. Delete subparagraphs 3.9.2 and 3.9.3 in their entirety and substitute the following subparagraph 3.9.2:

"The superintendent and assistants shall be satisfactory to the Architect, and shall not be changed except with the consent of the Architect, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ".

9. Add subparagraph 3.13.1:

3.13.1 "All material shall be arranged and maintained in an orderly manner without hindering the use of walks, drives, roads, and entrances. Should it be necessary at any time to move material, sheds, or storage platforms, the Contractor shall do so as and when directed, and at his own expense".

10. Add subparagraphs 7.2.2 and 7.2.3:

7.2.2 The contractor shall be required to furnish the original bills and payrolls and support the statement with proper affidavits. The burden of proof of the costs rests upon the Contractor. Bills for extras will be allowed only when work is ordered in writing. No bills based on verbal orders will be allowed by the Architect unless accompanied by a written order from the Architect. The Contractor waives all claim for extension of time of completion on account of extra work, unless application for such extension is made by the Contractor in writing within twenty (21) days of the time such work is ordered.

7.2.3 The Contractor shall not make any changes except on written order of the Owner. Contractor's request for a Change Order to the Work shall be made on the AIA Document G709 and shall provide itemized breakdown of whole sum listing unit quantities and costs of all labor and materials. Contractor shall submit all verifying data as required to support claims, such as copies or original invoices, payrolls, etc. Requests shall identify percentage sums included for insurance, taxes, bonds, overhead and profit. Percentages shall not be allowed for changes altering allowances. Changes in the work by cost and a mutual acceptable fixed or percentage fee shall be computed as follows:

a. Net cost of materials, plus State Sales Tax.
b. Net delivery cost.
c. Net placing cost plus W.C. Insurance premium and FICA Tax.
d. 12% Overhead and Profit Charge on a. through c. allowed.
e. Allowable Bond Premium.

Where changes in the work involve subcontract work, the General Contractor shall add to cost of subcontract work a profit charge of 5% total overhead and profit charge.

11. Delete subparagraph 7.4 and substitute the following:

"The Architect will have authority to order minor changes in the Work in the form of Field Orders which interpret the Contract Documents or order minor changes in the work without change in Contract Sum or Contract Time. Such changes shall be effected by written Field Order, and shall be binding on the Owner and the Contractor. The Contractor shall attend to such Field Order promptly".

12. Add subparagraphs 7.4.1 and 7.4.2:

7.4.1 "If the Contractor considers that a change in Contract Sum or Contract Time is required, he shall submit an itemized proposal to the Architect immediately and before proceeding with this work. If the proposal is found to be satisfactory and in proper order, the Field Order will in that event be superseded by a Change Order as provided in Paragraph 7.2. The Contractor shall attend to such Field Orders promptly".

7.4.2 "When the time required for processing a Change Order would cause a delay in the progress of the Work, the Architect may issue a Field Order which, when signed by the Owner and the Contractor, will authorize the Contractor to proceed with changes in the work, which may change the Contract Sum and/or the Contract Time. Such Field Orders will be subsequently incorporated in the work as Change Orders as provided in paragraph 7.2. The contractor shall attend to such Field Order promptly".

13. Delete subparagraph 9.3.1 and substitute the following:

"On or before the twenty-fifth day of each calendar month, the Contractor shall submit to the Architect an itemized Application for Payment on AIA Document G702, supported by data substantiating the Contractor's right to payment submitted on AIA Document G703 and attached thereto. The Contractor shall submit one (1) legible copy of these prepared Application for Payment forms and (1) legible copy of each invoice or statement supporting requests for payment of materials or equipment stored on job site or in an approved bonded warehouse". These forms can be emailed to the address as provided at the Pre-Construction meeting or by mailing, shipping or hand-delivery.

"Throughout entire job, the Owner will pay 95 percent of the amount due the Contractor on account of progress payments in compliance with Act 193 of 2009 amended AR. Code. Ann.§22-9-604(a). No retainage will be withheld on material and/or equipment stored on job site or in an approved bonded warehouse".

14. 10.2.2 Add the following new subparagraphs:

10.2.2.1 Project with trenching or excavation which exceeds five feet in depth shall comply with Arkansas Code Annotated §22-9-212.

10.2.2.2 The current edition of OSHA Standard for Excavation and Trenches Safety System, 29 CFR 1926, Subpart P, shall be incorporated by reference in this contract.

15. NOTE: Refer to Sample of Liability Insurance Form for Sample Acord Form. Add the following clauses to 11.1.1:

11.1.1.1 The Contractor shall purchase and maintain Workers Compensation insurance providing Statutory Workers compensation benefits as well as Employers Liability Coverage of at least $1,000,000.00 Limit of Liability.

The following endorsements providing extensions of coverage shall be attached forming a part of said Workers compensation policy:

a. Broad Form All States Endorsement
b. Maritime or Jones Act coverage - where applicable, such as work on navigable waters.
c. United States Longshoremen's & Harbor Workers Coverage (may be voluntary if job is not close to body of water).

11.1.1.2 Comprehensive General Liability insurance shall be purchased and maintained by the contractor providing the following coverages and limits of liability:

a. Premises & Operations
b. Independent Contractors
c. Completed Operations and Products
d. X-Explosion, C-Collapse, U-Underground Property Damage Coverage – When Applicable Included
e. Contractual Liability/Blanket Coverage
f. Personal Injury Coverage with Employee Exclusion Removed
g. Owner and Architect shall be named as an Additional Insured on CGL Policy including Completed Operations
h. Additional insured shall be provided with a certificate of insurance

Limits No Less Than:

$1,000,000 Per Occurrence
$2,000,000 Annual Aggregate
$2,000,000 Products/Completed Operations Aggregate

"Per Project Aggregate" endorsement shall be included.

11.1.1.3 Business Auto Liability or Comprehensive Auto Liability policy shall be purchased and maintained by the contractor providing coverage for all owned, non-owned and hired autos.

Limit of Liability required shall be:

$1,000,000.00 Combined Single Limit.

11.1.1.4 An Umbrella Liability Policy shall be purchased and maintained by the contractor providing coverage over and above required underlying Employers Liability, Comprehensive General Liability, and Business Auto Liability coverages.

Limits of Liability shall be no less than $l,000,000.00 per Occurrence/$1,000,000.00 Aggregate.

The Owner and Architect shall be named as an Additional Insured.

11.1.1.5 Property Insurance, (Builder's Risk, Installation Floater, Boiler & Machinery coverage when applicable), providing All-Risk Coverage shall be purchased and maintained by the contractor providing full coverage for all materials, including labor, destined to be part of job and/or already part of job.

The Owner, Architect, Contractor and all Subcontractors shall be included as Named Insureds covering their interest of the said job.

The policy shall reflect a Deductible of $250.00 per occurrence which shall be paid in all cases by the Contractor.

11.1.1.6 Miscellaneous Requirements:

a. All required insurance coverages and bonds shall be provided by an insurance company of a sound financial rating and licensed to do business in the state of the designated job.
b. Certificates of Insurance shall be filed in duplicate with the Architect and approved by the Owner prior to commencement of the work. The certificates shall reflect coverages, limits of liability, and wording at least as broad as the attached specimen. Use the Accord Certificate of Insurance form as shown by specimen included in this set of specifications. All certificates shall include 30 day written notice of cancellation applicable to the General Liability, Workers Compensation, Automobile and Umbrella policies.

c. The contractor shall not commence work under this contract or allow any subcontractor or anyone directly or indirectly employed by anyone of them to commence work until he has obtained all insurance required under this, and two duly executed Certificates of such insurance shall have been filed with the Architect and approved by the Owner and Contractor has complied with bonding requirements and work order has been issued. Each such certificate and policy shall contain a provision that coverages afforded under the policies will not be cancelled or materially altered until at least thirty days prior written notice has been given to the Owner.

d. The insurance carrier shall issue an endorsement specifically permitting the waiver of rights provision in AIA Document A201, Article 11.3.1.

16. Add subparagraph 11.1.1.7:

If by the terms of this insurance any mandatory deductibles are required, or if the Contractor should elect, with the concurrence of the Owner, to increase the mandatory deductible amounts or purchase this insurance with voluntary deductible amounts, the Contractor shall be responsible for payment of the amount of the deductible in the event of a paid claim.

17. Add subparagraph 11.1.2.1:

"Contractor shall furnish and pay for an Executed Performance Bond on AIA Document A311 and Labor and Material Payment bond on AIA Document A311 in the amount of 100% of the contract sum. No modification to the standard bond forms will be allowed without written consent of the Architect".

18. Add subparagraph 11.1.2.2:

"After being approved by the Architect and prior to any work under this contract, the Contractor shall file the bonds with the circuit clerk and recorder of the county in which the work to be performed is located. Contractor shall obtain from the circuit clerk certificates as evidence that the bonds have been approved and filed with the clerk and said certificates shall be filed with the Architect".

19. Add subparagraph 11.1.5:

"If at any time a surety on any such bond is declared bankrupt or loses its right to do business in this state, Contractor shall notify the Owner immediately and within ten (10) days, furnish an acceptable bond (or bonds), in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable Bond to the Owner. Failure to comply with the above requirements may be deemed sufficient grounds for termination of this contract".

20. Delete subparagraph 11.2.1 in its entirety and substitute the following:

The Contractor shall be responsible for purchasing and maintaining liability insurance as will protect the Owner against claims which may arise from operations under the contract.

21. Delete subparagraph 11.2.2 in its entirety and substitute the following:

11.2.2 The Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. Such insurance shall be in a company or companies against which the Owner has no reasonable objection. This insurance shall include the interests of the Owner, the Contractor, Subcontractors, and Subcontractors in the Work and shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism and malicious mischief. If not covered under all risk insurance or otherwise provided in the Contract Documents, the contractor shall effect and maintain similar property insurance on portions of the work stored off the site or in transit when such portions of the work are to be included in an application for Payment under subparagraph 9.3.2. The form of policy for this coverage shall be completed value.

22. Add subparagraph 11.5.3

The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section 11.1.1.5 Property Insurance have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

23. Delete subparagraph 15.1.6.2 in its entirety and substitute the following:

"Extension of Time Due to Weather Delays: Claims for extension of time due to unusual inclement weather shall be granted only because such unusual inclement weather prevented the execution of major items of the work. Unusual inclement weather is defined as severe weather which is beyond the normal weather recorded and expected for the month of the year as shown in the chart below. Extension of time due to weather delays shall be granted only for those days in excess of the number of days shown. Extension of time requests shall be submitted in writing within 30 days of occurrence and submitted with current pay request.

PRECIPITATION

MONTH	AVERAGE NO. OF DAYS .01" OR MORE
January	10
February	9
March	10
April	10
May	10
June	8
July	9
August	7
September	7
October	6
November	8
December	9

24. In paragraph 15.3, omit any and all references to arbitration.

25. Delete paragraph 15.4 in its entirety.

END OF SUPPLEMENTARY CONDITIONS

52.222-5 Davis-Bacon Act—Secondary Site of the Work.

As prescribed in 22.407(h), insert the following provision:

DAVIS-BACON ACT—SECONDARY SITE OF THE WORK (JULY 2005)

(a)(1) The offeror shall notify the Government if the offeror intends to perform work at any secondary site of the work, as defined in paragraph (a)(1)(ii) of the FAR clause at 52.222-6, Davis-Bacon Act, of this solicitation.

(2) If the offeror is unsure if a planned work site satisfies the criteria for a secondary site of the work, the offeror shall request a determination from the Contracting Officer.

(b)(1) If the wage determination provided by the Government for work at the primary site of the work is not applicable to the secondary site of the work, the offeror shall request a wage determination from the Contracting Officer.

(2) The due date for receipt of offers will not be extended as a result of an offeror's request for a wage determination for a secondary site of the work.

(End of provision)

52.222-6 Davis-Bacon Act.

As prescribed in 22.407(a), insert the following clause:

DAVIS-BACON ACT (JULY 2005)

(a) Definition.—"Site of the work"—

(1) Means—

(i) *The primary site of the work*. The physical place or places where the construction called for in the contract will remain when work on it is completed; and

(ii) *The secondary site of the work, if any*. Any other site where a significant portion of the building or work is constructed, provided that such site is—

(A) Located in the United States; and

(B) Established specifically for the performance of the contract or project;

(2) Except as provided in paragraph (3) of this definition, includes any fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, tool yards, etc., provided—

(i) They are dedicated exclusively, or nearly so, to performance of the contract or project; and

(ii) They are adjacent or virtually adjacent to the "primary site of the work" as defined in paragraph (a)(1)(i), or the "secondary site of the work" as defined in paragraph (a)(1)(ii) of this definition;

(3) Does not include permanent home offices, branch plant establishments, fabrication plants, or tool yards of a Contractor or subcontractor whose locations and continuance in operation are determined wholly without regard to a particular Federal contract or project. In addition, fabrication plants, batch plants, borrow pits, job headquarters, yards, etc., of a commercial or material supplier which are established by a supplier of materials for the project before opening of bids and not on the Project site, are not included in the "site of the work." Such permanent, previously established facilities are not a part of the "site of the work" even if the operations for a period of time may be dedicated exclusively or nearly so, to the performance of a contract.

(b)(1) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, or as may be incorporated for a secondary site of the work, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Any wage determination incorporated for a secondary site of the work shall be effective from the first day on which work under the contract was performed at that site and shall be incorporated without any adjustment in contract price or estimated cost. Laborers employed by the construction Contractor or construction subcontractor that are transporting portions of the building or work between the secondary site of the work and the primary site of the work shall be paid in accordance with the wage determination applicable to the primary site of the work.

(2) Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (e) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period.

(3) Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided that the employer’s payroll records accurately set forth the time spent in each classification in which work is performed.

(4) The wage determination (including any additional classifications and wage rates conformed under paragraph (c) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the primary site of the work and the secondary site of the work, if any, in a prominent and accessible place where it can be easily seen by the workers.

(c)(1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination.

(ii) The classification is utilized in the area by the construction industry.

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the:

The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to paragraphs (c)(2) and (c)(3) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(d) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(e) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(End of clause)

52.222-7 Withholding of Funds.

As prescribed in 22.407(a), insert the following clause:

WITHHOLDING OF FUNDS (FEB 1988)

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

(End of clause)

52.222-8 Payrolls and Basic Records.

As prescribed in 22.407(a), insert the following clause:

PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis-Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b)(1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the—

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402

The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify—

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR Part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(End of clause)

52.222-9 Apprentices and Trainees.

As prescribed in 22.407(a), insert the following clause:

APPRENTICES AND TRAINEES (JULY 2005)

(a) Apprentices.

(1) An apprentice will be permitted to work at less than the predetermined rate for the work performed when employed—

(i) Pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer, and Labor Services (OATELS) or with a State Apprenticeship Agency recognized by the OATELS; or

(ii) In the first 90 days of probationary employment as an apprentice in such an apprenticeship program, even though not individually registered in the program, if certified by the OATELS or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program.

(3) Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph (a)(1) of this clause, shall be paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination.

(5) Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(6) In the event OATELS, or a State Apprenticeship Agency recognized by OATELS, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees.

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer, and Labor Services (OATELS). The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by OATELS.

(2) Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the OATELS shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed.

(3) In the event OATELS withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) *Equal employment opportunity.* The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(End of clause)

52.222-10 Compliance with Copeland Act Requirements.

As prescribed in 22.407(a), insert the following clause:

COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

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

(End of clause)

52.222-11 Subcontracts (Labor Standards).

As prescribed in 22.407(a), insert the following clause:

SUBCONTRACTS (LABOR STANDARDS) (JULY 2005)

(a) *Definition.* "Construction, alteration or repair," as used in this clause, means all types of work done by laborers and mechanics employed by the construction Contractor or construction subcontractor on a particular building or work at the site thereof, including without limitation—

(1) Altering, remodeling, installation (if appropriate) on the site of the work of items fabricated off-site;

(2) Painting and decorating;

(3) Manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work;

(4) Transportation of materials and supplies between the site of the work within the meaning of paragraphs (a)(1)(i) and (ii) of the "site of the work" as defined in the FAR clause at 52.222-6, Davis-Bacon Act of this contract, and a facility which is dedicated to the construction of the building or work and is deemed part of the site of the work within the meaning of paragraph (2) of the "site of work" definition; and

(5) Transportation of portions of the building or work between a secondary site where a significant portion of the building or work is constructed, which is part of the "site of the work" definition in paragraph (a)(1)(ii) of the FAR clause at 52.222-6, Davis-Bacon Act, and the physical place or places where the building or work will remain (paragraph (a)(1)(i) of the FAR clause at 52.222-6, in the "site of the work" definition).

(b) The Contractor shall insert in any subcontracts for construction, alterations and repairs within the United States the clauses entitled—

(1) Davis-Bacon Act;

(2) Contract Work Hours and Safety Standards Act—Overtime Compensation (if the clause is included in this contract);

(3) Apprentices and Trainees;

(4) Payrolls and Basic Records;

(5) Compliance with Copeland Act Requirements;

(6) Withholding of Funds;

(7) Subcontracts (Labor Standards);

(8) Contract Termination—Debarment;

(9) Disputes Concerning Labor Standards;

(10) Compliance with Davis-Bacon and Related Act Regulations; and

(11) Certification of Eligibility.

(c) The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor performing construction within the United States with all the contract clauses cited in paragraph (b).

(d)(1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Standard Form (SF) 1413, Statement and Acknowledgment, for each subcontract for construction within the United States, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (b) of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

(e) The Contractor shall insert the substance of this clause, including this paragraph (e) in all subcontracts for construction within the United States.

(End of clause)

52.222-12 Contract Termination—Debarment.

As prescribed in 22.407(a), insert the following clause:

CONTRACT TERMINATION—DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act—Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

(End of clause)

52.222-13 Compliance with Davis-Bacon and Related Act Regulations.

As prescribed in 22.407(a), insert the following clause:

COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

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

(End of clause)

52.222-14 Disputes Concerning Labor Standards.

As prescribed in 22.407(a), insert the following clause:

DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

52.222-15 Certification of Eligibility.

As prescribed in 22.407(a), insert the following clause:

CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

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

(End of clause)

"General Decision Number: AR20250020 01/03/2025

Superseded General Decision Number: AR20240020

State: Arkansas

Construction Type: Building
BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Counties: Calhoun, Clark, Columbia, Dallas, Hempstead, Howard, Lafayette, Montgomery, Ouachita, Pike and Sevier Counties in Arkansas.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number Publication Date
0 01/03/2025

CARP0216-003 01/01/2024

	Rates	Fringes
MILLWRIGHT	$ 31.65	11.83

ENGI0624-006 01/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Crane	$ 34.25	15.00
Forklift	$ 33.25	15.00

IRON0321-010 08/01/2024

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 28.00	21.21

PAIN0424-008 07/01/2021

	Rates	Fringes
PAINTER (Spray)	$ 16.25 **	10.42

SUAR2015-017 01/09/2017

	Rates	Fringes
BRICKLAYER	$ 19.18	1.60
CARPENTER, Excludes Drywall Hanging	$ 16.03 **	0.00
CEMENT MASON/CONCRETE FINISHER	$ 19.14	0.00
DRYWALL HANGER	$ 16.19 **	0.00
ELECTRICIAN	$ 21.21	5.74
LABORER: Common or General	$ 12.84 **	0.00
LABORER: Mason Tender - Brick	$ 12.88 **	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	$ 23.95	0.00
OPERATOR: Bulldozer	$ 18.13	0.00
PAINTER (Brush and Roller)	$ 17.02 **	6.42
PLUMBER	$ 24.42	4.86
SHEET METAL WORKER (HVAC Duct Installation Only)	$ 20.06	6.75
TRUCK DRIVER: Dump Truck	$ 15.00 **	0.00

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

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.75) or 13658 ($13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

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

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

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

Union Rate Identifiers

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

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates

in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

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

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

Survey Rate Identifiers

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

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

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

WAGE DETERMINATION APPEALS PROCESS

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

a) a survey underlying a wage determination
b) an existing published wage determination

c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION"

Section 01 11 00

SUMMARY OF WORK

PART ONE - GENERAL

1.1 WORK COVERED BY THE CONTRACT DOCUMENTS

A. The work generally consists of:

1. A 175 sq.ft. block structure to include two restrooms. Building shall also include all finishes, plumbing, HVAC and electrical, complete.

1.2 LAYOUT OF NEW WORK

A. The General Contractor shall be responsible for correct layout of all proposed improvements in accordance with the Drawings. He shall establish building lines, grades and elevations called for on the Drawings.

1.3 CONTRACT TIME

A. The Contract Time shall be that time set forth in the Bid Form.

1.4 CONTINGENCY ALLOWANCE

A. The Contractor shall include in the bid a contingency amount of $5,000. This contingency shall be used only upon written approval from the Architect. Any difference in cost above or below this amount shall be adjusted by change order. Overhead and profit shall not be allowed if use of the contingency is necessary.

PART TWO – PRODUCTS

Not Used

PART THREE – EXECUTION

Not Used

END OF SECTION

Section 01 31 19

PROJECT MEETINGS

PART ONE - GENERAL

1.1 PRECONSTRUCTION CONFERENCE

A. Before the work order has been issued on the project by the Architect, a preconstruction conference shall be held on the job site with the following personnel; Architect's representative, General Contractor, Superintendent (who will be on the job at all times), mechanical contractor, plumbing and electrical contractor and, if he so desires, the Owner. This meeting is designed for a two-fold purpose: To clarify any questions about the plans and specifications and the transfer of ideas as to what the Architect will expect for all trades and subcontractors.

B. The purpose being as follows: Distribution by Prime Contractor of following:

1. List of subcontractors, including addresses, telephone numbers and person to contact (to be used also as a Job Directory).
2. Tentative Progress Schedule prepared in accordance with the following provisions:

a. Schedule and regulate all construction activities. The schedule shall indicate start and finish dates for activities, submittal and delivery dates for major materials and equipment, and final completion date.
b. Prepare tentative Progress Schedule for preview at initial progress meeting, final schedule being prepared shortly thereafter.
c. Discussion of following:

1) General over-all progress based on tentative Progress Schedule as presented by Prime Contractor.
2) Shop Drawing submission procedure as presented by Architect-Engineer.
3) Change Order processing procedure as presented by Architect-Engineer.
4) Pay request submission procedure as presented by Architect-Engineer.
5) Clarification of Architect-Engineer and Contractor personnel, duties, functions and responsibilities.

d. A pre-work conference shall be required between the Architect's representative, job superintendent and major trades subcontractor before their phase of work begins.

1.2 PROGRESS MEETINGS

A. General Contractor, major subs and all trades on job at the time shall attend bi-monthly (twice a month) progress meetings upon request of the Architect.

B. Architect reserves the right to initiate additional meetings between above parties as he deems necessary.

PART TWO – PRODUCTS

Not Used.

PART THREE – EXECUTION

Not Used.

END OF SECTION

Section 01 33 23

SHOP DRAWINGS, PRODUCT DATA & SAMPLES

PART ONE - GENERAL

1.1.1 Work included:

1.1.1.1 Wherever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined by manufacturer's name and catalog number, reference to recognized industry and government standards, or description of required attributes and performance.

1.1.1.2 To ensure that the specified products are furnished and installed in accordance with design intent, procedures have been established for advance submittal of design data and for their review by the Architect. All required submittals, shop drawings, product data, and samples shall be submitted within four (4) weeks after construction contracts have been signed.

1.1.1.3 Make all submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

1.1.1.4 Material Safety Data Sheets (MSDS) shall not be submitted as part of the submittal package. They are not a requirement of the Contract Documents.

1.1.2 Related work described elsewhere: Individual requirements for submittals are described in pertinent other Sections of these Specifications.

1.2 QUALITY ASSURANCE

1.2.1 Coordination of submittals: Prior to each submittal, carefully review and coordinate all aspects of each item being submitted and verify that each item and the submittal for it conforms in all respects with the requirements of the Contract Documents. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed. Any Shop Drawing submitted to the Architect that has not been checked thoroughly, stamped and signed by the Contractor will be rejected.

1.2.2 Progress schedule: Designate in the Progress Schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed Shop Drawings, Product Data, and Samples will be needed.

1.3 SHOP DRAWINGS – ELECTRONIC SUBMITTAL PROCEDURES

1.3.1 Summary:

1. Shop drawings and product data submittals shall be transmitted to Architect in electronic (PDF) format via Architect’s SharePoint Portal (sp.laeprojects.com).
2. Details shall be identified by reference to sheet and detail, schedules, or room numbers shown on the Contract Drawings.
3. The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.
4. The electronic submittal process is not intended for color samples, color charts, or physical material samples.
5. Shop Drawings shall be present in a clear and thorough manner.

1.3.2 Requirements:

1. All participants in electronic documentation process will be required to have internet access.
2. Necessary software Adobe Acrobat (www.adobe.com) or Blubeam PDF Revu (www.blubeam.com) to produce, view, apply comments and save to PDF files. A PDF reader only will not be adequate.

1.4 PRODUCT DATA

1.4.1 Preparation:

1. Provide cover page with project name and contractor name(s).
2. Include "Table of Contents" if multiple items are included in submittal.
3. Clearly mark each copy to identify pertinent products or models.
4. Show performance characteristics and capacities.
5. Show dimensions and clearances required.
6. Show wiring or piping diagrams and controls.
7. Include special installation instructions.

1.4.2 Manufacturer's standard schematic drawings and diagrams:

1. Modify drawings and diagrams to delete information which is not applicable to the Work.
2. Supplement standard information to provide information specifically applicable to the Work.

1.4.3 Submission:

1. Contractor shall request access to Architect's SharePoint Portal (sp.laeprojects.com).
2. Submittal Preparation - Contractor may use any or all of the following options:
   a. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor through means provided by and required by Contractor.
   b. Subcontractors and Suppliers provide paper submittals to General Contractor who electronically scans and converts to PDF format.
3. Contractor shall review and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer / product, dimensions and coordination of information with other parts of the work.
4. Contractor shall transmit each submittal to Architect using the Architect's SharePoint Portal (sp.laeprojects.com).
5. At discretion of Architect's Reviewer, paper copies can be requested upon receipt of electronic submittal in order to assist in review. Request will be made through email. Contractor will provide the number of paper copies requested.
6. Architect / Engineer review comments will be made available on the Architect's SharePoint Portal for downloading. Contractor will receive email notice of completed review.
7. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.

1.5 SAMPLES

1.5.1 Samples shall be of sufficient size and quantity to clearly illustrate:

1. Functional characteristics of the product, with integrally related parts and attachment devices.
2. Full range of color, texture and pattern.
3. Workmanship when applicable.

1.5.2 Field samples and mock-up:

1. Erect at the project site at a location acceptable to the Architect.
2. Size or area: That specified in the respective specification section.
3. Fabricate each sample and mock-up complete and finished.
4. Remove mock-ups at conclusion of the Work or when acceptable to the Architect.

1.6 NOTIFICATION

1.6.1 Notify the Architect in writing, at the time of submission, of any deviations in the submittals from requirements of the Contract Documents.

1.6.2 Notify the Architect in writing, at the time of resubmission, of changes made on re-submittals other than those previously requested by the Architect.

PART TWO – PRODUCTS

Not Used.

PART THREE – EXECUTION

Not Used.

END OF SECTION

Section 01 45 29

TESTING LABORATORY SERVICES

PART ONE – GENERAL

1.1 WORK INCLUDED

A. The Owner will employ and pay for the services of an independent testing laboratory to perform specified testing, except where designated otherwise in the Specification Sections.

1. Contractor shall cooperate with the laboratory to facilitate the execution of the required services.
2. Employment of the laboratory by the Owner shall in no way relieve the Contractor's obligations to perform the Work of the Contract.

B. The Owner will pay for all initial services of the testing agency. Similar services required of the Contractor, as outlined in 3.4 - Contractor’s Responsibilities, shall be born by the Contractor.

C. Testing laboratory curing and testing is required for cast-in-place concrete. See Section 03 31 00 - Cast-in-Place Concrete.

1.2 RELATED WORK

A. Related requirements in other parts of the Project Manual:

1. Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities: General Conditions of the Contract.

B. Related requirements specified in other sections:

1. Certification of products: The respective sections of Specifications.
2. Test, adjust and balance of equipment: The respective Sections of Specifications.
3. Laboratory tests required, and standards for testing: Each specification section listed.

1.3 QUALITY ASSURANCE

A. The testing laboratory employed by the Owner will meet "Recommended Requirements for Independent Laboratory Qualification" published by the American Council of Independent Laboratories.

B. In its work on this project, the testing laboratory will be required to meet the basic requirements of ASTM E329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction".

1.4 SUBMITTALS

A. Submit a written report of each test and inspection to the following:

1. Architect
2. Contractor
3. Project Record file at job site

PART TWO - PRODUCTS

Not used.

PART THREE - EXECUTION

3.1 DUTIES OF TESTING LABORATORY

A. Cooperate with Architect and Contractor; provide qualified personnel after due notice.

B. Perform specified inspections, sampling and testing of materials and methods of construction:

1. Comply with specified standards.
2. Ascertain compliance of materials with Requirements of the Contract Documents.

C. Promptly notify Architect and Contractor of observed irregularities or deficiencies of work or products.

D. Promptly submit copies of the written report of each test and inspection as required in Article 1.4 above.

3.2 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

A. The testing laboratory is not authorized to:

1. Release, revoke, alter or enlarge on the requirements of the Contract Documents.
2. Approve or accept any portion of the Work.
3. Perform any duties of the Contractor.

3.3 FIELD WORK BY TESTING LABORATORY

A. The testing laboratory personnel shall supply field services under the following limitations:

1. There will be no laboratory field services provided for concrete work. Under the requirements of the concrete work, the General Contractor shall secure and deliver all samples for testing and the lab shall perform laboratory tests only.
2. Samples of proposed fill material shall be secured by the contractor's personnel and delivered to the laboratory for testing. (See 3.4.2 below.)
3. Laboratory field work is acceptable for the taking of compaction readings. The general contractor shall coordinate the tests, to be certain compacted soil is ready for testing so as to avoid unnecessary re-tests.

3.4 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel and provide access to the Work and to Manufacturer's operations.

B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing. The cost of securing and delivery to the laboratory shall be born by the Contractor.

C. Provide to the laboratory the proposed design mix to be used for concrete and other material mixes which require control by the testing laboratory.

D. Furnish copies of products test reports as required.

E. Furnish incidental labor and facilities:

1. To provide access to the Work to be tested.
2. To obtain and handle samples at the project site or at the source of the product to be tested.
3. To facilitate inspections and tests.
4. For storage and curing of test specimens.

F. Notify the laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.

G. Provide all required time within the construction schedule for the testing laboratory to perform its tests and to issue each of its tests and to issue each of its findings.

H. Provide at the site three extra standard test cylinder molds for emergency use.

END OF SECTION

Section 01 50 00

TEMPORARY FACILITIES
AND CONTROLS

PART ONE – GENERAL

1.1 DESCRIPTION

A. Work included: Temporary facilities and controls required for this Work include, but are not necessarily limited to:

1. Temporary utilities such as heat, water, and electricity.
2. Field Offices and sheds.
3. Sanitary facilities.
4. Enclosures such as tarpaulins, barricades, and canopies.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

A. Comply with National Electric Code.

B. Comply with Federal, State and local codes and regulations and with utility company requirements.

1.3 TEMPORARY ELECTRICITY AND LIGHTING

A. Arrange with utility company, provide service required for power and lighting, and pay all costs for service and for power used.

B. Install circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout the construction by the use of construction-type power cords.

C. Provide adequate artificial lighting for all areas of work when natural light is not adequate for work, and for areas accessible to the public.

1.4 TEMPORARY HEAT AND VENTILATION

A. Provide temporary heat and ventilation as required to maintain adequate environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation of materials, and to protect materials and finishes from damage due to temperature or humidity.

B. Provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases.

C. Portable heaters shall be standard approved units complete with controls.

D. Pay all costs of installation, maintenance, operation and removal, and for fuel consumed.

1.5 TEMPORARY WATER

A. Arrange with utility to provide temporary water service for construction.

B. Install necessary branch piping:

1. Locate taps so that water is available throughout the construction by the use of hoses.
2. Protect piping and fittings against freezing.

1.6 TEMPORARY SANITARY FACILITIES

A. Provide temporary sanitary facilities in the quantity required, for use of all personnel. Maintain in a sanitary condition at all times.

B. Service, clean, and maintain facilities and enclosures.

1.7 REMOVAL

A. Completely remove temporary facilities and equipment when their use is no longer required.

B. Clean and repair damage caused by temporary installations or use of temporary facilities.

1.8 FIELD OFFICES AND SHEDS

A. Provide a field office building and sheds adequate in size and accommodation for all Contractor's offices, supply and storage.

B. The entire facility, including furniture, will remain the property of the Contractor and shall be removed from the site after completion of the Work.

1.9 ENCLOSURES

A. Furnish, install, and maintain for the duration of construction all required scaffolds, tarpaulin, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of the work in compliance with all safety and other regulations.

1.10 PROJECT SIGNS

A. Provide 4' x 8' x 3/4" exterior grade plywood on two 8' x 4' x 4' treated wood posts. Paint sign as directed by Architect.

B. Allow no signs or advertising of any kind on the job site except as specifically approved in advance by the Architect.

PART TWO – PRODUCTS

Not Used.

PART THREE - EXECUTION

3.1 Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the Work. Remove all such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Architect.

END OF SECTION

Section 01 74 23

FINAL CLEANING

PART ONE - GENERAL

1.1 WORK INCLUDED

A. Execute cleaning during progress of the Work and at completion of the Work.

PART TWO - PRODUCTS

2.1 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

PART THREE - EXECUTION

3.1 DUST CONTROL

A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.

B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

3.2 FINAL CLEANING

A. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.

B. Wash and shine glazing and mirrors.

C. Polish glossy surfaces to a clear shine.

D. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds disturbed during construction.

END OF SECTION

Section 01 77 19

CONTRACT CLOSEOUT

PART ONE - GENERAL

1.1 PRODUCT CLOSEOUT

A. Upon completion of the project, the Contractor shall remove all temporary structures and facilities from the site, and leave the premises in the condition required by the Construction Documents. The Contractor shall notify the Architect, in writing, as to the date when, in his opinion all or a designated portion of the work will be substantially completed and ready for final observation and the punch list to be performed on the building. If the Architect determines that the state of preparedness is as represented, the punch list will promptly be started on the building.

B. The Architect will give written copies of the Punch List to the Contractor of observed defects. The Contractor shall promptly remedy any defects due to noncompliance of Construction Documents, faulty materials, or workmanship and pay for any damage to other work resulting therefrom.

1.2 FINAL OBSERVATION

A. When defects are remedied as acceptable and upon receipt of punch list with each item initialed and dated acknowledging same, Architect shall arrange for final observation with the Owner, General Contractor and the Architect. Should Architect/Engineer perform additional observations due to failure of work not complying with the claims of status of completion made by the Contractor, the Architect/Engineer will be compensated for such additional observations by the Contractor. The amount of compensation due to the Architect/Engineer shall be deducted from the final payment to the Contractor.

B. Immediately prior to final observation and acceptance, remove protective covers or markings and complete surface treatments, washing or polishing as specified, leaving all interior surfaces, including projections, in such condition that all areas can be occupied and used without further cleaning. (This includes all plumbing fixtures, trim, heat and air conditioning grilles, etc. provided under the Mechanical Work and all electrical fixtures and switch plates, etc., provided under the Electrical Work.)

1.3 PAPER WORK

A. Final payment of the retainage will be withheld until the following documents are delivered to the Architect on two (2) USB flash drives – one (1) for the Architect and one (1) for the Owner.

1. Shop Drawings:
An approved copy of each shop drawing, manufacturer’s brochures, test data, etc., submitted to the Architect for approval during the course of construction shall be included with an index listing material, manufacturer and subcontractor of each submittal.

2. Operating Manuals:
   Include all operating and instruction manuals (not submittals, shop drawings, etc.) for all material, equipment or assemblies furnished or installed as part of this contract. All items shall be arranged in alphabetical order and shall include an index of contents as its first page with name of subcontractor and material supplier on each separate item.
3. Record Documents:
   Provide, as described in Section 01 78 39, one (1) set of project record documents, with all dimensions of utility locations, variances from original drawings, etc., clearly documented in red.
4. The following shall also be included:
   a. Project Directory: Complete listing of all subcontractors, mechanics, and material suppliers involved in the work under this contract.
   b. Guarantees/Warranties: Submit signed and notarized copies of all manufacturers, mechanics, contractors or supplier guarantees required by the contract documents, including General Contractor's one year warranty. Form and wording of guarantees must be as specified and/or as submitted by the Contractor and approved by the Architect prior to bidding.
   c. AIA Forms:
      1) AIA Document G704 – Certificate of Substantial Completion issued by the Architect. (To be signed by Owner, Architect, and Contractor.)
      2) AIA Document G706* - Contractor's Affidavit of Payment of Debts And Claims (To be completed by the General Contractor.)
      3) AIA Document G706A* - Contractor's Affidavit of Release of Liens (To be completed by the General Contractor.)
      4) AIA Document G707* - Consent of Surety Company to Final Payment (To be completed by the General Contractor.)

      *Forms can be obtained from:
      AIA Dallas, (214)764-3153, www.aiadallas.org or www.aia.org
   d. Lien Waivers: Submit signed and notarized lien waivers from all subcontractors, mechanics, and material suppliers involved in the work of this contract. No partial lien waivers shall be accepted. Lien Waiver form to be as supplied by the Architect.

PART TWO – PRODUCTS

Not Used.

PART THREE – EXECUTION

Not Used.

END OF SECTION

Section 01 78 39

PROJECT RECORD DOCUMENTS

PART ONE - GENERAL

1.1 DESCRIPTION

A. Reference: Applicable provisions of the General and Supplementary Conditions and Division 1, General Requirements, govern all work of this Section.

1.2 WORK

A. Maintain at the site for the Owner one record copy of:
   1. Drawings, Specifications, Addenda, Change Orders, and other modifications to the Contract.
   2. Approved Shop Drawings, and Product Data.
   3. Field Test Records.

B. Record actual construction on drawings at the job site. Provide the job site set of drawings with close-out documents as required and and one (1) photo copied set to the Architect.

1.3 RELATED REQUIREMENTS

A. Submittals - Section 01 33 23

B. Conditions of the Contract

1.4 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Maintain documents in a secure, clean, dry, legible condition and in good order. Do not use record documents for construction purposes.

B. Make documents available at all times for inspection by Architect.

1.5 RECORDING

A. Label each document "PROJECT RECORD" in neat large printed letters with felt tip marking pen.

B. Record information concurrently with construction progress.

   1. Do not conceal any work until required information is recorded.

C. Legibly mark drawings to record actual construction:

   1. Depths of various elements of foundation in relation to finish first floor elevation.
   2. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
4. Field changes of dimension and detail.
5. Changes made by Field Order or by Change Order.
6. Details not on original contract drawings.

1.6 SUBMITTAL

At Contract Close-out, Record Documents shall be included on the two (2) USB flash drives as requested in Section 01 77 19 - Contract Closeout.

PART TWO – PRODUCTS

Not Used

PART THREE – EXECUTION

Not Used

END OF SECTION

Section 02 30 00

SUBSURFACE INVESTIGATION

PART ONE - GENERAL

1.1 DESCRIPTION

A. General: Bidders should visit the site and acquaint themselves with all existing conditions. Prior to bidding, bidders may make their own subsurface investigations to satisfy themselves as to site and subsurface conditions, but all such 54

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1.2 QUALITY ASSURANCE

A. Adjustment of work: Readjust all work performed that does not meet technical or design requirements, but make no deviations from the Contract Documents without specific and written approval from the Architect.

PART TWO – PRODUCTS

Not Used

PART THREE – EXECUTION

Not Used

END OF SECTION

PART ONE - GENERAL

1.1 GENERAL

A. Work Included: This section covers all cast-in-place, reinforced and non-reinforced concrete construction and pre-cast splash blocks as shown and specified.

1.2 REFERENCE STANDARDS

A. ACI 318 "Building Code Requirements for Reinforced Concrete".

B. Concrete Reinforcing Steel Institute, "Manual of Standard Practice".

1.3 DELIVERY, STORAGE AND HANDLING OF MATERIALS

A. All materials shall be so delivered, stored and handled as to prevent the inclusion of foreign materials and the damage of materials by water or breakage. Package materials shall be delivered and stored in original packages until ready for use. Packages or materials showing evidence of water or other damage shall be rejected. All materials shall be of the respective quantities specified herein. Frozen or partially frozen aggregates shall not be used.

1.4 SUBMITTALS

A. The contractor shall submit one hard copy (not to be returned) and one electronic copy in PDF format as per Section 01 33 23, through an approved testing laboratory, the proposed concrete mix to be used to the architect for approval. The proposed concrete mix must be proved by 3 cylinder tests in accordance with ASTM C-31. The owner shall pay for all design mixes and cylinder tests.

B. Reinforcing steel fabricator shall submit one hard copy (not to be returned) and one electronic copy in PDF format as per Section 01 33 23 of detailed shop drawings for approval by the Architect on reinforcing bars and anchor bolts seating plans before fabrication or shipment.

PART TWO - PRODUCTS

2.1 CONCRETE: Concrete for interior slabs and footings shall have a 28-day minimum compressive strength of 3000 psi. Maximum water-cement ratio - .53 by weight. Exterior concrete shall have a 28 day minimum compressive strength of 4000 psi w/air entrainment of 6% ± 1%. Maximum water-cement ratio - .50 by weight. No other admixtures shall be used without approval of Architect.

A. Portland cement shall conform to ASTM C-150, Type I/II, or ASTM C-595, Type IL.

B. Water shall be potable.

C. Aggregate shall conform to ASTM C-33.

2.2 REINFORCING STEEL

A. Deformed bars shall conform to ASTM A615, Grade 60.

B. Welded wire fabric shall conform to ASTM A-185. Provide 6 x 6 W1.4 x W1.4 in all floor slabs unless noted otherwise.

2.3 VAPOR BARRIER: See specification section 07 26 16.

2.4 FLOOR SEALER: MasterKure CC 180 WB as manufactured by BASF.

2.5 CURING COMPOUND: 1100-Clear by W.R. Meadows.

2.6 CONSTRUCTION JOINTS OR CONTROL JOINT: Provide 24 gage galvanized preformed steel screed keys as manufactured by Dayton Superior or approved equal. Provide steel stakes and splice plates as required by manufacturer.

2.7 Premolded expansion joint material shall be asphalt impregnated expansion joint material to meet ASTM specification D-1751-73. Expansion joint material shall have a “zip strip” or “tear tab” for ease in installation of backer rod and sealant.

PART THREE - EXECUTION

3.1 FORMS AND SCREEDS

A. Form shall be so constructed that the finished concrete will conform to the shapes, lines, grades, and dimensions indicated on the drawings.

B. Set all screeds with instrument. Wet screeds are unacceptable.

3.2 PLACING REINFORCEMENT

A. Reinforcing shall be unpainted and uncoated, free from rust or scale and shall be cleaned and straightened before being shaped and put into position.

B. Reinforcing shall be accurately positioned and securely tied.

3.3 CONCRETE MIXING

A. Concrete shall be Ready-Mix in accordance with ASTM C-94.

3.4 CONCRETE PLACING

A. Notify Architect 36 hours prior to placing to permit inspection of forms and reinforcing.

B. Concrete shall be handled from the mixer to the forms as rapidly as possible by methods which shall prevent the separation of ingredients.

C. Consolidate concrete as required.

3.5 CURING

A. Moisture Cure: The slabs shall be moisture cured by ponding, continuous sprinkling and application of absorptive mats or 1 1/2 inch of sand kept continuously wet. Whichever method used, the slabs shall be kept continuously wet for 7 days.

B. Curing Compound: Provide curing compound as recommended by manufacturer.

3.6 FINISHES: Interior slabs shall receive a steel trowel finish typically. Exterior slabs shall receive a light broomed finish over a steel trowel finish.

A. Apply curing compound to interior and exterior concrete. Curing compound shall not be applied to slabs to receive floor hardener.

3.7 TESTING

A. Samples and tests of the concrete shall be made by an approved independent testing and inspection laboratory. At Contractor's expense, a certified ACI technician shall take test cylinders at the job site. All other test shall be at paid for by the owner unless noted otherwise. Not less than one test for 40 cu. yd. of concrete, or fraction thereof, will be required, and in any event not less than one test for each day's pour. Not less than four specimens will be made for each test. Specimens shall be made and cured in accordance with current ASTM Specifications C-39 and C-31. A slump test shall be made for each set of test cylinders.

B. Test cylinders shall be made in accordance with ASTM C-31, latest edition. Test one cylinder at 7 days, one at 14 days and two at 28 days. Test cylinders shall be cast on the project site and cured under conditions approaching that of concrete poured on job as nearly as possible. If average strength of test cylinders falls below strength called for, the Architect shall have the right to order removal and replacement of any defective concrete at the contractor's expense.

END OF SECTION

Section 04 01 20

UNIT MASONRY CLEANING

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work included: Cleaning of all masonry surfaces as shown on the Drawings, specified herein, or needed for a complete and proper installation.

B. Related work described elsewhere:

1.	Masonry Mortaring	Section 04 05 13
2.	Contrete Unit Masonry	Section 04 22 00

PART TWO - PRODUCTS

2.1 CLEANING AGENTS

A. All cleaning agents listed are as manufactured by Prosoco, Inc., Kansas City, Kansas or Architect approved equal.

1. Brick veneer (red clay) with mortar – no color: Sure Klean No. 600 detergent.
2. Brick veneer (buff clay) with mortar – no color: Sure Klean Vana Trol cleaner.
3. Masonry with color mortar: Sure Klean Vana Trol cleaner.
4. Colored block: Sure Klean Custom Masonry Cleaner.

B. MURIATIC ACID WILL NOT BE ALLOWED AS A CLEANING AGENT.

PART THREE - EXECUTION

3.1 POINTING

Cut out any defective joints and holes to depth of 3/4 inch in exposed masonry and repoint with mortar.

3.2 CLEANING EXTERIOR SURFACES

A. Clean masonry surface with rough cloth or brush. Clean at end of each day.

B. Clean all exposed exterior masonry after mortar has cured:

1. Clean initially with stiff brushes and water.
2. Allow Architect to inspect initially cleaned surfaces.
3. Where directed by Architect, apply cleaning agent to sample wall area of 20 square feet.
4. Do not proceed with application of cleaning agent without approval of Architect.

5. When cleaning agent is required:
    a. On block follow block manufacturer's recommendation.
    b. Follow cleaning agent manufacturer's directions.
    c. Rinse surface thoroughly with water following cleaning.
    d. Protect surrounding non-masonry surfaces from exposure to the cleaning agent.

3.3 CLEANING INTERIOR SURFACES

A. Clean exposed interior masonry:

1. Brush surface or rub with rough cloth at end of each day's work.
2. Clean as necessary after mortar has cured with stiff brush dipped in bucket of water.
3. Mop up immediately any water puddling on the floors.

3.4 GENERAL CLEANING

A. At the completion of work, all exposed block shall be cleaned from the top down with a solution of non-staining soap powder and clean water, using stiff fiber brushes for scrubbing. Rinse surface with clean water. Apply solution in strict accordance with the manufacturer's recommendations. No acid for cleaning masonry will be permitted on the job or in trucks on the job.

END OF SECTION

Section 04 05 13

MASONRY MORTARING

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work included: Provide all material, complete, in place, as shown on the Drawings, specified herein, or needed for a complete and proper installation.

B. Related work specified elsewhere:

1.	Unit Masonry Cleaning	Section 04 01 20
2.	Masonry Accessories	Section 04 05 23
3.	Metal Doors and Frames	Section 08 11 00

1.2 QUALITY ASSURANCE

A. Use the same manufacturer's products throughout the project.

B. Submit manufacturer's certification that materials meet the specification requirements.

1.3 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM):

1. ASTM C144, Specification for Portland Cement.
2. ASTM C144, Specification for Aggregate for Masonry Mortar.
3. ASTM C207, specification for Hydrated Lime for Masonry Purposes.

B. Specifications for Masonry Structures TMS 402/602-16.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver and store manufactured products in original unopened containers.

B. Store cementitious ingredients in weather-tight enclosures and protect against contamination and warehouse set.

C. Stock pile and handle aggregate to prevent contamination from foreign materials.

D. Keep water free of harmful materials.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Heat mixing water when air temperature is below 40 degrees F and heat aggregates when air temperature is below 32 degrees F., to assure mortar temperatures between 40 degrees F and 120 degrees F., until used.

B. Produce subsequent mortar batches within ± 10 degrees F. (± 6 degrees C.) of first batch.

C. Do not heat water or sand above 120 F., (50 degrees C.).

PART TWO - PRODUCTS

2.1 MORTAR

A. Materials:

1. Portland Cement: ASTM C150, Type 1.
2. Pre-packaged portland cement, hydrated lime and dried masonry sand meeting specification is acceptable.
3. Hydrated Lime: ASTM C207.
4. Sand: ASTM C144, well screened, clean, hard, sharp siliceous, and free from loam, silt, or other impurities.
5. Water: Clean and free of deleterious amounts of acids, alkalies, oil, or organic materials.
6. Mortar coloring: None required.
7. Admixtures: Performance admixtures, except waterproofing, shall not be used without written proof from a recognized testing laboratory to the effect that the bond strength of mortar or grout to which said admixture has been added is not less than that for mortar or grout without addition of said admixture and the written approval of the Owner.

B. Mortar Mix:

1. Proportions by volume:

Mortar Type	Portland Cement	Masonry Cement	Hydrated Lime or Lime Putty	Aggregate Measured in Damp Loose Condition
N	1	None	1	Not less than 2-1/4 and not more than 3 times the sum of volumes of cement and lime used.

2. Measure in container of known volume, not by "Shovelfulls".
3. Provide Dry-Block Integral Water-Repellant admixture at recommended dosage rate for type of mortar being used (exterior walls and interior wet areas only).

PART THREE - EXECUTION

3.1 INSTALLATION

A. Mechanical:

1. Approved type: Batch type with controlled water quantity.
2. Mixing time: 5 minutes, 2 minutes continuous after water added.

B. Hand-mixing: Only when specifically approved by Architect.

1. Use for small batches only.
2. Use weather tight mixing box.
3. Rake each batch thoroughly and turn over together before adding water until dry mix is an even color throughout the mass.
4. Add water gradually until thoroughly mixed mortar of required plasticity is obtained.

C. General:

1. Keep all equipment and mixing boxes clean.
2. Prepare mortars in batches or volume that will be used before initial set takes place.
3. Transport mortar to point of use within 45 minutes after mixing.
4. Do not re-tamper mortar after it has set.
5. Mortar flow: Mortar of the materials and proportions used in the construction shall have a flow after suction for a one minute of not less than 65 percent of that immediately before suction. The flow shall be determined by the method of the Water Retention Test of the Standard Specifications for Masonry Cement, ASTM C91 if testing is required.
6. Mortar consistency: The mortar shall be as wet a consistency as can be conveniently handled. Mortar which has greatly stiffened or in which the cementing material has started to set shall not be used.

END OF SECTION

Section 04 05 23

MASONRY ACCESSORIES

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work included: Provide all masonry accessories, complete, in place, as shown on the Drawings as specified herein, and as required for a complete and proper installation.

B. Related work described elsewhere:

1. Concrete Unit Masonry Section 04 22 00

PART TWO - PRODUCTS

2.1 GENERAL

A. All masonry anchors, ties and wall reinforcement shall be corrosion resistant as manufactured by Hohman & Barnard, Inc., Hauppauge, New York.

B. Metal accessories for use in exterior wall construction to meet local wind load requirements and shall be hot dipped galvanized after fabrication in accordance with ASTM A-153, Class B-2, and local codes.

C. Metal accessories for use in interior wall construction shall be mill galvanized in accordance with ASTM A-641, Class 1, and local codes.

2.2 MASONRY WALL REINFORCEMENT

A. VENEER ATTACHMENT (STUD WALL): (2'0" o.c. Horizontally, 1'4" o.c. Vertical)

DW10-HS	Anchor Plate
VBT – Vee-Byna Ties	3", 4" and 5"

B. MULTI-WYTHE WALL: (4" veneer and 6", 8", l0" and 12" block)

270	Ladder Eye Wire with 3/16" diameter pintles. Side rods shall be 9 gage side rods (16" o.c. vertically).

C. SINGLE WYTHE WALL:

6", 8", 10", and 12" walls:

220	Ladder Mesh Reinforcement 9 gage side rods (16" o.c. vertically).

4” walls:

One (1) 9 gage longitudinal rod (16” o.c. vertically)

D. VENEER ATTACHMENT (CONCRETE WALL): (2’0” o.c. horizontally, 1’4” o.c. vertically)

305	24 gage Dovetail Anchor Slot
315	3 ½”, 4 ½” and 5” Triangle Tie

E. VENEER ATTACHMENT (STEEL BEAM OR COLUMN): (2’0” o.c. horizontally, 1’4” o.c. vertically)

359	Weld-on Ties
VBT – Vee-Byna Ties	3”, 4” and 5”

2.3 MASONRY WALL FLASHING

A. Provide .020 inch flexible membrane flashing, type HD concealed flashing and membrane waterproofing, as manufactured by Nervastral, Inc., of Greenwich, CT.

2.4 MASONRY CONTROL JOINT MATERIAL

A. #673 Masonry Control Joint by Greenstreak Plastics, Inc., of St. Louis, MO.

PART THREE - EXECUTION

3.1 INSTALLATION

A. Joint reinforcement:

1. Place in horizontal joints of unit masonry work as described in Part 2 of Section 04 05 23.
2. Lap joints of 6 inches.
3. Use prefabricated shapes at corners and tees.

B. Ties and anchors:

1. Install mesh ties in horizontal joints of concrete masonry wall 16" O.C. or as shown on the Drawings.
2. Secure anchor brackets vertically to exterior walls or steel beams and columns.
3. Install flexible ties as brick masonry work progresses.

C. Flashing:

1. Lap joints 4 inches and seal with mastic.
2. Install continuously in exterior wall masonry perimeter and at all lintels and openings indicated on the Drawings.

D. Control joints:

1. Secure to masonry wall with masonry nails through flange at existing wall and grout flanges at new walls.

E. Cavity Wall Drainage System:

1. Lay the first 1 or 2 courses of brick at flashing level, then install cavity wall drainage system continuously by placing it against the inside of the openings. No fasteners or adhesives are required, and mortar need not have set.

END OF SECTION

Section 04 22 00

CONCRETE UNIT MASONRY

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work included: Provide all concrete unit masonry, complete, in place, as shown on the Drawings, specified herein, or needed for a complete and proper installation.

B. Related work described elsewhere:

1.	Concrete for Footings and Foundations	Division Three
2.	Unit Masonry Cleaning	Section 04 01 20
3.	Masonry Mortaring	Section 04 05 13
4.	Masonry Accessories	Section 04 05 23
5.	Painting	Section 09 91 00

C. Refer to Structural Plans for Seismic Category.

D. Reference standards:

1. Standard Specification TMS 402/602-16.

1.2 QUALITY ASSURANCE

A. Qualifications of workmen:

1. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
2. Provide one skilled journeyman mason who shall be present at all times during execution of this portion of the Work and who shall personally direct all work performed under this Section.

1.3 MOCK-UP

A. Prior to proceeding with the masonry work, erect a 4'0" x 4'0" sample wall panel. Panel shall include 8" block, masonry wall reinforcing and caulked control joint if block is for exterior use. Remove rejected panel and erect new panel until workmanship is approved.

1. Erect on jobsite away from the building foundation.
2. Clean panel thoroughly and provide temporary cover as required to keep panel dry at all times.
3. The approved panel shall be the standard of comparison for all masonry work on the project.
4. The approved panel shall remain in place and not be altered, moved or destroyed until all masonry work is completed, or until removal is authorized by the Architect.

1.4 PRODUCT HANDLING

A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

C. Cold weather: Do not erect concrete masonry units when ambient temperature has dropped below 45 degrees F., unless it is rising, and at no time when it has dropped below 40 degrees F. except with written permission of the Architect.

PART TWO - PRODUCTS

2.1 CONCRETE MASONRY UNITS

A. All concrete masonry units shall meet or exceed the minimum specifications of the ASTM Standard C-90. In addition a letter from the block supplier shall be submitted to the Architect stating that no blocks cured less than 28 days will be shipped to this job.

B. Minimum compressive strength of concrete masonry unit = 2000 psi for M or S type mortar used and 2,650 psi for N type mortar used.

C. All masonry units above grade shall be lightweight unit masonry with a density of 108 pcf or less.

D. Manufacture all units with exterior exposure and/or interior wet areas with integral water repellant admixture equal to Dry-Block Integral Water-Repellant Admixture for block.

E. Mortar: Refer to Section 04 05 13.

F. Provide round corner blocks (1” radius) at window sills, one side of block at door jambs, and all 90 degree outside corners, including exposed corners of block.

2.2 OTHER MATERIALS

A. All other materials not specifically described but required for a complete and proper installation of the work of this Section, shall be as selected by the Contractor subject to the approval of the Architect.

PART THREE - EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 COORDINATION

A. At exterior brick and block walls, the brick and block shall be laid separately.

B. Carefully coordinate with all other trades to ensure proper and adequate interface of the work of other trades with the work of this Section.

3.3 GENERAL

A. Lay only dry masonry units using standard running bond, setting units plumb, true to line, and with level courses accurately spaced.

B. Use masonry saws to cut and fit masonry units. Make cut outs as small and true as possible so that cover plates will totally cover masonry opening.

C. Locate electrical boxes so that bottom of box is in line with a masonry joint unless shown otherwise on the Drawings.

D. Solidly mortar spaces around built-in items in faces of exterior walls so that masonry fill insulation will not escape from the cavities.

E. Where noted on the Drawings, fill voids in blocks and reinforced bond beams with 3,000 psi concrete masonry fill.

F. Ensure cavities in masonry units of exterior walls are completely free of mortar bulges and droppings to allow free flow of masonry fill insulation as masonry is erected.

G. Fill solidly with mortar all spaces in jambs of hollow metal frames abutting mortar.

H. Fill hollow masonry units receiving anchor bolts for plates completely with 3,000 psi concrete masonry fill.

3.4 FACE JOINTS.

A. Horizontal and Vertical:

1. Nominal thickness: 3/8 inches.
2. Construct uniform joints.
3. Shove vertical joints tight.
4. Strike joints flush in surfaces to be plastered, stuccoed, covered with ceramic tile, or other surface applied finish other than paint.
5. Tool joints in exposed or to be painted surfaces when thumbprint hard to a smooth "C" joint with the intersections smooth and neat. Brush & rejoint.
6. Remove mortar protruding into cells of cavities to be reinforced or filled.

3.5 CLEANING

A. Leave work and surrounding surfaces clean and free of mortar spots and droppings.

B. Clean mortar boxes at the end of each day's work.

3.6 MASONRY CONTROL JOINTS

A. Locate exterior masonry control joints at max spacing of 24'0" o.c. unless indicated differently on the Drawings. Locate interior control joints so that the maximum length of straight masonry wall is 24'0".

3.7 PROTECTION OF WALLS

A. Cover top of masonry walls and partitions at end of each day's work with waterproof membrane. Protect all concrete blocks from the weather by covering during storage and after laying in the walls. Before using blocks they shall be dried down to a moisture content of approximately the average air dry condition to which the finished walls will be exposed.

END OF SECTION

Section 05 50 00

METAL FABRICATIONS

PART ONE - GENERAL

1.1 SCOPE

1.1.1 Work included: Provide miscellaneous metal work, complete, including:

a. Steel supports for work of other trades.
b. Miscellaneous metal steel attachments, anchors, plates, angles, etc.
c. Anchors, angles, bolts, expansion shields for items in this section only, and other accessories shown in details and/or required for the complete installation of all work.

1.2 RELATED WORK SPECIFIED IN OTHER SECTIONS

Concrete Section 03 31 00

1.3 SUBMITTALS

1.3.1 Comply with provisions of Section 01 33 23.

1.3.2 Product Data: Submit for products used in miscellaneous metal fabrications, including paint products and grout.

1.3.3 Shop drawings: Submit shop drawings for the fabrication and erection of all assemblies of miscellaneous metal work. Include plans, elevations, sections, and details of fabrications and their connections. Show anchorage and accessory items. Provide templates for anchors and bolts specified for installation under other sections.

1.4 PROJECT CONDITIONS

1.4.1 Field Measurements:

a. Check actual locations of walls and other construction to which metal fabrications must fit, by accurate field measurements before fabrication; show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.
b. Where field measurements cannot be made without delaying work, guarantee dimensions and proceed with fabrication of products without field measurements. Coordinate construction to ensure that actual opening dimensions correspond to guaranteed dimensions. Allow for trimming and fitting.

PART TWO - PRODUCTS

2.1 MATERIALS

2.1.1 Metal surfaces, general: For metal fabrications exposed to view upon completion of work, provide materials selected for their surface flatness, smoothness, and freedom from surface blemishes. Do not use materials whose exposed surfaces exhibit pitting, seam marks, roller marks, rolled trade names, and roughness.

a. Miscellaneous Steel Bars, Rods and Shapes: ASTM A36, A283, A108, A663, A501, and A575, as applicable.
b. Pipe: ASTM A53 black finish steel pipe, standard weight (Schedule 40).
c. Bolts and Nuts: ASTM A307, Grade A. High strength bolts: ASTM A 325. Hot-dip galvanize all items in accordance with ASTM A 153.
d. Expansion Bolts Wedge Anchors: Ramset "Trubolt" or Hilti "Kwik Bolt".
e. Adhesive Anchors: Hilti "HVA".
f. Expansion Shields: F.S. FF-S-325.
g. Anchor Bolts: Furnish and deliver to site, anchor bolts and other items to be embedded in concrete. Provide necessary shop details and diagrams for concrete forms and, if required, provide templates to insure proper and accurate locations and setting of anchor bolts.
h. Toggle Bolts: Tumble-wing type F.S. FF-B-588 type, class and style as required.
i. Lock Washers: F.S. FF-W-84, helical spring type carbon steel.
j. Welding Rods and Electrodes: Select in accordance with AWS specifications for metal alloy to be welded.
k. Metal Stair Pans: For integral riser and treads up to 5’0” in length use 14 gage steel; for lengths up to 8’0” use 12 gage steel.
l. Miscellaneous Items: Furnish bent or otherwise custom fabricated bolts, plates, z-clips, anchors, hangers, dowels and other miscellaneous steel shapes as required for framing and supporting work and for anchoring or securing work to concrete or other structures. Straight bolts and other stock rough hardware items are specified in Section 06 10 00.
m. Shop Paint: Lead free, alkyd primer; Tnemec 10-99, Southern coatings Enviro-Guard 1-2900, or approved equal, meeting performance requirements of F.S. TT-P-86, and passing ASTM B117 after 500 hours. Primer selected must be compatible with finish coats of paint. Coordinate selection of metal primer with finish paint requirements specified in Section 09 91 00.
n. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12 except containing no asbestos fibers.
o. Non-shrink Nonmetallic Grout: Master Builders "Masterflow 713", Euclid "Euco N.S. Grout", L&M "Crystex", or U.S. Grout "Five Star Grout", or Sonneborn "Sonogrout", or W.R. Meadows "Sealtight 588 Grout".

2.2 FABRICATIONS, GENERAL

2.2.1 Workmanship: Use materials of size and thickness shown or, if not shown, of required size and thickness to produce strength and durability in finished product. Work to dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use type of materials shown or specified for various components of work.

2.2.2 Form exposed work true to line and level with accurate angles and surfaces and straight, sharp edges. Ease exposed edges to a radius of approximately 1/32" unless otherwise shown. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

2.2.3 Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush to match and blend with adjoining surfaces.

2.2.4 Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type shown, or if not shown, Phillips flat-head (countersunk) screws or bolts. Provide for anchorage of type shown, coordinated with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use. Cut reinforce, drill and tap miscellaneous metalwork as indicated to receive finish hardware and similar items.

2.2.5 Shop painting:

a. Shop paint miscellaneous metal work, except concealed metal work, members or portion of members to be embedded in concrete or masonry, surfaces and edges to be field welded, and galvanized surfaces, unless otherwise specified.
b. Remove scale, rust and other deleterious materials before applying shop coat. Clean off heavy rust and loose mill scale in accordance with SSPC SP-2 or SSPC SP-3.
c. Remove oil, grease and similar contaminants in accordance with SSPC SP-1.
d. Immediately after surface preparation, brush or spray on primer in accordance with manufacturer's instructions, and at rate to provide uniform dry film thickness of 2.0 mils for each coat. Use painting methods which will result in full coverage of joints, corners, edges, and exposed surfaces.

2.3 MISCELLANEOUS METAL FABRICATIONS

2.3.1 Steel supports: Provide structural steel lintels, channels, braces, angles, etc. as indicated and assemble as detailed. Secure all connections to provide rigid supports for all items required including supports not specifically specified in other sections.

PART THREE - EXECUTION

3.1 PREPARATION

3.1.1 Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions and directions for installation of anchorages, including concrete inserts, sleeves, anchor bolts, and miscellaneous items having integral anchors that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to site.

3.1.2 Set sleeves in concrete with tops flush with finish surface elevations; protect sleeves from water and concrete entry.

3.2 INSTALLATION

3.2.1 Fastening to in-place construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications or frames to in-place construction; include threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors as required.

3.2.2 Cutting, fitting, placement: Perform cutting, drilling and fitting required for installation. Set metal fabrication accurately in location, alignment and elevation; with edges and surfaces level, plumb, true, and free of rack; measured from established lines and levels.

3.2.3 Field Welding: Comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of welds made, methods used in correcting welding work, and the following:

a. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
b. Obtain fusion without undercut or overlap.
c. Remove welding flux immediately.
d. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and contour of welded surface matches those adjacent.

3.2.4 Setting loose plates:

a. Clean concrete and masonry bearing surfaces of bond-reducing materials and roughen to improve bond to surfaces. Clean bottom of surface of bearing plates.
b. Set loose leveling and bearing plates on wedges, or other adjustable devices. After bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims, but if protruding, cut off flush with edge of bearing plate before packing with grout.

3.3 TOUCH UP SHOP PAINTING

3.3.1 Immediately after erection, clean field welds, bolted connections and abraded areas of shop paint, and paint exposed areas with same materials as used for shop painting.

END OF SECTION

Section 06 06 00

LUMBER

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Provide all wood, nails, bolts, screws, framing anchors, and other rough hardware, and all other items needed for rough and finished carpentry in this Work but not specifically described in other Sections of these Specifications.

1.1.2 Related work described elsewhere:

1. Rough Carpentry Section 06 10 00
2. Finish Carpentry Section 06 20 00

1.2 QUALITY ASSURANCE

1.2.1 Standards: Comply with all pertinent codes and regulations, and with the standards listed in this Section or as described by the National Grading Rule as published by the Southern Pine Inspection Bureau.

1.2.2 Conflicting requirements: In the event of conflict between pertinent codes and regulations and the requirements of the referenced standard or these specifications, the provisions of the more stringent shall govern.

1.3 SUBMITTALS

Make all proposals for substitution in strict accordance with the provisions of Section 01 33 23 of these Specifications.

1.4 PRODUCT HANDLING

1.4.1 Protection:

1. Use all means necessary to protect lumber materials before, during, and after delivery to the job site, and to protect the installed work and materials of all other trades.
2. Deliver the materials to the job site and store, all in a safe area, out of the way of traffic, and shored up off the ground surface.
3. Identify all framing lumber as to grades, and store all grades separately from other grades.
4. Protect all metal products with adequate waterproof outer wrappings.
5. Use extreme care in the off-loading of lumber to prevent damage splitting, and breaking of materials.

1.4.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 GRADE STAMPS

2.1.1 Framing lumber: Identify all framing lumber by the grade stamp of Southern Yellow Pine or West Coast Lumber.

2.1.2 Plywood: Identify all plywood as to species, grade, and glue type by the stamp of the American Plywood Association.

2.1.3 Other: Identify all other materials of this Section by the appropriate stamp of the agency listed in the reference standards, or by such other means as are approved by the Architect.

2.2 MATERIALS

All materials, unless otherwise specifically approved in advance by the Architect, shall meet or exceed the following:

Item:	Description:
Plates (in contact with concrete or masonry)	Pressure-treated Southern Pine
Studs and headers	Southern Pine #2 KD or Spruce #1
All other framing members	Southern Pine #2 KD
Plywood – concealed decking	C-D with exterior glue, group 4 30/12
Plywood – interior finish	A-B with one side sanded
Pressure-treated wood	Wolman CCA preservative by the Koppers Co. Pressure impregnated in accordance with AWPA Standard C-2 (or approved equal)
Steel hardware	ASTM 47 and A36 (use galvanized at exterior locations)
Machine bolts	ASTM A307
Lag bolts	Federal Spec. FF-B-561
Nails	Common (except as noted), Federal Spec. FF-N-1-1 (use galvanized at exterior locations)
Joist hangers, hurricane ties, and framing anchors	Simpson, or equal Finish: ZMax (G185) or post hot-dip galvanized (HDG)

All other materials, not specifically described but required for a complete and proper installation as indicated on the Drawings, shall be new, suitable for intended use, and subject to the approval of the Architect.

PART THREE - EXECUTION

3.1 DELIVERIES

3.1.1 Stockpiling: Stockpile all materials sufficiently in advance of need to ensure their availability in a timely manner for this work.

3.1.2 Delivery schedule: Make as many trips to the job site as are necessary to deliver all materials of this Section in a timely manner to ensure orderly progress of the total work.

3.1.3 Wood roof cants shall be cut 4 x 4 treated wood in maximum 8' lengths.

3.2 COMPLIANCE

Do not permit materials not complying with the provisions of this Section of these specifications to be brought onto or to be stored at the job site. Immediately remove from the job site all non-complying materials and replace them with materials meeting the requirements of this Section.

END OF SECTION

Section 06 10 00

ROUGH CARPENTRY

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Install all wood framing indicated on the Drawings or required for a complete and operable facility.

1.1.2 Related work described elsewhere:

1.	Concrete Formwork	Section 03 11 00
2.	Lumber	Section 06 06 00

1.2 QUALITY ASSURANCE

1.2.1 Qualifications of workers: Provide sufficient workmen and supervisors who shall be present at all times during execution of this portion of the Work, and who shall be thoroughly familiar with the type of construction involved and the materials and techniques specified.

1.2.2 Rejection: In the acceptance or rejection of rough carpentry, the Architect will make no allowance for lack of skill on the part of workmen.

1.3 PRODUCT HANDLING

1.3.1 Protection:

1.3.1.1 Store all materials in such a manner as to ensure proper ventilation and drainage, and to protect against damage and the weather.

1.3.1.2 Keep all materials clearly identified with all grade marks legible. Keep all damaged material clearly identified as damaged, and store separately to prevent its inadvertent use.

1.3.1.3 Do not allow installation of damaged or otherwise non-complying materials.

1.3.1.4 Use all means necessary to protect the installed work and materials of all other trades.

1.3.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

Refer to Section 06 06 00 – LUMBER

PART THREE - EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 WORKMANSHIP

3.2.1 General: All rough carpentry shall produce joints true, tight, and well nailed, with all members assembled in accordance with the Drawings and with all pertinent codes and regulations.

3.2.2 Selection of lumber pieces:

3.2.2.1 Carefully select all members. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing or making connections.

3.2.2.2 Cut out and discard all defects which will render a piece unable to serve its intended function. Lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.

3.2.3 Shimming: Do not shim sills, joists, short studs, trimmers, headers, lintels, or other framing components.

3.3 TREATED LUMBER

3.3.1 General: Use only treated lumber for all wood bucks and nailing grounds (other than Foundation grade Redwood) in, or in contact with, concrete.

3.3.2 Treatment:

3.3.2.1 Treat all wood, as called for on Drawings and in the specifications by spraying with the preservative specified in Section 06 06 00.

3.3.2.2 Perform all treatment in strict accordance with the published recommendations of the manufacturer of the treatment preservative.

3.4 GENERAL FRAMING

3.4.1 General:

3.4.1.1 In addition to all framing operations normal to fabrication and erection indicated on the Drawings, install all backing required for work of other trades.

3.4.1.2 Set all horizontal or sloped members with crown up.

3.4.1.3 Do not notch, bore, or cut members for pipes, ducts, conduits, or other reasons except as shown on the Drawings or as specifically approved in advance by the Architect.

3.4.2 Bearings:

3.4.2.1 Make all bearings full unless otherwise indicated on the Drawings.

3.4.2.2 Finish all bearing surfaces on which structural members are to rest so as to give sure and even support. Where framing members slope, cut or notch the ends as required to give uniform bearing surface.

3.5 BLOCKING AND BRIDGING

3.5.1 Blocking:

3.5.1.1 Install all blocking required to support all items of finish, to include, but not limited to, all door stops, towel or grab bars, wall hung shelving, etc., and to cut off all concealed draft openings, both vertical and horizontal, between ceiling and floor areas.

3.5.1.2 Where treated blocking is in contact with metal structure, angles, roof deck, etc., blocking shall be wrapped in 15 lb. building felt.

3.5.2 Bridging:

3.5.2.1 Install wood cross bridging of not less than two inches by three inches nominal, metal cross bridging of equal strength, or solid blocking between joists as required by wood truss manufacturer.

3.6 INSTALLATION OF PLYWOOD DECKING

3.6.1 Placement:

3.6.1.1 Place all plywood with face grain perpendicular to supports and continuously over at least two supports, except where otherwise specifically indicated on the Drawings.

3.6.1.2 Center joints accurately over supports. Unless otherwise specifically shown on the Drawings, stagger the end joints of plywood panels to achieve a minimum of continuity of joints.

3.6 .2 Protection of plywood: Protect all plywood from moisture by use of all required waterproof coverings until the plywood has in turn been covered with the next succeeding component or finish.

3.9 FASTENING

3.9.1 Nailing: Do all nailing without splitting wood. Pre-bore as required. Replace all split members.

3.9.2 Bolting: Drill holes 1/16 inch larger in diameter than the bolts being used. Drill straight and true from one side only. Bolt threads shall not bear on wood. Use washers under head and nut where both bear on wood; use washers under all nuts.

3.9.3 Screws: For lag screws and wood screws, pre-bore same diameter as root of thread; enlarge holes to shank diameter for length of shank. Screw, do not drive, all lag screws and wood screws.

3.10 CLEANING UP

3.10.1 General: Keep the premises in a neat, safe, and orderly condition at all times during execution of this portion of the Work, free from accumulations of sawdust, cut ends, and debris.

3.11.2 Sweeping:

3.11.2.1 At the end of each working day, and more often if necessary, thoroughly sweep all surfaces where refuse from this portion of the Work has settled.

3.11.2.2 Remove the refuse to the area of the job site set aside for its storage.

3.11.2.3 Upon completion of this portion of the Work, thoroughly broom clean all surfaces.

END OF SECTION

Section 06 20 00

FINISH CARPENTRY

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Provide all finish carpentry needed for a complete and proper installation including, but not necessarily limited to:

1. Installing all finish hardware.

1.2 QUALITY ASSURANCE

1.2.1 Qualifications of personnel:

1.2.1.1 Throughout progress of the work of this Section, provide at least one person who shall be thoroughly familiar with the specified requirements, completely trained and experienced in the necessary skills, and who shall be present at the site and shall direct all work performed under this Section.

1.2.1.2 In actual installation of the Work of this Section, use adequate number of skilled workmen to ensure installation in strict accordance with the approved design and the approved recommendations of the material's manufacturers.

1.2.1.3 Qualifications of finish hardware adjuster: Provide the services of an AHC member of Door and Window Institute, or an equally qualified individual approved in advance by the Architect.

1.3 PRODUCT HANDLING

1.3.1 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation, and to protect the work and materials of all other trades.

1.3.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 FASTENERS

2.1.1 Fasteners shall be the appropriate size finish or casing nails and/or screws.

2.1.2 Bright finish nails may be used for interior work and smooth finish galvanized casing nails used for exterior work. Heads of all nails shall be counter-sunk and holes filled.

2.1.3 Screws shall be the appropriate size and finish with flat counter-sinking heads installed flush with finish surface unless designated to be counter-sunk and holes filled.

2.2 LUMBER

2.2.1 Trim and finish lumber: Wood fascias, door frames, shelving and all other trim and finish lumber shall be B or better Southern Yellow Pine or West Coast Fir in corresponding grade.

2.2.2 Moisture content: Moisture content for rough framing lumber shall not exceed 19%. Moisture content for trim and finish lumber shall not exceed 14%.

2.2.3 Protection of lumber: All lumber in contact with concrete or masonry or where called for on the drawings shall be given a pressure treatment against deterioration by "wolmanizing" or a similar and approved equal treatment.

2.2.4 Hardwood plywood: All plywood used to be installed as shown on the drawings. Provide grades 2-2 interior birch plywood where surfaces are exposed. 2-3 grade birch plywood may be used at all grades where one side is not exposed. Exposed plywood to be suitable for a smooth paint or stained surface.

2.2.5 Softwood plywood: PS20; custom grade in accordance with AWI; maximum moisture content of 8% for interior work and 12 percent for exterior work. Woodwork called to be painted shall be "C" or better white pine, Ponderosa pine or as otherwise noted.

2.3 PROTECTION

2.3.1 All work and materials shall be protected from weather, grease, stain, abuse, etc., after erection by temporary shielding or covering.

2.3.2 See Painting, Section 09 91 00, for priming requirements before erection and immediately thereafter.

PART THREE - EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF FINISH HARDWARE

3.2.1 Location: Using only the specified finish hardware, and the proper equipment for the purpose, install all other finish hardware in the following locations throught the Work:

1. Door pulls or plates:	Centered 40 5/16” above the finish floor.
2. Door closing devices:	Install and adjust in strict accordance with the templates and printed instructions supplied by the manufacturer of the devices. Insofar as practicable, doors opening to or from halls or corridors shall have the closer mounted on the room side of the door.
3. Extension lever flush bolts:	In the edge of the door. Center to bolt fronts 12” from bottom and 12” from top edge of the door.
4. Kick plates:	On single-acting doors with kick plate on push side. On double-acting doors with kick plate on both sides.
5. Mortise dead-lock strike:	Center 60” above the finish floor.
6. Knob lock and knob latch strikes:	Center 40 5/16” above the finish floor.

7. Panic bolt cross bars:	Align in horizontal position with top and bottom bolts and rods aligned vertically. Install the centerline of strike 40 5/16” above finish floor.
8. Push plates:	Centered 48” above the finish floor.
9. Other hardware items:	Install as directed not described above.

3.2.2 Anchoring: Anchor all components firmly into position for long life under hard use. Use only the anchoring devices furnished with the hardware item, unless otherwise specifically directed.

3.3 WORKMANSHIP

3.3.1 All items of finish carpentry shall be installed with the latest practices and methods to accomplish a first class installation.

3.3.2 Any finish work showing hammer marks, open cut joints, joints that are not mitered, etc., or defects in material will be rejected and replaced at no additional cost to Owner.

3.3.3 All work shall be done by workmen who are skilled in the trade. Nails shall be set and holes filled.

3.4 INSPECTION, ADJUSTMENT, AND REPORTING

3.4.1 General: Inspect each item of installed finish hardware. Verify that each such item has been installed in strict accordance with the manufacturer's recommendations, is in proper condition, and functions in its intended manner.

END OF SECTION

Section 07 19 00

WATER REPELLANTS

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Provide all materials, complete, in place, as shown on the drawings, specified herein or needed for a complete and proper installation.

1.1.2 Related work described elsewhere:

1.	Masonry Mortaring	Section 04 05 13
2.	Concrete Unit Masonry	Section 04 22 00
3.	Unit Masonry Cleaning	Section 04 01 20

PART TWO - PRODUCTS

2.1 WATER REPELLANTS

Water seal: Prime-A-Pell 200 one coat water repellent by Chemprobe Corp., Garland, Texas, or Siloxane by Prosoco, Kansas City, Kansas or approved equal.

PART THREE - EXECUTION

3.1 CLEANING

In strict accordance with Section 04 01 20 – Unit Masonry Cleaning.

3.2 APPLICATION

3.2.1 Spray on to manufacturer's recommended coverage. Apply evenly until surface is wet without run down.

3.2.2 Application to be made in a dry atmosphere with ambient temperature of product and surface being treated above 40 degrees F.

3.3 FINISHING

All adjacent materials, windows, doors, etc., shall be wiped clean before drying.

3.4 GUARANTEE

Provide a five year manufacturer’s written guarantee.

END OF SECTION

Section 07 26 16

UNDER SLAB VAPOR
BARRIER/RETARDER

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work included: Provide vapor barrier, seam tape, mastic, pipe boots, and detail strip required for this work including, but not necessarily limited to:

1.2 RELATED WORK DESCRIBED ELSEWHERE

A. Concrete Section 03 31 00

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. ASTM E 1745-09 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete slabs.
2. ASTM E 154-99 (2005) Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.
3. ASTM E 96-05 Standard Test Methods for Water Vapor Transmission of Materials.
4. ASTM F 1249-06 Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.
5. ASTM E 1643-09 Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.

B. American Concrete Institute (ACI)

1. ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.

1.4 SUBMITTALS

1.4.1 General: Comply with provisions of Section 01 33 23.

1.4.2 Manufacturer's data: Within 30 calendar days after award of the Contract, submit:

A. Complete materials list of all items proposed to be furnished and installed under this Section.

B. Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements.

C. Manufacturer's recommended installation procedures.

D. Independent laboratory test results showing compliance with ASTM and ACI Standards. The manufacturer's recommended installation procedures, when approved by the Architect, will become the basis for inspecting and accepting or rejecting actual installation procedures used on the Work.

PART TWO - PRODUCTS

2.1 MATERIALS

A. Vapor barrier products:

1. Stego Wrap Vapor Barrier (15-mil) by Stego Industries LLC., (877) 464-7834
2. Acceptable material/manufacturers:
   a. Yellow Guard, Poly America, Grand Prairie, TX
   b. Viper Vaporcheck II, Peioria, ILL
3. Architect approved equal.

B. Vapor barrier shall have all the following qualities:

1. Maintain permeance of less than 0.01 Perms [grains/(ft^2 · hr · inHg)] as tested in accordance with mandatory conditioning tests per ASTM E1745 Section 7.1 (7.1.1-7.1.5).
2. Other performance criteria:
   a. Strength: ASTM E1745 Class A.
   b. Thickness: 15 mils minimum
3. Provide third party documentation that all testing was performed on a single production roll per ASTM E1745 Section 8.1
4. Warranty: (a) compliance with the designated ASTM E1745 classification, and (b) no manufacturing defects in the product for, at least, the Life of the Building.

2.2 ACCESSORIES

A. Vapor barrier accessories:

1. All accessories by Stego Industries LLC., (877) 464-7834 or Architect approved equal.
   a. Seams: Stego tape
   b. Sealing penetrations of vapor barrier:
      1) Stego mastic and tape
   c. Perimeter/terminated edge seal:
      1) Stego Crete Claw (textured tape)
      2) Stego Term Bar
      3) StegoTack Tape (double-sided sealant tape)
      4) One-sided seaming tape is not a recommended method of sealing at the terminated edge.
   d. Penetration Prevention: Beast Foot
   e. Vapor Barrier-Safe Hand Screed System: Beast Screed

PART THREE - EXECUTION

3.1 PREPARATION

A. Ensure that subsoil is approved by Architect or Geotechnical Engineer.

1. Level and compact base material.

B. Contact vapor barrier manufacturer to schedule a pre-construction meeting and to coordinate a review, in-person or digital, of the vapor barrier installation.

3.2 INSTALLATION

A. Install vapor barrier in accordance ASTM E1643.

1. Unroll vapor barrier with the longest dimension parallel with the direction of the concrete placement and face laps away from the expected direction of the placement whenever possible.
2. Extend vapor barrier to the perimeter of the slab. If practicable, terminate it at the top of the slab, otherwise (a) at a point acceptable to the structural engineer or (b) where obstructed by impediments, such as dowels, water stops, or any other site condition requiring early termination of the vapor barrier. At the point of termination, seal vapor barrier to the foundation wall, grade beam or slab itself.
   a. Seal vapor barrier to the entire slab perimeter using manufacturer's textured tape with a surface that creates a mechanical seal to freshly-placed concrete, per manufacturer's instructions.

   OR

   b. Seal vapor barrier to the entire perimeter wall or footing/grade beam with manufacturer's double-sided tape, or both termination bar and double-sided tape, per manufacturer's instructions. Ensure the concrete is clean and dry prior to adhering tape.
3. Overlap joints 6 inches and seal with manufacturer's seam tape.
4. Apply seam tape/textured tape/double-sided tape to a clean and dry vapor barrier.
5. Seal all penetrations (including pipes) per manufacturer's instructions.
6. Avoid the use of stakes driven through vapor barrier by utilizing screed and forming systems that will not leave punctures in the vapor barrier.
7. Repair damaged areas with vapor barrier material of similar (or better) permeance, puncture and tensile.

END OF SECTION

Section 07 42 93

METAL SOFFIT

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Provide metal soffit system including all accessories, complete, in place, as shown on the Drawings, specified herein, and needed for a complete and proper installation.

1.2 QUALITY ASSURANCE

1.2.1 Qualifications of Manufacturers: Products used in the work of this Section shall be produced by Manufacturers regularly engaged in manufacture of similar products and with a history of successful production acceptable to the Architect.

1.2.2 Qualifications of Installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

1.3 SUBMITTALS

1.3.1 General: Comply with provisions of Section 01 33 23.

1.3.2 Product data: Within 30 calendar days after award of the contract, submit:

A. Manufacturer's specifications and other data required to demonstrate compliance with specified requirements.

B. Manufacturer's recommended installation procedures which, when approved by the Architect, shall become the basis for inspecting and accepting or rejecting actual installation procedures used on the Work.

C. Complete materials list of all items proposed to be furnished and installed under this Section.

D. Shop drawings and sufficient dimensional data to enable proper co-ordination of installation of concealed items of support.

1.5 PRODUCT HANDLING

1.5.1 Protection: Use all means necessary to protect materials of this Section before, during and after installation and to protect work and materials of all other trades.

1.5.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 GENERAL

All soffit panels, trim pieces and accessories shall be as manufactured by Fabral, 3449 Hempland Rd., Lancaster, PA 17604-4608, or Architect approved equal.

2.2 SOFFIT PANELS

Provide vented Posi-Lock Panels of 0.032" aluminum with a width of 14" and a V-groove at 4-3/4" on center. Furnish with interlocking design to hide fasteners.

2.3 FINISH

Provide Kynar PVDF resin fluorescarbon coating with epoxy primer, factory applied coating. Furnish the manufacturers non-prorated twenty (20) year warranty against cracking, checking, peeling, or losing adhesion. Color shall be selected from manufacturer's nine standard colors.

2.4 STRUCTURAL FRAMING

Provide .050" aluminum structural framing members as shown on details. Hat section 1-3/4" high, 2" base and 1-1/8" crown and channel section 1-1/4" high x 1" wide; fastened at intersections with two 1/4" x 3/4" tek screws each side per connection.

2.5 ACCESSORIES

A. Hat section furring strip/stringers, roll formed .050" aluminum 3005-H281, 1-3/4" high, 2" base x 1-1/8" crown.

B. Custom brake formed trim accessories with protective strippable coating for field brake forming of .032" aluminum.

C. Black 1" thick EPDM top and bottom closure strips.

D. Aluminum hold down clips.

E. Splice kits (if needed).

F. Shelf drips and corner caps as required.

PART THREE - EXECUTION

3.1 Installation of soffit shall follow printed manufacturer's recommendations as approved by the Architect.

3.2 Erect the entire installation straight and true in accordance with standard construction procedures as approved by the Architect.

3.3 All surfaces shall be cleaned thoroughly prior to acceptance of building.

END OF SECTION

Section 07 60 00

FLASHING AND SHEET METAL

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Furnish and install the metal flashing and other sheet metal work as shown and called for on the drawings, as specified herein and as required to prevent penetration of water through the roof or exterior walls of the building and permit the proper control of discharged water.

1.2 QUALITY ASSURANCE

1.2.1 Standards: All flashings/edge metals shall meet ANSI/SPRI ES-1 as required by the International Building Code shall be applicable standard for method and quality work under this Section.

1.2.2 Qualifications of Manufacturer: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.

1.2.3 Qualification of Installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

1.3 SUBMITTALS

1.3.1 General: Comply with the pertinent provisions of Section 01 33 23.

1.3.2 Product data: Submit the following to the Architect for approval:

1. Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements.

1.4 PRODUCT HANDLING

1.4.1 Protection: Use all means necessary to protect materials of this Section before, during, and after installation and to protect installed work and materials of all other trades.

1.4.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 SHEET METAL

2.1.1 All metal edge and drainage components shall be as manufactured by Exceptional Metals, Saginaw, Michigan, or Architect approved equal.

2.1.2 Metal edge components shall be selected from manufacturer’s standard details for fascia, coping, edge and termination.

2.1.3 Colors shall be selected from manufacturer's standard Kynar finish colors.

2.2 NAILS, RIVETS AND FASTENERS

2.2.1 Nails, rivets and fasteners shall be same material as metal to secured or shall be of durable compatible materials which are regularly recommended for the intended use. Nails shall be No. 10 gauge (.1019" diameter) or larger, needle point and long enough to penetrate wood 1" or masonry and concrete 2".

2.3 MATERIALS

2.3.1 Solder: Shall conform to ASM specification B32, Composition 50% tin and 50% lead.

2.3.2 Flux: Rosin, muriatic acid neutralized with zinc or an approved brand of soldering paste.

2.3.3 Bituminous Plastic Cement: Shall conform to Federal Specification SS-C-153, Type I. It shall be delivered in the manufacturer's original sealed containers.

PART THREE - EXECUTION

3.1 INSPECTION

3.1.1 Surface Conditions: Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence. Do not proceed with sheet metal installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 INSTALLATION

3.2.1 Install the work of this Section in strict accordance with the recommendations of the manufacturer as approved by the Architect.

3.3.1 Securely anchor in place by approved screw fastener.

END OF SECTION

Section 07 61 00

SHEET METAL ROOFING

PART ONE – GENERAL

1.1 GENERAL CONDITIONS

All work under this section is subject to General Conditions and Supplementary General Conditions and shall be governed by the requirements therein.

1.2 SCOPE

1.2.1 The intent of these specifications and drawings is to establish a quality and performance level for design, material, durability and workmanship. All roof penetrations (plumbing, mechanical, electrical, etc.) shall be performed by and therefore the responsibility of, the roofing contractor.

1.2.2 The roofing panels shall be the design and fabrication of a manufacturer who is regularly engaged in the fabrication of sheet metal roofing. All materials shall be new, unused and free from defect. Metal roof panels shall be rated and in compliance with ENERGY STAR.

Approved manufacturers:

MBCI
Alliance Steel Building Systems
ACI
McElroy Metals

1.2.3 The following standards and criteria (of most recent issue) shall be used where applicable by this specification:

"Recommended Design Practices Manual" Metal Building Manufacturers Association
"Steel Construction Manual" American Institute of Steel Construction
"Cold Formed Steel Design Manual" American Iron and Steel Institute
"Arkansas Fire Prevention Code" 2021
2021 IBC and Arkansas Amendments

1.3 GUARANTEES

1.3.1 Weathertightness: Weathertightness of roof against leaks and perforations due to workmanship and/or materials shall be guaranteed for 20 years by metal building manufacturer. The Contractor shall furnish a two (2) year guarantee on material and workmanship.

1.3.2 Color: The exterior color finish for the panels shall be guaranteed by the manufacturer for twenty (20) years against blistering, peeling, cracking, flaking, checking and chipping. Excessive color change shall not exceed 5 N.B.S. units (per ASTM D-2244.64%) and chalking shall not be less than a rating of 8 per ASTM D-659.

PART TWO - MATERIALS

2.1 ROOF SYSTEMS DESCRIPTION

The roof shall be covered with the MR24 as furnished by Butler Manufacturing Company or approved equal and installed in accordance with the manufacturer's instructions.

2.1.1 Roof Panels:

a. Roof panels shall be roll formed MR24 panels as manufactured by Butler Manufacturing Company; 24" wide with major corrugations 2" high on center, 4" on center between and parallel to the major corrugations.
b. Panel material as specified shall be: 24 gauge hot dipped galvanized steel (50,000 psi yield), G-90 coating conforming to ASTM A-525 specification.
c. The panel finish shall be: Painted galvanized with exterior color specified from standard Butler-Cote 500 FP. Color selected from minimum 5 standard colors.

2.1.2 Roof System Design:

a. All components of the MR24 paneling system shall be designed in accordance with sound engineering methods and practices.
b. The MR24 panels shall be designed in accordance with AISI "Specifications for the Design of Light Gauge Cold Form Steel Structural Members," latest edition.
c. Panels shall be designed for either 50 psf uniformly distributed or a 200-pound concentrated (point) load (over a 1' x 1' area) located at center of maximum roofing (panel) span. The most severe conditions govern.
d. Panels and their connection to the structure shall be designed for U.L. wind up-lift class 90 rating.

2.1.3 Roof system Installation:

a. Connections of the MR24 panel to structural members shall be made with concealed clips. The clips shall be moveable type which contains a moveable tap. Thermal blocks may be used with moveable clips.
b. MR24 panel sidelaps shall be field seamed by a seaming device; all sidelap sealant shall be factory applied.
c. MR24 panel endlaps, when required, shall be at least 6" and sealed with field applied sealant. One panel end shall be "swagged" to insure nestible, watertight endlaps.

2.1.4 Miscellaneous Framing:

a. Provide frames for scuttle and mechanical openings as required. Provide support members between roof trusses to carry mechanical equipment shown on mechanical and/or framing plans. Coordinate the members required with mechanical equipment.
b. Provide all miscellaneous angles, outriggers, struts, to complete work shown on plans.

2.2 UNDERLAYMENT

2.2.1 Minimum 30 mils self-adhered roofing underlayment as manufactured by W.R. Grace & Co. or Architect approved equal. Install following manufacturers installation instructions.

PART THREE - EXECUTION

3.1 EXAMINATION

3.1.1 Examine roof deck to verify deck is clean and smooth, free of depressions, waves, or projections, properly sloped to valleys and eaves.

3.1.2 Verify roof openings, curbs, pipes, sleeves, ducts or vents through roof are solidly set, cant strips and reglets in place and nailing strips located.

3.1.3 Examine primary roof structure, that it is aligned and constructed so as not to warp or distort roof panels prior to installation.

3.2 INSTALLATION

3.2.1 Install metal roofing and accessory materials in accordance with Manufacturer's recommendations and printed instructions.

3.2.2 Form hip and ridges with sheets not exceeding 10 feet in length. Lap joints 4" and seal with butyl caulk. Pop rivet to Z-shaped cleat.

3.2.3 Panel sidelaps shall be field seamed by a self-propelled and portable electrical lock seaming machine. The machine field forms the final 180 degrees of a 360 degree Pittsburgh double lock standing seam; all sidelaps sealant shall be factory applied.

3.2.4 Immediately after installation remove protective plastic film.

3.2.6 Pipe penetrations:

1. Install flexible EPDM boot directly to roofing in accordance with manufacturer's printed instructions.
2. Seal with silicone sealant.
3. Avoid ribs.
4. Conceal boot with decorative metal hood secured to pipe; do not attach to boot.

END OF SECTION

Section 07 84 00

FIRESTOPPING

PART ONE – GENERAL

1.1 SECTION INCLUDES

A. Firestopping of through penetrations in rated assemblies.

B. Firestopping of construction gaps.

1.2 RELATED SECTIONS

A. Coordinate work of this section with work of other sections as required to properly execute the work and as necessary to maintain satisfactory progress of the work of other sections, including but not limited to:

1.	Cast-In-Place Concrete	Section 03 31 00
2.	Masonry	Division Four
3.	Joint Sealants	Section 07 92 00
4.	Mechanical	Division Twenty Three
5.	Electrical	Division Twenty Six

1.3 REFERENCES

A. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2000a.

B. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2000a.

C. ASTM E 814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops; 2000.

D. ASTM E 1399 - Standard Test Method for Cyclic Movement and Measuring the Minimum and Maximum Joint Widths of Architectural Joint Systems; 1997 (Reapproved 2000).

E. ASTM E 1529 - Standard Test Methods for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies; 2000.

F. ASTM E 1725 - Standard Test Methods for Fire Tests of Fire-Resistive Barrier Systems for Electrical System Components; 1995 (Reapproved 2001).

G. UL 1479 - Standard for Fire Tests of Through-Penetration Firestops; 1994.

H. UL 1709 - Rapid Rise Fire Tests of Protection Materials for Structural Steel; 1994.

I. ANSI/UL 2079 - Tests for Fire Resistance of Building Joint Systems; 1998.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 23.

B. Shop Drawings: For each different firestopping configuration, provide the following:

1. Listing agency's detailed drawing showing opening, penetrating items, and firestopping materials, identified with listing agency's name and number or designation, fire rating achieved, and date of listing.
2. Identify which rated assembly each system is to be used in.
3. Any installation instructions that are not included on the detailed drawing.
4. For proposed systems that do not conform strictly to the listing, submit listing agency's drawing marked to show modifications and stamped approved by firestop system manufacturer's fire protection engineer.

C. Product Certificates: Submit certificates signed by firestop system manufacturer certifying that materials furnished comply with requirements.

D. Product Data: Manufacturer's data sheets on each material to be used in firestop system systems, including:

1. Listing numbers of systems in which each product is to be used.
2. Preparation instructions and recommendations.
3. Storage and handling requirements and recommendations.
4. Installation methods.

E. Installer's Qualification Documentation.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Firm who is qualified by having experience, staff, and training to install the specified products, and who:

1. Is acceptable to or licensed by manufacturer.
2. Can provide a list of completed projects as evidence of experience; include project name and address, Owner's name and address, and Architect's name and phone number.

B. Pre-Installation Meeting: Conduct a meeting at the project site to discuss installation conditions and requirements; require the attendance of all relevant installers.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products until ready for installation in manufacturer’s original unopened packaging, legibly marked with manufacturer’s name and product identification, date of manufacture, lot number, shelf life, listing agency’s classification marking, curing time, and mixing instructions if applicable.

B. Store and handle in such a manner as to prevent deterioration or damage due to moisture, temperature changes, contaminants, and other causes; follow manufacturer’s instructions.

1.7 PROJECT CONDITIONS

A. Coordinate construction and cutting of openings so that each particular firestop system may be installed in accordance with its listing, including sizing, sleeves, and penetrating items.

B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install firestopping under environmental conditions outside manufacturer's absolute limits.

C. Provide ventilation as required by firestopping manufacturer, including mechanical ventilation if required.

PART TWO – PRODUCTS

2.1 MANUFACTURERS

A. Acceptable manufacturers shall be 3M Fire Protection Products, Inc., SpecSeal Firestop Products, Hilti, Inc. or Architect approved equal.

B. Single Source: All instances of a specific firestop system shall be made using products of the same manufacturer; where multiple installers (e.g. different subcontractors) are responsible for installation of firestopping, all installers shall use the same system made by the same manufacturer.

2.2 MATERIALS

A. Scope:

1. Rated Assemblies: Provide installed firestopping that limits the spread of fire, heat, smoke, and gasses through otherwise unprotected openings in rated assemblies, including walls, partitions, floors, roof/ceilings, etc.
2. Construction Gaps: Provide installed firestopping that limits the spread of fire, heat, smoke, and gasses through otherwise unprotected gaps between adjacent rated assemblies, including:
    a. Building expansion joints in walls and floors.
    b. Interior walls to floor/roof deck above.
    c. Intersection of floors and exterior walls.

PART THREE – EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Conduct tests according to manufacturer's written recommendations to verify that substrates are free of oil, grease, rolling compounds, incompatible primers, loose mill scale, dirt and other foreign substances capable of impairing bond of firestopping.

C. Verify that items penetrating fire rated assemblies are securely attached, including sleeves, supports, hangers, and clips.

D. Verify that openings and adjacent areas are not obstructed by construction that would interfere with installation of firestopping, including ducts, piping, equipment, and other suspended construction.

E. Verify that environmental conditions are safe and suitable for installation of firestopping.

F. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Prepare substrates in accordance with manufacturer's instructions and recommendations.

B. Install masking and temporary coverings as required to prevent contamination or defacement of adjacent surfaces due to firestopping installation.

3.3 INSTALLATION

A. Install in strict accordance with manufacturer's detailed installation instructions and procedures.

B. Install so that openings are completely filled and material is securely adhered.

C. Where firestopping surface will be exposed to view, finish to a smooth, uniform surface flush with adjacent surfaces.

D. After installation is complete, remove combustible forming materials and accessories that are not part of the listed system.

E. Repair or replace defective installations to comply with requirements.

F. At each through penetration, attach identification labels on both sides in location where label will be visible to anyone seeking to remove penetrating items or firestopping.

G. Clean firestop materials off surfaces adjacent to openings as work progresses, using methods and cleaning materials approved in writing by firestop system manufacturer and which will not damage the surfaces being cleaned.

H. Notify authority having jurisdiction when firestopping installation is ready for inspection; obtain advance approval of anticipated inspection dates and phasing, if any, required to allow subsequent construction to proceed.

I. Do not cover firestopping with other construction until approval of authority having jurisdiction has been received.

3.4 PROTECTION

A. Protect installed systems and products until completion of project; where subject to traffic, provide adequate protection board.

B. Touch-up, repair or replace damaged systems and products before Substantial Completion.

END OF SECTION

Section 07 92 00

JOINT SEALANTS

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Throughout the Work, caulk and seal all joints where shown on the Drawings and elsewhere as required to provide a positive barrier against passage of air and passage of moisture.

1.1.2 Related work described elsewhere:

A. Adhere strictly to the caulking and sealant details shown on the Drawings.

1.2 QUALITY ASSURANCE

1.2.1 Qualifications of Manufacturers: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to Architect.

1.2.2 Qualifications of installers:

1.2.2.1 Proper caulking and proper installation of sealants require that installers be thoroughly trained and experienced in the necessary skills and thoroughly familiar with the specified requirements.

1.2.2.2 For caulking and installation of sealant throughout the Work, use only personnel who have been specifically trained in such procedures and who are completely familiar with the joint details shown on the Drawings and the installation requirements called for in this Section.

1.3 SUBMITTALS

1.3.1 General: Comply with provisions of Section 01 33 23.

1.3.2 Manufacturers data: Within 30 calendar days after award of the Contract, submit:

A. A complete materials list showing all items proposed to be furnished and installed under this Section.

B. Sufficient data to demonstrate that all such materials meet or exceed the specified requirements.

C. Specifications, installation instructions, and general recommendations from the materials manufacturer showing procedures under which it is proposed that the materials will be installed.

Upon approval by the Architect, the proposed installation procedures will become the basis for inspecting and accepting or rejecting actual installation procedures used on the Work.

1.4 PRODUCT HANDLING

1.4.1 Deliver and storage: Deliver all materials of this Section to the job site in the original unopened containers with all labels intact and legible at time of use. Store only under conditions recommended by the manufacturers. Do not retain on the job site any material which has exceeded the shelf life recommended by its manufacturer.

1.4.2 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

1.4.3 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 EXTERIOR VERTICAL APPLICATIONS

2.1.1 Metal to masonry: MasterSeal NP 1 as manufactured by BASF, Shakope, MN or approved equal. Color shall be as selected by the Architect from manufacturer's standard colors.

Masonry to masonry, precast to masonry and E.I.F.S. to masonry: MasterSeal NP 2 as manufactured by BASF, Shakope, MN or approved equal. Color shall be as selected by the Architect from manufacturer’s standard colors.

2.2 EXTERIOR HORIZONTAL APPLICATIONS

2.2.1 MasterSeal SL 2 as manufactured by BASF, Shakope, MN or approved equal. Color shall be as selected by the Architect from manufacturer’s standard colors.

2.3 INTERIOR VERTICAL APPLICATIONS

2.3.1 MasterSeal NP 1 as manufactured by BASF, Shakope, MN or approved equal. Color shall be as selected by the Architect from manufacturer’s standard colors.

2.4 INTERIOR HORIZONTAL APPLICATIONS

2.4.1 At all interior floor joints MasterSeal SL1 as manufactured by BASF, Shakope, MN or approved equal. Color shall be as selected by the Architect from manufacturer’s standard colors.

2.5 JOINT BACKING

Furnish " Backer-Rod" by BASF Products or approved equal.

2.6 OTHER MATERIALS

All other materials, not specifically described but required for complete and proper caulking and installation of sealants, shall be first quality of their respective kinds, new, and as selected by the Contractor subject to the approval of the Architect.

PART THREE - EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

3.2.1 Steel surfaces:

3.2.1.1 Steel surfaces in contact with sealant shall be sandblasted or, if sandblasting would not be practical or would damage adjacent finish, the metal shall be scraped or wire-brushed to remove mill scale.

3.2.1.2 Use solvent to remove oil and grease, wiping the surfaces with clean rags.

3.2.1.3 Remove protective coatings on steel by sandblasting or by a solvent that leaves no residue.

3.3 INSTALLATION OF BACKUP MATERIAL

Use only the backup material recommended by the manufacturer of the sealant and approved by the Architect for the particular installation, compressing the backup material 25% to 50% to secure a positive and secure fit. When using backup of tube or rod stock, avoid lengthwise stretching of the material. Do not twist or braid hose or rod backup stock.

3.4 PRIMING

Use only the primer recommended by the manufacturer of the sealant and approved by the Architect for the particular installation. Apply the primer in strict accordance with the manufacturer's recommendations as approved by the Architect.

3.5 BOND-BREAKER INSTALLATION

Install an approved bond-breaker where recommended by the manufacturer of the sealant and where directed by the Architect, adhering strictly to the installation recommendations as approved by the Architect.

3.6 INSTALLATION OF SEALANTS

3.6.1 General: Prior to start of installation in each joint, verify the joint type according to the details in the Drawings, and verify that the required proportion of width of joint to depth of joint has been secured.

3.6.2 Equipment: Apply sealant under pressure with hand or power-actuated gun or other appropriate means. Guns shall have nozzle of proper size and shall provide sufficient pressure to completely fill joints as designed.

3.6.3 Masking: Thoroughly and completely mask all joints where the appearance of sealant on adjacent surfaces would be objectionable.

3.6.4 Installation of sealant: Install the sealant in strict accordance with the manufacturer's recommendations as approved by the Architect, thoroughly filling all joints to the recommended depth.

3.6.5 Tooling: Tool all joints to the profile shown on the Details in the Drawings.

3.6.6 Cleaning up:

3.6.6.1 Remove masking tape immediately after joints have been tooled.

3.6.6.2 Clean adjacent surfaces free from sealant as the installation progresses. Use solvent or cleaning agent as recommended by the sealant manufacturer.

END OF SECTION

Section 08 11 00

METAL DOORS AND FRAMES

PART ONE - GENERAL

1.1 DESCRIPTION

1.1 Work included: Provide all standard and non-standard steel doors and steel door and window frames, complete in place, not specifically described in other Sections of these Specifications but indicated on the Drawings or otherwise required for a complete and operable facility.

1.1.2 Related work described elsewhere:

1. Painting Section 09 91 00

1.2 QUALITY ASSURANCE

1.2.1 Qualifications of manufacturer: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.

1.2.2 Qualifications of installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.2.3 Single source: All work of this Section shall be produced by a single manufacturer unless otherwise approved by the Architect.

1.3 SUBMITTALS

1.3.1 General: Comply with provisions of Section 01 33 23.

1.3.2 Manufacturer's data: Within 30 calendar days after award of the Contract, submit:

1. Complete materials list of all items proposed to be furnished and installed under this Section.
2. Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements.
3. Shop Drawings showing details of each frame type, elevations of each door design type, details of all openings, and all details of construction, installation, and anchorage.
4. Manufacturer's recommended installation procedures.

The manufacturer's recommended installation procedures, when approved by the Architect, will become the basis for inspecting and accepting or rejecting actual installation procedures used on the Work.

1.4 PRODUCT HANDLING

1.4.1 Protection: Use all means necessary to protect materials of this Section before, during, and after installation and to protect installed work and materials of all other trades.

1.4.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 STEEL DOORS (NON-LABELED)

Steel doors to be manufactured by Curries Manufacturing, Inc., Mason City, Iowa, or approved equal.

2.1.1 Model: Curries 707 Series Doors. Core materials for doors to be expanded polystyrene for insulated doors, permanently bonded to the inside of each face sheet.

2.1.2 Facesheets: Full flush 18 gauge cold rolled steel, stretcher-levelled quality of flatness.

2.1.3 Vertical edges of doors to have an exposed center seam.

2.1.4 Hinge and lock rail reinforcements: Hinge and lock rail shall be reinforced with a one piece full height 14 gauge channel. Both hinge and lock channels to be welded to each face sheet of the door.

2.1.5 Doors shall have a beveled (1/8" in 2") lock edge and square hinge edge.

2.1.6 Finish to be phosphatized inside and out and factory coat of prime paint.

2.1.7 Top and bottom channels: 16 gauge top and bottom channels welded to door skins at 4" centers.

2.1.8 Closer reinforcement: Box type factory installed, 14 gauge.

2.1.9 Other reinforcement: All hardware shall have factory installed reinforcement as required for hardware specified and as approved by the Architect.

2.1.10 Glazing system: GBST steel in factory primed finish.

2.1.11 Channel fillers: Screw applied steel tap cap in toilet stall and exterior doors only.

2.1.12 Astragal: Overlapping, 14 gauge material.

2.2 STEEL FRAMES

Steel frames to be as manufactured by Curries Manufacturing, Inc., Mason City, Iowa, or approved equal.

2.2.1 Construction: 16 gauge in frame depths as detailed. Frames to be mitered, face welded and ground smooth. Plaster guards to be provided at all hinge and strike locations.

2.2.2 Hinge reinforcement: 7 gauge with a minimum of 4 projection welds per reinforcement.

2.2.3 Strike reinforcement: 14 gauge with tubulated screw holes.

2.2.4 Surface mounted hardware reinforcement: Min. 14 gauge.

2.2.5 Frame to be prepared for 4-1/2" x 4-1/2" standard weight or heavy weight hinges and strike plate as required for hardware specified.

2.2.6 Anchors: Masonry or stud anchors at max. 24 inches o.c., suitable to specified wall conditions and as approved by the Architect.

2.2.7 Silencers: Three per strike jamb and two per head on double swing frames. Punch frames to receive silencers.

2.2.8 Finish: Factory installed one coat of rust inhibitive primer.

2.3 FIRE RATED DOOR ASSEMBLIES

2.3.1 All labeled fire door assemblies to be of a type which have been classified and listed in accordance with the latest edition of NFPA80 and tested in compliance with NFPA-252, UL-10B, and UBC-7-2. A physical label to be affixed to the fire door at an authorized facility. Embossed labels are acceptable on standard three sided door frames.

2.3.2 For openings required to be fire rated exceeding limitations of labeled assemblies, submit manufacturer's certification that each door and frame assembly has been constructed to conform to design, materials, and construction equivalent to requirements for labeled construction.

2.4 FABRICATION

2.4.1 General:

2.4.1.1 Fabricate steel door and frame units to rigid, neat in appearance and free from defects, warp or buckle. Accurately form metal to required sizes and profiles.

2.4.1.2 Wherever practicable, fit and assemble units in the manufacturer's plant. Clearly identify work that cannot be permanently factory-assembled before shipment, to assure proper assembly at the site.

PART THREE - EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

3.2.1 General: Install hollow metal units and accessories in accordance with manufacturer's data, and as specified herein.

3.2.2 Placing frames:

3.2.2.1 Comply with the provisions of Standard 100 of the Steel Door Institute, unless otherwise indicated.

3.2.2.2 Except for frames located at in-place concrete or masonry openings, place frames prior to construction of enclosing walls and ceilings. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.

3.2.2.3 In masonry construction, locate wall anchors at 24" o.c. at hinge and strike levels. Building-in of anchors and grouting of frames will be performed under provisions of Division 4 of these Specifications.

3.2.2.4 At in-place concrete or masonry construction, set frames and secure to adjacent construction with machine screws and masonry anchorage devices. If attached with screws, provide "Z" fillers at each screw location to prevent collapse or distortion of frame when screws are tightened.

3.2.2.5 When installed in prepared openings in concrete or masonry construction, install sealant between frame and concrete or masonry in compliance with the requirements of Section 07 92 00.

3.2.2.6 Place 5/8" glazing stops where required and screw at 12" o.c. maximum.

3.2.3 Door installation:

3.2.3.1 Fit doors accurately in their respective frames, within clearances specified in S.D.I. 100.

3.3 ADJUST AND CLEAN

3.3.1 Final adjustments: Check and readjust operating finish hardware items in hollow metal work just prior to final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including doors or frames which are warped, bowed or otherwise damaged.

3.3.2 Prime coat touch-up: Immediately after erection, sand smooth all rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

END OF SECTION

Section 08 51 13

ALUMINUM WINDOWS

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Provide all aluminum windows complete in place, as indicated on the Drawings, specified herein, or otherwise needed for a complete and proper installation of the work of this Section.

1.1.2 Related work described elsewhere:

1. Concrete Unit Masonry	Section 04 22 00
2. Joint Sealants	Section 07 92 00

1.2 QUALITY ASSURANCE

1.2.1 Reference standards:

1. Architectural Aluminum Manufacturers Association (AAMA).

1.2.2 Qualification of manufacturer: Use products in the work of this Section produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.

1.2.3 Qualifications of installers: Use skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.2.4 Substitutions: Only the window manufacturers listed in this specification will be used for bidding. No substitutions.

1.3 SUBMITTALS

1.3.1 General: Comply with the requirements of Section 01 33 23.

1.3.2 Prompt data: No later than 30 calendar days after award of the contract, submit:

1. Complete materials list of all items proposed to be furnished and installed under this Section.
2. Sufficient data to demonstrate compliance with all specified requirements.
3. Shop Drawings of the entire installation.
4. Samples of the specified finish.
5. Manufacturer's recommended methods of installation which, when approved by the Architect, will become the basis for inspecting and accepting or rejecting actual installation methods used on the job.

1.4 PRODUCT HANDLING

1.4.1 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

1.4.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 MATERIALS

2.1.1 Series SX45 horizontal sliding windows as manufactured by EFCO or Architect approved equal.

A. Aluminum

1. Extruded aluminum shall be 6063-T6 alloy and tempered.

B. Hardware

1. Concealed plunger lock in the meeting rail with a flush mounted actuating handle.
2. Sash shall ride on steel ball bearing rollers and a raised track, so dirt will not interfere with normal operation.

C. Weather-Strip

1. All primary weather-strip shall be E-lon or equal.

D. Glass

1. 1” insulated glass shall be 1/4" bronze tinted annealed float glass, 1/2" air space and 1/4" clear annealed float glass, Air space shall be hermitically sealed using double-seal organic sealants and drying agent.

E. Thermal Barrier

1. All exterior aluminum shall be separated from interior aluminum by a rigid, structural thermal barrier. For purposes of this specification, a structural thermal barrier is defined as a system that shall transfer shear during bending and, therefore, promote composite action between the exterior and interior extrusions.

PART THREE - EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 ERECTION

All windows shall be set true and plumb by skilled mechanics in prepared openings and securely anchored in place in accordance with detailed approved shop drawings and approved manufacturer's instructions.

3.3 ADJUSTING AND CLEANING

3.3.1 Make final adjustment after installation is complete to see that ventilator operation and locking mechanism are as intended by the manufacturer.

3.3.2 Just prior to final inspection, remove labels from glass panes and thoroughly clean all glass and aluminum surfaces of all stains, dirt, oils and other foreign matter. Clean mortar stains immediately after the mortar gets on surfaces.

3.3.3 Sealants are specified under Section 07 92 00. Use G.E. Silpruf or equal. Vulcum is not acceptable.

END OF SECTION

Section 09 65 13

RESILIENT BASE

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Provide all rubber base, complete in place, as indicated on the Drawings, specified herein, or otherwise needed for a complete and proper installation of the Work of this Section. Leave extra stock of each for Owner as specified.

1.2 QUALITY ASSURANCE

Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

1.3 SUBMITTALS

1.3.1 General: Comply with pertinent provisions of Section 01 33 23.

1.3.2 Manufacturer's data: Within 30 calendar days after award of contract, submit:

1. Complete materials list of all items proposed to be furnished and installed under this Section.
2. Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements.
3. Samples of each item, color, and pattern available in the specified products from the proposed manufacturer.
4. Manufacturer's recommended methods of installation.

The manufacturer's recommended methods of installation, when approved by the Architect, will become the basis for inspecting and accepting or rejecting actual installation methods used on the Work.

1.4 PRODUCT HANDLING

1.4.1 Delivery and storage: Deliver materials to the job site and store in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with the manufacturer's recommendations.

1.4.2 Protection: Use all means necessary to protect materials of this Section before, during, and after installation and to protect installed work and materials of all other trades.

1.4.3 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

1.5 EXTRA STOCK

1.5.1 Upon completion of the work of this section, deliver to the Owner an extra stock equal to 2% of each color and type of flooring.

PART TWO - PRODUCTS

2.1 MATERIALS, GENERAL

2.1.1 Rubber base shall be 4" high cove base as manufactured by Tarkett-Johnsonite or Architect approved equal. Color as selected by the Architect from standard colors of the approved manufacturer. Furnish pre-formed corners. “Wrapped” corners will not be allowed. Vinyl base is not acceptable.

2.1.2 Adhesives shall be as recommended by the manufacturer of the approved resilient material. Asphalt emulsions and other non-waterproof types will not be acceptable.

2.2 OTHER MATERIALS

All other materials, not specifically described but required for a complete and proper installation of the work of this Section, shall be as recommended by the manufacturer of the resilient materials, used, and as approved by the Architect.

PART THREE - EXECUTION

3.1 INSPECTION

3.1.1 General: Examine the areas and conditions under which rubber base is to be placed. Correct conditions detrimental to the proper and timely completion of the Work. Remove all dust and debris. Do not proceed until unsatisfactory conditions have been corrected.

3.1.2 By beginning the work, this subcontractor assumes all responsibility for any debris or imperfections that show through the base material.

3.2 INSTALLATION

3.2.1 General:

3.2.1.1 Install rubber base only after all finishing operations, including painting, have been completed.

3.2.1.2 Place rubber base with adhesive cement in strict compliance with the manufacturer's recommendation.

3.3 CLEANING AND PROTECTION

Remove excess adhesive or other surface blemishes from rubber base, using neutral type cleaners as recommended by manufacturer. Protect installed rubber base from damage until acceptance by the Owner.

END OF SECTION

Section 09 91 00

PAINTING

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Paint, caulk all joints of dissimilar materials, and finish all exterior and interior exposed surfaces listed on the Painting Schedule in Part Three of this Section, in accordance with the type of finish shown on the Finish Schedules in the Drawings and as specified herein. Tape and float all interior gypsum board surfaces. Provide firetaping as required.

1.1.2 Work not included:

1.1.2.1 Do not include painting which is specified under other Section.

1.1.2.2 Unless otherwise indicated, painting is not required on surfaces in concealed areas and inaccessible areas such as furred spaces, foundation spaces, utility tunnels, pipe spaces and duct shafts.

1.1.2.3 Metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze, and similar finished materials will not require painting under this Section except as may be specified herein.

1.1.2.4 Do not paint any moving parts of operating units; mechanical or electrical parts such as valve operators, linkages, sinkages, sensing devices, and motor shafts, unless otherwise indicated.

1.1.2.5 Do not paint over any required labels or equipment identification, performance rating, name, or nomenclature plates.

1.1.3 Definitions: The term "paint" as used herein, means all coating systems materials including primers, emulsions, epoxy, enamels, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coats.

1.2 QUALITY ASSURANCE

1.2.1 Qualification of manufacturer: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.

1.2.2 Qualifications of workmen:

1.2.2.1 Provide at least one person who shall be present at all times during execution of the work of this Section who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all work performed under this Section.

1.2.2.2 Provide adequate numbers of workmen skilled in the necessary crafts and properly informed of the methods and materials to be used.

1.2.2.3 In acceptance or rejection of the work of this Section, the Architect will make no allowance for lack of skill on the part of workmen.

1.2.3 Paint coordination:

1.2.3.1 Provide finish coats which are compatible with the prime coats used.

1.2.3.2 Review other Section of these Specifications as required, verifying the prime coats to be used and assuring compatibility of the total coating system for the various substrata.

1.2.3.3 Upon request, furnish information on the characteristics of the specific finish materials to ensure that compatible prime coats are used.

1.2.3.4 Provide barrier coats over noncompatible primers, or remove the primer and reprime as required at no additional cost to the owner.

1.2.3.5 Notify the Architect in writing of anticipated problems in using the specified coating systems over prime coating supplied under other Sections.

1.3 SUBMITTALS

1.3.1 General: Comply with provisions of Section 01 33 23.

1.3.2 Material Safety Data Sheets (MSDS) shall not be submitted as part of the submittal package. They are not a requirement of the Contract Documents and will be returned to the Contractor.

1.3.3 Manufacturers' data: Within 30 calendar days after award of the Contract, submit:

1. Complete materials list of all items proposed to be furnished and installed under this Section.
2. Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements.
3. For information only, submit two copies of manufacturer's specifications, including paint analysis and application instructions for each materials. Indicate by transmittal that copy of each manufacturer's instructions has been distributed to the applicator.

Upon receipt of review comments, make all revisions and corrections, and resubmit if so required.

1.4 PRODUCT HANDLING

1.4.1 Delivery of materials: Deliver all materials to the job site in original, new, and unopened containers bearing the manufacturer's name and label showing at least the following information:

1. Name or title of the material,
2. Fed. Spec. number, if applicable,
3. Manufacturer's stock number,
4. Manufacturer's name,
5. Contents by volume for major constituents,
6. Thinning instructions,
7. Application instructions.

1.4.2 Storage of materials: Provide proper storage to prevent damage to, and deterioration of, paint materials.

1.4.3 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work materials of all other trades.

1.4.4 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

1.5 JOB CONDITIONS

1.5.1 Surface and Air Temperatures: Do not apply any paint materials when the temperature of surfaces to be painted and the surrounding air temperature are below 55 degrees F, unless otherwise permitted by the manufacturer's printed instructions as approved by the Architect. HVAC equipment shall be functioning minimum 48 hours before painting shall begin.

1.5.2 Weather Conditions: Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceed 85%; or to damp or wet surfaces; unless otherwise permitted by the manufacturer's printed instructions as approved by the Architect. Applications may be continued during inclement weather within the temperature limits specified by the paint manufacturer during application and drying period.

1.6 EXTRA STOCK

1.6.1 Amount: Upon completion of the work of this Section, deliver to the Owner an extra stock equaling 3% of each color, type, and gloss of paint used on the Work.

1.6.2 Packaging: Tightly seal each container and clearly label with the contents and location used.

PART TWO - PRODUCTS

2.1 PAINT MATERIALS

2.1.1 Design is based on use of paint products manufactured by Sherwin-Williams Company. Equal products by Benjamin Moore, Farrell Calhoun and Pittsburg Paints will be acceptable when approved by the Architect.

2.1.2 General: Provide the best quality grade of the various types of coatings as regularly manufactured by paint materials manufacturers approved by the Architect. Materials not displaying the manufacturer's identification as a standard best-grade product will not be acceptable.

2.1.3 Durability: Provide paints of durable and washable quality. Do not use paint materials which will not withstand normal washing as required to remove pencil marks, ink, ordinary soil, and similar material without showing discoloration, loss of gloss, staining, or other damage.

2.1.4 Colors and Glosses: The Architect will select colors to be used in the various types of paint specified and will be the sole judge of acceptability of the various glosses obtained from the materials proposed to be used in the Work.

2.1.5 Color Selection: The Architect shall select a basic color to be used on 70% of painted surfaces, The remaining 30% of the painted surfaces shall receive any of twelve colors selected from any of the manufacturer's standard colors. Refer to the finish schedule for any additional painting requirements.

2.1.6 Undercoats and thinners: Provide undercoat paint produced by the same manufacturer as the finish coat. Use only the thinners recommended by the paint manufacturer, and use only to the recommended limits. Insofar as practicable, use undercoat, finish coat, and thinner material as parts of a unified system of paint finish.

2.1.7 Standards: Provide paint materials which meet or exceed the standard listed for each application in the Painting Schedule in PART THREE of this Section.

2.2 APPLICATION EQUIPMENT

2.2.1 General: For application of the approved paint, use only such equipment as is recommended for application of the particular paint by the manufacturer of the particular paint, and as approved by the Architect.

2.2.2 Compatibility: Prior to actual use of application equipment, use all means necessary to verify that the proposed equipment is actually compatible with the material to be applied and that the integrity of the finish will not be jeopardized by the use of the proposed application equipment.

2.3 OTHER MATERIALS

All other materials, not specifically described but required for a complete and proper installation of the work of this Section, shall be new, first-quality of their respective kinds, and as selected by the Contractor subject to the approval of the Architect.

PART THREE - EXECUTION

3.1 SURFACE CONDITIONS

3.1.1 Inspection: Prior to installation of the work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence. Verify that painting may be completed in strict accordance with the original design and with the manufacturer's recommendations as approved by the Architect.

3.1.2 Discrepancies: Do not proceed in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 MATERIALS PREPARATION

3.2.1 General:

3.2.1.1 Mix and prepare painting materials in strict accordance with the manufacturer's recommendations as approved by the Architect.

3.2.1.2 Store materials not in actual use in tightly covered containers.

3.2.1.3 Maintain containers used in storage, mixing, and application of paint in a clean condition, free from foreign materials and residue.

3.2.2 Stirring: Stir all materials before application to produce a mixture of uniform density, and as required during the application of materials. Do not stir into the material any film which may form on the surface. Remove the film and, if necessary, strain the material before using.

3.3 SURFACE PREPARATION

3.3.1 General:

3.3.1.1 Perform all preparation and cleaning procedures in strict accordance with the paint manufacturer's recommendations as approved by the Architect.

3.3.1.2 Remove all removable items which are in place and are not scheduled to receive paint finish, or provide surface-applied protection prior to surface preparation and painting operations.

3.3.1.3 Following completion of painting in each space or area, reinstall the removed items by using workmen skilled in the necessary trades.

3.3.1.4 Clean each surface to be painted prior to applying paint or surface treatment.

3.3.1.5 Remove oil and grease with clean cloths and cleaning solvents of low toxicity and a flash point in excess of 38 degrees C (100 degrees F), prior to start of mechanical cleaning.

3.3.1.6 Schedule the cleaning and painting so that dust and other contaminants from the cleaning process will not fall onto wet newly painted surfaces.

3.3.2 Preparation of wood surfaces:

3.3.2.1 Clean all wood surfaces until they are free from dirt, oil, and all other foreign substance.

3.3.2.2 Smooth all finished wood surfaces exposed to view, using wood filler (if required) and the proper sandpaper. Where so required, use varying degrees of coarseness in sandpaper to produce a uniformly smooth and unmarred wood surface.

3.3.2.3 Unless specifically approved by the Architect, do not proceed with painting of wood surfaces until the moisture content of the wood is 12% or less as measured by a moisture-meter approved by the Architect.

3.3.3 Preparation of metal surfaces:

3.3.3.1 Thoroughly clean all surfaces until they are completely free from dirt, oil, and grease.

3.3.3.2 On galvanized surfaces, use solvent for the initial cleaning and then treat the surface thoroughly with phosphoric acid etch. Remove all etching solution before proceeding.

3.3.3.3 Allow to dry thoroughly before application of paint.

3.3.4 Preparation of masonry:

1. Mixing of Pro-Mar Block Filler for spray application shall use a maximum of one quart of latex wall paint per gallon pail of block filler. Do not use water or solvent thinned paints. Do not thin block filler for roller application.
2. Prior to any painting work, a sample wall of block fill shall be installed under the Architect's representatives' observation and approval. This wall shall be the minimum standard for the entire work.
3. Application of block fill:
    a. Uniformly spray apply block fill to the wall.

b. Roll with a medium mop roller (long nap rollers are not acceptable) to thoroughly embed block fill into the voids of the block. (Pinholes are not acceptable).
c. Apply a fast overspray of block fill to provide a uniform texture and eliminate roller marks.

3.4 PAINT APPLICATION

3.4.1 General:

3.4.1.1 Slightly vary the color of succeeding coats. Do not apply additional coats until the complete coat has been inspected and approved. Only the inspected and approved coats of paint will be considered in determining the number of coats applied.

3.4.1.2 Sand and dust between enamel coats to remove all defects visible to the unaided eye from a distance of five feet.

3.4.l.3 On all removable panels and all hinged panels, paint the back sides to match the exposed sides.

3.4.2 Drying:

3.4.2.1 Allow sufficient drying time between coats. Modify the period as recommended by the material manufacturer to suit adverse weather conditions.

3.4.2.2 Oil-base and oleo-resinous solvent-type paints shall be considered dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

3.4.3 Brush application: Brush out and work all brush coats onto the surfaces in an even film. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, and other surface imperfections will not be acceptable.

3.4.4 Spray application:

3.4.4.1 Confine spray application to metal framework, hollow metal doors and frames, and similar surfaces where hand brush work would be inferior.

3.4.4.2 Wherever spray application is used, apply each coat to provide the equivalent hiding of brush-applied coats. Do not double back with spray equipment for the purpose of building up film thickness of two coats in one pass.

3.5 PAINTING SCHEDULE

All products listed below are manufactured by Sherwin Williams. Other manufacturers, when equal in quality and performance, will be considered for substitution.

3.5.1 Interior concrete block:
Epoxy Paint (Total DFT = 18 mils).

1. Surface preparation: Remove all dirt, loose or excess mortar. Allow 30 days drying time before application.
2. First Coat: S-W Pro Industrial Heavy Duty Block Filler, B42W150. (DFT 8 mils.)
3. Second and third coat: S-W Pro Industrial Water Based Catalyzed Epoxy, B73-300 Series.

3.5.2 Interior Ferrous Metal:
Semi-gloss Enamel (Total DFT = 6.0 mils).

1. Surface preparation: Sand smooth and remove all dust prior to paint application
2. First Coat: S-W Kem Kromik Universal Metal Primer, B50Z Series. (DFT 3 mils).
3. Second and Third Coat: S-W ProMar 200 Alkyd Semi-Gloss Enamel, B34W200 Series. (1.5 mils DFT/coat).

3.5.3 Exterior Ferrous Metal:
Gloss (Total DFT - 9 mils).

1. Surface preparation: Sand smooth and remove all dust prior to paint application.
2. First coat: S-W Kem Kromik Universal Metal Primer, B50Z Series. (DFT 3 mils).
3. Second and Third Coat: S-W Pro Industrial Urethane Enamel B54-150 Series (3 mils DFT/coat).

3.5.4 Interior Wood (painted):
Epoxy Finish.

1. Surface preparation: Store all wood in dry, warm rooms. All surfaces shall be sanded smooth with the grain and never across it. Clean off all dust. Lightly sand between coats.
2. First Coat: S-W Premium Wall and Wood Primer, B28W8111.
3. Second Coat: S-W Pro Industrial Water Based Catalyzed Epoxy, B73 Series.
4. Third Coat: S-W Pro Industrial Water Based Catalyzed Epoxy, B73 Series.

3.6 PROTECTION AND CLEAN UP

3.6.1 Adequately protect other surfaces from paint and damage. Repair damage as a result of inadequate or unsuitable protection.

3.6.2 Furnish sufficient drop cloths, shields and protective equipment to prevent spray or droppings from fouling surfaces not being painted and, in particular, surfaces within storage and preparation area.

3.6.3 Place cotton waste, cloths and material which may constitute a fire hazard in closed metal containers and remove daily from site.

3.6.4 Remove electrical plates, surface hardware, fittings and fastenings, prior to painting operations. These items are to be carefully stored, cleaned and replaced on completion of work in each area. Do not use solvent to clean hardware that may remove permanent lacquer finish.

3.6.5 This Subcontractor shall be responsible for the condition of the building or parts of the building in his charge, as well as the protection of adjacent work. Damage done to the work of other Subcontractors to such an extent that the work and/or materials cannot be restored to their original condition shall be replaced at the expense of this Subcontractor.

END OF SECTION

Section 10 14 00

SIGNAGE

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: Provide all exterior door signs, complete, in place, as shown on the Drawings, specified herein, and needed for a complete and proper installation.

1.2 QUALITY ASSURANCE

1.2.1 Qualifications of manufacturer: Products used in the work of this Section shall be produced by Manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.

1.3 SUBMITTALS

1.3.1 General: Comply with the provisions of Section 01 33 23.

1.3.2 Product data: Within 30 calendar days after award of Contract, submit:

1. Complete materials list showing all items proposed to be furnished and installed under this Section.
2. Manufacturer's specifications and other data required to demonstrate compliance with specified requirements.
3. Manufacturer's recommended methods of installation.
4. Complete descriptive data on fasteners proposed for each type of wall construction, recommended mounting locations, and mounting instruction.

The manufacturer's recommended methods of installation, when approved by the Architect, will become the basis for inspecting and accepting or rejecting actual installation methods used on the Work.

1.4 PRODUCT HANDLING

1.4.1 Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

1.4.2 Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 DOOR SIGNS

2.1.1 Acceptable Manufacturers: Archway Graphic Designs, Little Rock, Arkansas; Best Sign Systems, Montrose, Colorado or Architect approved equal.

2.1.2 Schedule: Provide for door signs at each new interior door except at furnace closets. Exact wording and numbers will be provided by Owner.

2.1.3 Design: Manufacturer's standard monolithic tactile plaque constructed of one material utilizing a thermoforming process, which provides a monolithic plaque sign. The sign body, face, raised text and Braille are compression molded to form a single dimensional component.

1. Thickness: 1/8"
2. Tactile Characters/Symbols: Raised 1/32 inch from sign plate face.
3. Lettering Style: Helvetica regular, upper case letters, minimum height 5/8", maximum height 2".
4. Braille: Grade 2 braille, placed directly below last line of characters.
5. Contrast: Letters, numbers and symbols shall contrast with background as selected by the Architect.
6. Panel Shape and Sizes: Rectangular. Size shall be 5" x 7"; restrooms shall be 8" x 6".
7. Background Standard: Painted custom colors, Matthews acrylic polyurethane paint, subsurface.
8. Surface Texture: Standard – Suede – Low Gloss 12 gloss units +/- 3 units.
9. Surface Protection: Matthews acrylic polyurethane, satin finish clear coat.
10. Painted Backer: All signs mounted to glass shall have painted backer.

PART THREE - EXECUTION

3.1 DOOR SIGNS

Where permanent identification is provided for, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall. Mounting height shall be 60 inches above the finish floor to the centerline of the sign. Mounting location for such signage shall be so that a person may approach within 3 inches of signage without encountering protruding objects or standing within the swing of a door. Interior signs to be mounted to wall with double-sided vinyl tape and silicone adhesive. Exterior signs to be predrilled in (4) corners and attached with appropriate screws (and anchors) and decorative washers (nickel finish) to exterior wall surface.

END OF SECTION

Section 10 28 13

TOILET ACCESSORIES

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work included: Provide all toilet room accessories, complete, in place, as shown on the Drawings, specified herein, and needed for a complete and proper installation.

1.2 QUALITY ASSURANCE

A. Qualification of manufacturer: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.

1.3 SUBMITTALS

A. General: Comply with the provisions of Section 01 33 23.

B. Product data: Within 30 calendar days after award of Contract, submit:

1. Complete materials list showing all items proposed to be furnished and installed under this Section.
2. Manufacturer's specifications and other data required to demonstrate compliance with specified requirements.
3. Manufacturer's recommended methods of installation.
4. Complete descriptive data on fasteners proposed for each type of wall construction, recommended mounting locations, and mounting instructions.

The manufacturer's recommended methods of installation, when approved by the Architect, will become the basis for inspecting and accepting or rejecting actual installation methods used on the Work.

1.4 PRODUCT HANDLING

A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 GENERAL

A. Anchors and fasteners: Provide anchors and fasteners capable of developing a retaining force commensurate with the strength of the accessory to be mounted, and well suited for use with the supporting construction. Where exposed fasteners are permitted, provide oval head fasteners with finish matching the accessory. Provide masonry anchors for wall installation and stainless steel hex bolts for partition installation.

B. Finish: All accessory items shall be stainless steel with satin finish.

C. Design is based on use of products manufactured by Bradley, and catalog numbers of that manufacturer are given as an indication of the quality and style required. Equal products by Bobrick or other manufacturers, approved by the Architect, will be acceptable in accordance with the General Conditions.

2.2 ACCESSORY ITEMS

A. Grab bars: (Locate as shown on drawings.) Bradley 812 Series in lengths as shown on drawings. Mount at 34" above floor using mounting kit as recommended by manufacturer at block walls.

B. Mirror: (Locate as shown on drawings.) Bradley Model 780, mounted with bottom of reflective surface at 40" above the floor. Use stainless steel, tamper proof screws and metal expansion shield masonry anchors (plastic anchors are not acceptable).

C. Coat hooks: (One per toilet stall.) Bradley Model 9115 with concealed fasteners.

PART THREE - EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 COORDINATION

Throughout construction of substrate surfaces, use all means necessary to ensure proper and adequate provision for concealed support devices, and for finished openings, to receive the Work of this Section.

3.3 INSTALLATION

Install the Work of this Section in strict accordance with the manufacturer's recommendations as approved by the Architect, anchoring all components plumb, level, square, and firmly into position for long life under hard use.

END OF SECTION

Section 10 41 00

EXTERIOR SECURITY VAULT

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work included: Provide vault for emergency access to building, complete, in place, as shown on the Drawings, specified herein, and needed for a complete and proper installation.

1.2 QUALITY ASSURANCE

A. Qualifications of manufacturer: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.

1.3 SUBMITTALS

A. General: Comply with the provisions of Section 01 33 23.

B. Product data: Within 30 calendar days after award of Contract, submit:

1. Complete materials list showing all items proposed to be furnished and installed under this Section.
2. Manufacturer's specifications and other data required to demonstrate compliance with specified requirements.
3. Manufacturer's recommended methods of installation.
4. Complete descriptive data on fasteners proposed for each type of wall construction, recommended mounting locations, and mounting instructions.

The manufacturer's recommended methods of installation, when approved by the Architect, will become the basis for inspecting and accepting or rejecting actual installation methods used on the work.

1.4 PRODUCT HANDLING

A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 SECURITY VAULT

Provide a rapid entry system for emergency access to the building with a Series 3200 recessed Knox-Vault including a recessed mounting kit as manufactured by Knox Co., Phoenix, Arizona or Architect approved equal.

PART THREE - EXECUTION

3.1 INSTALLATION

Strictly follow manufacturer's installation recommendations and coordinate as required with all trades.

END OF SECTION

The Engineer of Record for Restroom Facility, SAU Tech, Camden, Arkansas Division 22 of the specifications.

March 17, 2025

Section 22 01 00

PLUMBING

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: This specification includes the furnishing of all labor, materials, tools, equipment, drayage, rigging, fees, etc., unless specifically furnished by others, necessary or reasonably required for the complete installation and operation of all the work as shown on the drawings or as required and/or as herein specified. The entire work shall be delivered complete in perfect working order and to the entire satisfaction of the Architect.

1.1.2 The scope of work shall include the general listings as shown below. This contractor shall furnish and install all required pipe, fittings, valves, hangers, supports, sleeves, inserts, traps, and other such equipment, items, and appurtenances as may be required for complete and operative systems, including all parts auxiliary to the systems whether or not specifically set forth herein and/or shown on the drawings.

1. Systems of sanitary waste and vent piping.
2. Systems of domestic cold and hot water.
3. Plumbing fixtures and accessories.
4. Insulation.
5. Miscellaneous equipment and accessories.
6. Tests, inspection, balancing and adjustment.

1.2 APPLICABLE GENERAL SPECIFICATIONS AND REGULATION

1.2.1 The General Conditions, Supplementary Conditions, Information to Bidders and other pertinent documents, as issued by the Architect, are a part of these specifications and shall be complied with in every respect.

1.2.2 All plumbing work and equipment, in whole or in part, shall conform to the applicable portions of the latest edition of the following ordinances, codes, and regulations in effect on the date of invitation for bids, which shall form a part of this specification.

1. National Electrical Code.
2. American Gas Association Recommended Practices.
3. National Fire Protection Association Recommended Practice.
4. Local, City and State Codes and Ordinances.
5. American Society of Mechanical Engineers Plumbing and Air Conditioning Codes.

1.2.3 The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only, (i.e.) American Society for Testing and Materials (ASTM). Publications:

D 2665	Poly Vinyl Chloride (PVC) Drain, Waste and Vent Pipe and Fittings.
D 2321	Underground Installation of Thermoplastic Pipe for Sewers & Other Gravity Flow Applications.

1.2.4 Should any part of the drawings or specifications be found to be in conflict with applicable codes or ordinances, the Contractor shall notify the Architect before submitting his bid. After entering into the contract, the contractor shall complete all work necessary to meet the requirements of all codes or ordinances without additional expense to the Owner.

1.2.5 The contractor shall not begin any building construction until possessing a copy of official acceptance of the Arkansas State Department of Health which shall be provided by the Architect.

1.2.6 Prior to final acceptance of the project, the contractor shall provide the Architect a written Certificate of Inspection covering all phases of the installation by the State of local Plumbing Administrative authority.

1.2.7 All potable water system components shall be "Lead Free" in accordance with Section 1417 of the Safe Drinking Water Act (42 U.S.C. 300g-6) and shall be certified as being in compliance with NSF/ANSI 372 or Annex G of NSF/ANSI 61.

1.3 SUBMITTALS

1.3.1 The Contractor shall furnish electronic shop drawings using the submittal procedure as detailed in Section 01 33 23. Provide cover sheet with project name and contractor name along with table of contents.

1.3.2 All submittals must be on the manufacturer's standard certified submittal sheets or other approved sheets; faxed material will not be accepted. Each item must be marked with the symbol, letter, or number designating it in the specifications or on the plans and items must be arranged in the order specified or scheduled.

1.3.3 All performance, data, details, dimensions, special features and accessories must be clearly marked.

1.3.4 All differences between equipment specified and that submitted must be clearly indicated.

1.3.5 Substitutions will not be considered without prior approval from the engineer.

1.3.6 Shop Drawings are required even though the equipment is as specified.

1.3.7 Provide Shop Drawings on the following Items:

1. Plumbing fixtures and accessories.
2. Domestic water heaters.
3. Sewer lift station
4. Documentation of water and sewer piping type and manufacturer.
5. Miscellaneous equipment and accessories.

1.3.8 The type and capacity of the various equipment and material specified herein by manufacturer's name and catalog number indicate the minimum acceptable qualifications required for this installation. Products of other manufacturers, with comparable qualifications, will be acceptable, if approved by the Architect, unless specifically stated otherwise. NO PREFERENCE WILL BE GIVEN TO THE MAKE OF ITEMS LISTED, provided all essential requirements of this specification relative to materials, capacity and performance are met. The bidder will furnish a statement giving a complete description of all points wherein the equipment he proposes to furnish differs from the specification. Failure to furnish such a statement within thirty days after award of the Contract will be interpreted to mean that the bidder agrees to furnish items specified in the specifications or on the plans.

1.3.9 If the substituted equipment actually furnished under these specifications requires the use of larger or more connections, or if they are different arrangement than those shown on drawings, or specified under these specifications, such additional or larger connections shall be installed to the complete satisfaction of the Architect without added cost to the Owner.

1.3.10 Should a substitution be approved for use in lieu of that specified and should the substitute material prove defective or otherwise unsatisfactory, in the judgment of the engineer, for the service required, within the guaranty period, the Contractor shall replace the material or equipment as originally specified without additional cost to the Owner.

1.3.11 If submittals are "not approved" or marked "revise and resubmit", the complete package shall be corrected and returned for review. The contractor may provide a separate bound submittal, with a cover sheet, which includes only the sections marked "not approved", or "revise and resubmit". Any additional submittal data requested shall also be provided in resubmittal.

1.4 COORDINATION

1.4.1 Chases, recesses and other openings in the building construction required for the location of pipes, or other mechanical equipment, will be provided by the General Contractor. The Mechanical Contractor shall advise the General Contractor of the sizes and locations, and furnish the necessary drawings in sufficient time to allow for provision of same; otherwise the additional cost caused thereby shall be paid by the Mechanical Contractor.

1.5 FEES AND PERMITS

1.5.1 Contractor shall pay for all fees, permits and charges for utility connections and initial boiler inspections. This includes all fees required for improvement district non-refundable or refundable contribution. Contractor shall contact utility company prior to bid for connection charges.

1.6 DRAWINGS

1.6.1 The drawings are diagrammatic and indicate the extent and general arrangement of the various systems. If any departures from these drawings are deemed necessary by this contractor, detailed drawings and descriptions of these departures and a statement of the reasons therefore shall be submitted to the Architect for approval as soon as practical. No departures from the arrangements shown on the drawings shall be made without the prior written approval of the Architect.

1.6.2 Coordination of drawings and work: The drawings showing the extent and arrangement of the work of a particular trade must be used, together with the drawings showing the extent and arrangement of the work of the other trades, and this Contractor shall lay out his work with due consideration for the other trades and shall be responsible for calling to the attention of the Architect any interferences encountered. Such interferences shall be investigated and called to the attention of the Architect before any material is fabricated. Relocation resulting from interferences shall be made at no additional cost to the Owner. This Contractor shall cooperate with the other contractors and subcontractors on the job and shall arrange and carry on his work in such manner that none of the contractors shall be hindered or delayed at any time.

1.7 OPERATION AND MAINTENANCE MANUALS

1.7.1 Refer to Section 01 77 19 – Contract Closeout for closeout requirements.

1.7.2 A complete double index shall be included: (1) listing the products alphabetically by name, and (2) listing the names of the manufacturers of mechanical products alphabetically with their addresses, and the names and addresses of the local sales representative.

1.8 CONTRACTOR REVISED DRAWINGS

1.8.1 The contractor shall, during the progress of the work, keep an accurate record of all changes and corrections from the layouts shown on the drawings. Record of changes shall be kept by accurately making all changes on a set of prints in the site construction office during the progress of the job. Exact location of all underground utility service entrances and their connections to utility mains as well as all valves, etc., which will be concealed in the finished work shall be accurately indicated on the drawings by measured distances. Upon completion of the work and prior to final payment, the contractor will furnish to the Architect the set of "as-built" prints, and a photo copy, legibly and accurately marked to indicate all changes, additions, deletions, etc., from the Contract Drawings.

1.9 UTILITIES, LOCATIONS, AND ELEVATIONS

1.9.1 Locations and elevations of the various utilities, included within the scope of this work have been obtained from utility maps and/or other substantially reliable sources and are offered separate from the contract documents as a general guide only, without guarantees as to accuracy. This contractor shall examine the site and shall verify to his own satisfaction the location and elevation of all utilities and shall adequately inform himself of their relation to the work before entering into a contract.

1.10 SOIL CONDITIONS

1.10.1 This specification and drawings in no way implies as to the conditions of the soil to be encountered. When excavating may be required in execution of the work, this contractor agrees that he has informed himself regarding conditions affecting the work and labor and materials required, without recourse to any representation as to soil conditions that may appear, or seem to be implied, in any portion of the contract documents.

1.11 VISITING SITE

1.11.1 The Contractor shall visit the site of this building before submitting a proposal on this work, and shall thoroughly familiarize himself with the existing conditions. Failure on his part to do this will not be cause for extra expense after the contract is signed, by reason of unforeseen conditions.

1.12 STANDARD PRODUCTS

1.12.1 Each item of equipment furnished under this specification shall be essentially the standard product of the manufacturer. Where two or more units of the same kind or class of equipment are required, these shall be the products of single manufacturer; however, the component parts of the equipment need not to be the products of one manufacturer. All material and equipment shall be of the best quality normally used in good commercial practice and shall be the product of a reputable manufacturer. Each major component shall bear a name plate giving the name and address of the manufacturer and the catalog number of designation.

1.13 STORAGE OF MATERIALS

1.13.1 The Contractor shall be responsible for the proper care of his materials, equipment, etc., delivered at the sites. Building materials, equipment, etc., may be stored on the premises, but the placing of same shall be subject to the approval of the Architect.

1.13.2 When any room in the building is used by the Contractor as a shop, store room, etc., he shall be responsible for any repairs, patching or cleaning arising from such use. He shall protect and be responsible for any damage or loss that may occur during this period. He shall handle all material as desired, so that it may be inspected by the Architect.

1.14 CLOSE-OUT DOCUMENTS

1. Operation and maintenance manuals (Section 22 01 00, paragraph 1.7).
2. Approved shop drawings (Section 22 01 00, paragraph 1.3).
3. As-built drawings (Section 22 01 00, paragraph 1.8).

PART TWO - PRODUCTS

2.1 PIPE

2.1.1 Soil, waste and vents, interior:

2.1.1.1 Underground and above ground soil, waste and vent pipe, inside building and extending 5'-0" outside shall be schedule 40 PVC complying with ASTM D2665 as manufactured by Eslon Thermoplastics or equal. No PVC waste will be accepted for final connection of lavatories, sinks, water coolers or similar fixtures. PVC cellular core (foam core) pipe and fittings are not acceptable.

2.1.1.2 Fittings shall be solvent welded DWV-PVC, complying with ASTM D2665 Standard, and listed by NSF as manufactured by Lasco Fluid Distribution Products.

2.1.1.3 The bedding and cover material for PVC piping shall be crushed stone (see 3.11.2).

2.1.1.4 PVC closet flanges shall have pre-drilled holes in lieu of adjustable slots.

2.1.2 Domestic water piping, interior:

2.1.2.1 Interior piping shall be type "K" copper below grade to 5'0" beyond building foundation and type "L" copper above grade.. No tee fittings shall be installed below grade. Galvanized pipe shall not be used in any instance.Water piping shall be buried not less than 12" below compacted fill.

2.1.3 Soil, waste, and vents – exterior:

2.1.4.1 Lines beyond 5'0" from building line shall be SDR-26 heavy wall PVC gasketed sewer pipe. Piping shall be as manufactured by Charlotte Pipe or approved equal.

2.1.4.2 PVC pipe for sanitary sewers shall conform to the latest revision of ASTM Designation D3034 (Type PSM) and shall have a minimum Standard Dimension Ratio (SDR) of 26. The pipe shall have a minimum pipe stiffness (F/dY) of 115 psi at 5% deflection as defined in ASTM D2412.

2.1.4.3 The pipe shall be made of a plastic having a cell classification of 12454-B as defined in ASTM D1784. All pipe and fittings shall be tested in accordance with ASTM Designations D2412, D2152, and D2444.

2.1.5 Soil, waste, and vents - exterior:

2.1.5.1 Lines gravity and forced main from building line shall be SCH 40 PVC same as interior. Piping shall be as manufactured by Charlotte Pipe or approved equal.

2.1.5.2 PVC pipe for sanitary sewers shall conform to the latest revision of ASTM Designation D3034 (Type PSM) and shall have a minimum Standard Dimension Ratio (SDR) of 26. The pipe shall have a minimum pipe stiffness (F/dY) of 115 psi at 5% deflection as defined in ASTM D2412.

2.1.5.3 The pipe shall be made of a plastic having a cell classification of 12454-B as defined in ASTM D1784. All pipe and fittings shall be tested in accordance with ASTM Designations D2412, D2152, and D2444.

2.1.5.4 All pipe sections shall be straight and true in alignment and shall be furnished in (13) feet lengths. Provision shall be made for expansion and contraction at each joint by use of a gasket type joint and integral bell.

2.1.5.5 Bedding and backfilling requirements for PVC gravity sewer pipe listed in paragraph 3.12.3 and the testing requirements listed in Section 3.6.

2.1.5.6 All bends, tees, plugs, adaptors, wyes, or other fittings shall meet with the requirements of the type of pipe used and all joints shall meet with the requirements for the joints listed in Part Three. PVC sewer wyes, tee-wyes, bends or other fittings shall be one piece molded construction with elastomeric gaskets conforming to ASTM 3212 and ASTM F-477, self-cleansing sanitary flow and design meeting ASTM 3034 standards.

2.1.6 Exterior water service piping:

2.1.6.1 Exterior water piping shall be type "K" hard drawn copper for 1-1/2" and smaller. Minimum depth to be 24". Any mechanical joints shall have to be coated with mastic and covered with two layers of 6 mil visqueen, secure with duct tape. Install No. 12 THHN copper tracer wire for PVC piping.

2.2 VALVES

2.2.1 All valves, fittings and other piping specialties, either as shown or required in the connection of the mechanical system or systems, except as may be otherwise specified elsewhere in these specifications, shall be Crane, Nibco, Nordstrom, or Milwaukee.

2.2.2 Threaded bronze ball valves shall be the "primary use" valve for domestic water service and branch isolation. Lubricated plug valves and ball valves shall be used for balancing. Do not use globe valves except where specifically indicated. All valves shall be threaded; sweat valves must be approved by Engineer and no sweat valves larger than 3/4" will be accepted. Install union with every valve. Do not install adaptor fitting in valve prior to soldering. Any valve which indicates direct heat was applied will be replaced.

TYPE	SIZE RANGE	NUMBER
Ball	2" & smaller (Threaded)	NIBCO T-585 (Class 150)
Ball	2 1/2" & 3" (Threaded)	NIBCO T-FP-600A
Gate	4" & larger (Flanged)	NIBCO F-607-RW (Epoxy coated)
Globe	2" & smaller	NIBCO T-235-Y

TYPE	SIZE RANGE	NUMBER
Globe	2 1/2" & larger	NIBCO F-718-B
Check	2" & smaller	NIBCO T-433-B
Check	2 1/2" & larger	NIBCO T-918-B

2.3 CLEANOUTS

2.3.1 General: Furnish and install cleanouts where indicated on plans or as required by local and state codes. Verify floor finish from Architectural schedule.

1. Cleanout to grade: Wade W-6004-Z-12 cast iron floor cleanout with threaded adjustable housing, ferrule with plug, inverted Ty-Seal hub connection and extra heavy ductile iron tractor top. See detail.

2.4 TRAPS AND DRAINS

2.4.1 P-traps shall be placed under all floor drains, and all plumbing fixtures without integral traps. All traps installed below grade shall be Schedule 40 PVC-DWV with deep seal.

2.4.2 Drains shall be Wade, or approved equal, in accordance with the schedule on the Drawings. Sizes and locations shall be as indicated on the Drawings. PVC body floor drains are not approved.

2.5 PLUMBING FIXTURES

2.5.1 Furnish and install complete, American Standard, Kohler or Sloan plumbing fixtures as scheduled on drawings. Handicapped lavatories and sinks with exposed hot supply and waste shall be insulated as stated in Paragraph 3.2.2.

PART THREE - EXECUTION

3.1 PIPING INSTALLATION

3.1.1 Pipe cutting:

3.1.1.1 Pipes shall be cut accurately to measurements established at the building and shall be worked into place without springing or forcing. All piping after cutting and before threading shall be reamed and have all burrs removed and shall be cleaned before installation. Nipples shall be of the same material and composition as the adjacent pipe and shall be extra heavy when unthreaded shoulder is less than one inch. No all thread nipples will be allowed.

3.1.2 Piping layout:

3.1.2.1 Exposed lines shall be run parallel with, or perpendicular to, building line and wherever possible shall be grouped together for easier service and identification. Sanitary, waste, and similar lines which require a definite grade for drainage, shall be given precedence in routing over all other lines. Whenever possible, horizontal and vertical runs shall be held as close as possible to the walls, ceilings, struts, members, etc., so as to occupy the minimum space consistent with the proper requirements for insulation, expansion, removal of pipe and access to valves, dampers, etc. All concealed work shall finish off within the limits permitted by the vertical or horizontal chases. This Contractor shall take note of the Architectural and structural features of the building, shall provide for the concealment of all piping in finished areas of the building, and the placement of piping as indicated within the concrete framing system sections.

3.1.2.2 Horizontal soil and waste pipes shall be given an even grade of 1/4 inch per foot where possible, but piping 4" and larger may be run at 1/8 inch per foot. All main vertical soil and waste stacks shall be installed with provisions for expansion and shall be extended full size to and above the roof line as vents, except where otherwise specifically indicated. Horizontal offsets in all sanitary and waste pipe shall be accomplished with one sixteenth (1/16), one eighth (1/8) or one sixth (1/6) bends, with preference given to the order named. Horizontal intersections shall be accomplished with forty-five (45) degree or sixty (60) degree "Y" branches, or combination "Y" and eighth bends with preference given to the order named. Sanitary tees or crosses may be used on vertical lines for fixture connections. Use string line or laser method to grade all sewer lines. No exceptions.

3.1.2.3 Before installing any waste lines below grade, contractor shall furnish to Architect a complete gradation plan of the building with grades shown at each major group of plumbing fixtures and at each line intersection including connection at main line or manhole.

3.1.3 Pipe assembly and domestic water:

3.1.3.1 All screws joints shall be made with tapered threads properly cut and shall be made perfectly tight with a stiff mixture of graphite and oil, applied with a brush to the pipe threads only, and in no case to the fittings. Caulking screwed joints will not be allowed.

3.1.3.2 Type "K" copper pipe joints shall be made up with the use of "Silfos" solder. Type "L" joints shall be made up using 95/5 solder and a suitable flux. Pipe ends shall be cut square, reamed to remove all burrs and cleaned bright with fine sandpaper and steel wool. Solder shall take up by capillary action and joint shall be made tight without a built-up head. Pulled tees are not acceptable.

3.1.3.3 Soldered joints observed by Engineer and found not acceptable shall be cleaned and resoldered at no additional cost to Owner.

3.1.4 Pipe assembly, force main, sanitary waste and vent:

3.1.4.1 Gasketed Polyvinyl Chloride (PVC) sewer pipe joints shall be assembled per manufacturer's joint assembly procedures. Only the manufacturer's gasket lubricant shall be used. All surfaces of the joint components shall be clean and dry. Use normal force to insert spigot. Contractor may use pipe puller or bucking bar if necessary; however, backhoe is not acceptable.

3.1.4.2 Glued Polyvinyl Chloride (PVC): Schedule 40 PVC fittings shall be solvent welded with schedule 40 PVC cement for 2" diameter or less and schedule 80 PVC cement for piping larger than 2". Surfaces shall be primed with tetrahydrofuran (THF). Primer shall leave purple residue to indicate the joints were primed. Never use a "dauber" type applicator for piping larger than 2", only natural bristle brush or roller shall be used (2" to 3" width). Use miterbox saw for cutting pipe square and de-bur end before inserting into fitting.

3.2 INSULATION

3.2.1 After satisfactory tests upon the piping systems have been made as herein specified and after the systems have been thoroughly cleaned, the following insulation shall be installed by a skilled workman who has several years insulating experience.

Upon inspection, Architect reserves the right to demand an insulation contractor, at the contractor's expense, who specializes in the trade to rework or complete any insulation work which is unacceptable to trade standards and/or meet the intent of these specifications.

3.2.2 Insulation shall be Owens/Corning Fiberglass 23 ASJ/SSL, all service jacket, self-sealing lap, thickness specified.

a. The specification covers the materials required for insulation of plumbing and piping and the general methods of installing this material. The application of all insulation shall be in accordance with the manufacturer's published recommendations and by mechanics regularly employed in this trade only. All piping, fittings, valves and equipment which may be subject to sweating and/or high surface temperatures shall be insulated.

b. Insulation shall be of the highest grade and installed in accordance with National Commercial and Industrial Insulation Standards and these specifications. Surfaces of insulation shall be smooth and even with jackets drawn tightly and smoothly cemented down at all longitudinal and end laps. Cement shall be resistant to vermin and mold and shall be durable. No scrap pieces of insulation will be used where a full length section will fit. Pipe insulation shall be secured with aluminum bands, three per section or staples in addition to the adhesive. Insulation, including finishes and adhesives on the exterior surfaces of ducts, pipes and equipment, shall have a flame spread rating of 25 or less and a smoke developed rating of 150 or less as determined by an independent testing laboratory in accordance with ASTM Standard #84.

c. All surfaces must be clean and dry when insulation is installed. All foreign matter such as rust, scale, dirt, etc., shall be removed. Insulation shall be free of foreign matter and shall be dry when installed and before and during the application of any finish. The insulation may be installed at any time the contractor desires after the cleaning and painting specified in other sections of this Specification have been completed. However, installation of insulation before the piping, etc., has been tested and approved shall be at the risk of the Contractor and should defects in insulated work develop at or before the time of inspection and tests, insulation shall be removed and, after defects have been corrected, shall be reinstalled without expense to the Owner.

d. Hangers for piping which is insulated with fiberglass insulation shall be installed on exterior of insulation. Piping 1-1/2" and larger shall contain a high density insulation "Foamglas" between the pipe and the hanger saddle to prevent crushing of the insulation. A wood block or wood dowel insert may be used in lieu of "Foamglas". All piping shall be provided with a 16-gauge galvanized sheet metal saddle between the fiberglass or "Foamglas" insulation and the hanger. Length of sleeve shall be two (2) inches longer than "Foamglas" section or a minimum of twelve (12) inches. Length of "Foamglas" shall be at least three (3) times the nominal pipe diameter or a minimum length of twelve (12) inches.

e. Insulate all above grade hot and cold water lines with fiberglass sectional pipe insulation having a factory applied all service vapor barrier jacket ASJ/SSL. Water piping shall be insulated with thickness as tabulated below. Apply insulation to clean, dry piping with all joints tightly butted. Apply 3 (three) inch wide butt joint strips over all end joints. Insulate all fittings on piping up to 3 (three) inches IPS with insulating cement and on larger sizes with molded fittings or mitered segments to the same thickness as the adjacent insulation vapor seal with two 1/8" wet coats of Vapor Barrier Mastic reinforced with Glass Fabric extending two (2) inches into the adjacent insulation. Each change in direction of piping 1" and larger shall have a factory molded "Zeston" PVC fitting with internal insulation.

MINIMUM PIPE INSULATION						
INSULATION THICKNESS FOR PIPE SIZES						
COLD WATER LINES		0.5" THICKNESS				
Service Water Heating Tempature	Noncirculating runouts 3/4" and less not exceeding 12 ft. in length	Circulating Main & Runouts (see note)				
		PIPE SIZES				
		Up to 1-1/4"	1-1/2-2"	2"	2-1/2"	3"
100-180°F	0.5"	1.0"	1.5"	2.0"	2.5"	3.0"

*Nominal iron pipe size and insulation thickness.

f. All water and drain lines shall be insulated below handicapped lavatories and sinks where exposed in knee space area with "P" trap cover, waste arm valve/supply covers and tailpiece cover. Protective pipe covers shall be as manufactured by Truebro, Inc. 100 Series for cast p-traps.

3.3 FLASHING

3.3.1 Where mechanical items penetrate the roofing, the contractor shall coordinate location and size as required for factory vent flashing assembly. The flashing shall be furnished and installed by the Roofing Contractor in strict accordance with the Roof Manufacturer's recommendation.

3.3.2 If single ply membrane roof is used, contractor shall use factory vent flashing assembly as recommended by Roofing Manufacturer. Coordinate locations with Roofing Contractor.

3.4 CROSS CONNECTIONS

3.4.1 No plumbing fixtures, device, or piping shall be installed which will provide a cross connection or interconnection between the water supply system for drinking or domestic purpose and a polluted supply or a soil or waste pipe which will permit or make possible the back flow of sewage, polluted water, or waste into the water supply system.

3.5 TESTING

3.5.1 General: All piping and other mechanical systems provided under this contract shall be tested by the contractor and approved by the Architect before acceptance. All piping located underground shall be tested by the contractor and observed by the Architect and local utility representative before backfilling. All equipment, fuel, water, electricity and personnel required for tests shall be furnished by the contractor without additional cost to the Owner. Testing equipment shall be required for the particular test and all equipment and gauges shall be accurate and in good working order. All equipment subject to damage if given test pressures shall be removed from line before pressure is applied. When tests have been completed, before pipe is covered contractor shall notify Architect for his observation.

3.5.2 Drainage system: The drainage systems shall have all necessary openings plugged to permit the entire system to be filled with water to the level of the highest stack above the roof (10 ft. minimum). The system shall hold this water for a minimum of 15 minutes before inspection of joints. All leaks shall be repaired and the system retested and proved tight before any fixtures are connected. The Contractor shall make any other tests which may be required under the local codes. System may be sectionalized with Architects approval if necessary to construction schedule. Pressure testing is permitted when using cast iron piping only,

3.5.3 Building sewer: The sewer from the building to a manhole or main shall be plugged at the point of connection to manhole or public sewer, filled with water and observed for leakage. The system shall be tight at all points.

3.5.4 Building domestic water system: The water piping system shall be tested under a hydrostatic pressure of 100 p.s.i. applied for one hour and proved tight and free from leaks. Where water piping is located other than in vertical pipe chases, the test shall be extended to 24 hours.

3.6 STERILIZATION

3.6.1 Domestic water piping systems:

3.6.1.1 The pipe system shall be flushed with clean, potable water until dirty water does not appear at the points of outlet.

3.6.1.2 The entire domestic hot and cold water piping systems shall be thoroughly sterilized with a water/chlorine solution containing at least 50 parts per million (50 mg/L) of chlorine, and the system or part thereof shall be valved off and allowed to stand for 24 hours; or the system or part thereof shall be filled with a water/chlorine solution containing at least 200 parts per million (200 mg/L) of chlorine and allowed to stand for 3 hours. After sterilization, the solution shall be flushed from the system with clean water until the residual chlorine content is not greater than 0.2 part per million, unless otherwise directed, to satisfy all requirements of the Arkansas State Plumbing Code, Section 610. Contractor shall furnish a letter of compliance to the Architect.

3.7 CERTIFICATE OF INSPECTION

3.7.1 This contractor shall furnish to the Architect in duplicate a certificate of inspection issued by the plumbing division of the Arkansas State Health Department and shall also bear the expense for all inspection fees, etc.

3.8 PLUMBING FIXTURES AND EQUIPMENT

3.8.1 Plumbing fixtures shall be furnished and installed complete with all trimmings, escutcheons, and fittings unless otherwise specified under this item. Fixtures shall have smooth impervious surfaces free from defects and concealed fouling surfaces. Generally, all fixtures except water closets and urinals shall have the water supply above the rim. Fixtures with the supply discharge below the rim shall be equipped with backflow preventers. Angle stops, straight stops, stops integral with the faucets, or concealed type of lock-shield loose-key pattern stops for concealed supplies shall be furnished and installed with all fixtures. Exposed traps and supply pipes for all fixtures and equipment shall be connected to the rough piping system at the wall unless otherwise specified under this item. All fixtures and trimmings shall be designed to prevent the backflow of polluted water into the water supply system.

3.8.2 Fixture connections: Connections between earthenware fixtures and flanges on soil pipe shall be made absolutely gas tight and watertight with a high quality closet setting compound or with gaskets. Rubber gaskets or putty will not be permitted. Closet bolts shall be not less than 1/4" in diameter and equipped with brass nuts and washers covered with chromium caps unless otherwise specified. Fixtures and outlet flanges shall be set the proper distance from floor or wall to make a first class joint with the closet setting compound or gasket and fixture. No fixtures shall be set in place until the Architect has examined and approved such flange. All exposed piping, fittings, and trim shall be heavily chromium plated. Caulk around all water closets, lavatories, urinals and service sinks with latex caulk and finish shall be concave and smooth.

3.8.3 Fixture and equipment supports and fastenings: All fixtures and equipment shall be supported and fastened in a satisfactory and workmanlike manner. Where secured to concrete or brick walls, they shall be fastened with brass bolts or machine screws in lead sleeve type anchorage units or with 1/4" brass expansion bolts. Expansion bolts shall be of sufficient length to extend at least 3" into solid concrete or brick work. Where secured to terra cotta walls or partitions, fixtures shall be fastened with 1/4" brass toggle or through bolts. Where wood screws are used, screws shall go into solid wood, such as wood inserts, floor joists, studs, or solid pieces set between studs. Where through bolts are used, they shall be concealed by plaster. Bolts and nuts shall be hexagon and exposed bolts, nuts, cap nuts, and screws shall be chromium plated and shall be provided with chromium plated brass washers.

3.9 EXCAVATING AND TRENCHING FOR PIPING

3.9.1 Excavate to the depths indicated on the Drawings or as otherwise specified. Excavated materials not required or suitable for backfill or fill shall be removed from the site. Do such grading as is necessary to prevent surface water from flowing into trenches or other excavations. Water accumulating therein shall be removed by pumping or by other approved method. Do sheeting and shoring as may be necessary for protection of the work and for safety of personnel. Excavation shall be by open cut except that short sections of a trench may be tunneled if the pipe can be safely and properly installed and backfill can be properly tamped in such tunnel sections.

3.9.2 Trench excavation: Bottom of trench for sewer and water pipe shall be rounded so that at least the bottom quadrant of the pipe rests firmly on undisturbed soil for as nearly the full length of the barrel as proper jointing operations will permit. Grade bottom of trenches to provide uniform bearing and support for each section of pipe on undisturbed soil. Where rock is encountered, excavate to a minimum overdepth of 4" below trench depths indicated on the drawings or specified. Overdepths in rock excavation and unauthorized overdepths shall be backfilled. Whenever wet or otherwise unstable soil incapable of properly supporting the pipe is encountered, such soil shall be removed and the trench backfilled to proper grade as hereinafter specified.

3.9.3 Protection of existing utilities: Existing utility lines to be retained that are shown on the Drawings, or the locations of which are made known to the Contractor prior to excavation, shall be protected from damage during excavation and backfilling, and if damaged, shall be repaired by the Contractor, at his expense.

3.9.4 Separation of private utilities: Water, gas and sewer piping shall be installed in separate trenches. In no case shall any utility piping be installed in same trench as electrical lines, TV cable, intercom, etc. The underground water service pipe and the building drain, or building sewer shall not be less than 10 feet apart horizontally and shall be separated by undisturbed or compact earth When approved by Engineer the water and sewer may be installed in same trench provided the water is 12" above the sewer at all points. The combining of gas and water must be approved by the Engineer and the Local Administrative Authority.

3.10 BACKFILLING OF TRENCHES

3.10.1 Trenches shall not be backfilled until required pressure and other tests have been performed, inspection by utility and Code officials have been accomplished, and until the utilities systems as installed conform to requirements of Drawings and Specifications.

3.10.2 Backfill trenches with excavated materials consisting of earth, sandy clay, clayey sand, or other approved impervious materials, free from clods of earth or stones over 2-1/2" maximum dimension, deposited in 6" layers and compacted in accordance with the compaction procedures outlined in Section 31 22 00 –Grading. Tests for maximum density will be made with expense borne by Contractor. If fills fail to meet the specified densities, the Contractor shall remove and recompact the fill until specified densities are achieved.

3.10.3 The embedment for schedule 40 PVC sanitary sewer below slab and PVC domestic water on exterior shall consist of crushed stone or rock (3/4” maximum) Class 1 material which is 6" below and above the pipe. Embedment for PVC sanitary and storm sewer piping exterior of building shall be manufactured angular, granular material, 1/4 to 1-1/4 inches in size (no fines), 6" below and above the pipe. The remaining backfill shall be compacted as outlined in Section 31 22 00 – Site Grading. The maximum bury of PVC pipe shall be sixteen (16) feet.

3.10.4 Backfill for trenches not below building, paving, sidewalks, etc., may be compacted to 90% Standard Proctor in accordance with ASTM D698. Backfill may be SB-2 below paving or asphalt and select native fill below topsoil. Select fill material used for pressure PVC pipe bedding must meet AWWA-C605 Standards (3/4” maximum for angular rock and 1 1/2” maximum for rounded rock).

3.10.5 Tests for displacement of sewers: After the trench has been backfilled to 2 feet or more above the pipe, if the pipe shows poor alignment, displaced pipe, or any other defects, such defects shall be remedied by the Contractor at his expense.

3.11 CUTTING AND PATCHING

3.11.1 This Contractor shall do all cutting and patching made necessary by this work, but in no case shall be cut through or into any structural member without written permission from the Architects. This Contractor shall furnish and pay for the installation of all sleeves required for his work.

3.12 DEFECTIVE WORK

3.12.1 If inspections or tests show defects such defective work or material shall be replaced and inspection and tests repeated. All repairs shall be made with new material. Caulking of screwed joints or holes in piping work will not be acceptable. Floor drains that do not have a floor slope to the strainer shall be removed and reset with slope at no additional charge.

3.13 CLEANUP

3.13.1 When the Contractor's part of the work is finished, he shall remove from the premises all tools, machinery, debris, etc., and shall leave the premises free from all obstructions.

3.14 GUARANTEE

3.14.1 This Contractor shall furnish a written certificate, guaranteeing all materials, equipment, and labor furnished by him to be free of all defects for a period of one (1) year from and after, the date of final acceptance of the work by the Owner, and this Contractor shall further guarantee that if any defects appear within the stipulated guaranty period, such work shall be replaced without charge.

3.14.2 This guarantee shall be extended to include the capacity and integrated performance of the component parts of the various systems, in strict accordance with the true intent and purpose of the specifications. The Contractor shall conduct such tests as are herein before specified, or as may be required by the Architects, to demonstrate the capacity and performance ability of the various systems and their component parts.

3.15 HANDICAPPED MOUNT HEIGHTS

3.15.1 Fixture heights shall be as follows unless noted otherwise in Fixture Schedule:

Lavatory	2'10" AFF to rim
Water Closet	17 3/4" AFF to top of seat

3.15.2 All handicapped fixtures to meet requirements of the Americans with Disabilities Act (ADA) 2010.

3.15.3 All water and drain lines shall be insulated on handicapped lavatories where exposed in knee space area. See paragraph 3.2.2.

END OF SECTION

The Engineer of Record for Restroom Facility, SAU Tech, Camden, Arkansas Division 23 of the specifications.

March 17, 2025

SECTION 23 05 00

COMMON WORK RESULTS
FOR HVAC

PART ONE - GENERAL

1.01 CONDITIONS OF THE CONTRACT

A. The Conditions of the Contract (General, Supplementary, and other Conditions) and the General Requirements are hereby made a part of this Section.

B. This Section is a Division 23 Basic Materials and Methods Section and is a part of each Division 23 Section.

C. The Contractor shall be responsible for construction coordination of all work described in this section with the work specified in other sections of the specifications and shown on the Drawings. In advance of construction, coordinate and work out any minor problems with other trades to avoid conflicts therewith. However, if other minor problems are encountered, bring these problems to the attention of the Architect, who will make the final decisions as to correction.

1. All references and notations pertaining to coordination by the Contractor shall apply to constructions coordination. The Architect and Engineers have, to the best of their ability, coordinated the drawing and specifications to avoid conflicts between specified equipment and space required for such, and between architectural and engineering disciplines.
2. If substituted equipment (approved equal) is to be used, the Contractor shall revise the 1/8" = 1'- 0" & 1/4" = 1'- 0" scale floor plans shown on the Drawings, indicating to scale, the equipment to be used. The purpose of these revised scale plans is to identify any problems with substituted equipment, and access and clearance requirements are maintained. These revised scale plans are to be submitted with the substituted equipment submittals.
3. Sheetmetal contractor shall provide 1/4" = 1'- 0" scale floor plans showing of ductwork systems with associated plumbing and electrical systems. The purpose of these plans will be to insure that the contractor is coordinated with each subcontractor and to locate all ductwork system, fire dampers and smoke dampers. If these plans are not submitted with equipment submittals, contractor shall incur all costs of engineer's additional review.

1.02 WORK INCLUDED

A. This section consists of General Requirements and Standard Specifications covering certain parts of work under Division 23 and is supplemented by other Division 23 sections covering additional work, requirements, and materials specifically applicable to the work of each section.

B. Extent of HVAC related work required by this section is indicated on drawings and schedules, and/or specified in other Division 23 sections.

C. Types of HVAC related work specified in this section include the following:

1. Access to HVAC Work: Access doors in walls, ceilings, and floors. Removable cover plates in walls, ceilings, and floors.

1.03 CODE AND REGULATORY AGENCY COMPLIANCE

A. Provide work and materials in full accordance with the latest rules and regulations of the following:

1. Occupational Safety and Health Administration
2. Arkansas HVAC Code, Current Edition
3. Architectural Barriers Act of 1968: Public Law 90 480
4. ANSI A171.1
5. Arkansas Fire Code, Vol. I & Vol. II, Current Edition
6. National Fire Protection Association 101, Life Safety Code
7. ADA Code
8. Other applicable state and local laws and codes

1.04 QUALITY ASSURANCE

A. Manufacturers: Only firms regularly engaged in manufacturing of the HVAC services, equipment and specialties of types and sizes required, whose products have been in satisfactory use in similar service shall be used on this project.

B. Installers Qualifications: Only firms with successful installation experience on projects with work similar to that required for this project shall perform work on this project.

1.05 SUBMITTALS

A. Comply with Section 01 33 23, Submittals. Provide for each type of equipment material or information for installation.

B. Product Data, Access Units: Submit manufacturer's data for each type access door assembly, including setting drawings, templates, instructions, and directions for installation of anchorage devices.

1.06 SITE EXAMINATION

A. Examine site, verify dimensions and locations against Drawings, and inform self of conditions under which work is to be done before submitting proposal. No allowance will be made for extra expense on account of error.

B. Information shown relative to existing services is based upon available records and data but is approximate only. Make minor deviations found necessary to conform with actual locations and conditions without extra cost. Verify location and elevation of utilities prior to commencement of excavation for new piping or its installation.

1.07 PLACEMENT OF EQUIPMENT AND WORK

A. The placement of substituted (approved equal) equipment and specified equipment in the locations shown on the drawings shall be the Contractors responsibility. The Contractor shall verify that all substituted and specified equipment will fit, operate and have clearances and accessibility for maintenance, inspections, and operation within the space shown on the drawings. If the Contractor determines that substituted equipment or specified equipment will not fit and/or operate within the space shown on the Drawings and/or clearances and accessibility cannot be achieved, he shall bring these problems to the attention of the Architect who will make the final decision as to the method of correction. Corrections to work already completed and in place shall not constitute an increase in the contract amount. The Contractor shall be responsible and incur any cost to allow for 30" clearance on two adjacent sides of equipment or on all sides if electrical access which is required.

B. Move equipment and/or work into spaces through openings provided or located in the spaces during construction, as required.

C. Do disassembling and reassembling of equipment or other work necessary to accomplish this requirement without extra cost to the Owner. Do not disassemble or reassemble any equipment in order to locate it in the space.

1.08 MATERIAL LIST AND SUBSTITUTIONS

A. Comply with Supplementary General Conditions.

1.09 MAINTENANCE AND OPERATING INSTRUCTIONS

A. Incorporate complete operating instructions including starting, stopping, and description of emergency manual operation methods for the following:

1. Heating Systems
2. Ventilating Systems
3. Provide charts and diagrams as required.
4. Provide operating manual for any equipment listed in individual sections of the specifications.

B. Provide maintenance instructions for each item of individual equipment covering pertinent maintenance data, such as lubricants to be used, frequency of lubrications, inspections required, adjustments, belt and pulley sizes, etc.

C. Provide parts bulletins containing manufacturer's bulletins with parts numbers, instructions, etc., for each item of equipment. Strip bulletins so that useless bulk is avoided.

D. Post service telephone numbers and/or addresses in an appropriate place as designated by the Architect.

PART TWO - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. Mention herein or on Drawings requires that this Contractor provide each item listed of quality noted or acceptable equal. All material shall be new, full weight, standard in all respects, and in first class condition. Provide materials of the same brand of manufacture throughout for each class of material or equipment where possible. Materials shall be tested within the Continental United States by independent, nationally recognized testing agency and shall be listed in accordance with testing agency requirements.

B. The grade or quality of materials desired is indicated by the trade names or catalog numbers stated herein. The catalog numbers and specification are for bidding purposes only. Actual equipment submitted and ordered shall be verified to be appropriate for indicated use.

C. Dimensions, sizes, and capacities shown are a minimum and shall not be changed without permissions of the Architect/Engineer.

2.02 MATERIALS FURNISHED

A. Identify all materials and equipment by manufacturer's name and model number. Remove unidentified materials and equipment from site.

B. Equipment specified by manufacturer's number shall include all accessories, controls, etc., listed in catalog as standard with equipment. Furnish optional or additional accessories as specified.

C. Equipment or material damaged during transportation, installation, or operation is considered as totally damaged. Replace with new equipment. Variance for this permitted only with written consent.

PART THREE - EXECUTION

3.01 DRAWINGS AND COORDINATION

A. General arrangement and location of piping, ductwork, equipment, etc., are shown on Drawings or herein specified. Careful examine other work that may conflict with this work. Install this work in harmony with other crafts and at proper time to avoid delay of work.

B. In advance of construction, work out minor changes and relocations to suit actual conditions and work of other trades to avoid conflict therewith. Any change in rerouting ductwork, piping and equipment shall not be cause for additional cost.

C. The Sub Contractor shall verify that the measurement of constructed rooms, spaces and areas are as shown on the Drawings. Any measurement deviation and/or discrepancies shall be brought to the attention of the Architect who will make the final decision as to the method of correction. Corrections to work already completed and in place shall be done at the Contractor's expense.

D. In addition, obtain all necessary information from the other trades regarding centers of partitions, walls, location of plumbing mains, fire sprinkler mains, and electrical conduits, ducts, pipes, etc., in order that pipes equipment, and ductwork may be placed in their correct positions.

E. Execute any work or apparatus shown on the Drawings and not mentioned in the specifications, or vice versa, the same as if specifically mentioned by both. Omission from Drawings or specifications of any minor details of construction, installation, materials or essential specialties does not relieve this Contractor from furnishing same in place complete.

F. Furnish and install any incidental work not shown or specified which can reasonably be inferred as part of the work and necessary to provide a complete and workable system.

G. Furnish materials and work at proper time to avoid delay of the work.

3.02 ACCESS TO HVAC WORK

A. Install access units where required or where conditions require, in accordance with manufacturer's written instructions, in compliance with recognized industry practices.

B. Coordinate with other work, include substrate construction work, as necessary to interface installation of access units with other work.

C. Locate each removable access unit accurately in relation to HVAC work requiring access.

D. Provide adequate temporary support or attachment to framing or formwork, that units will not be dislocated during construction of substrates.

E. Set frames accurately in position and securely attach to supports with face panels plumb or level in relation to adjacent finish surfaces.

F. Adjust hardware and panels after installation for proper operation.

G. Remove and replace panels or frames which are warped, boxed, or damaged.

3.03 CLOSING IN ON UNINSPECTED WORK

A. Do not allow or cause work installed to be covered up or enclosed before it has been inspected and tested. Should work be enclosed or covered up before it has been inspected and tested, Contractor shall uncover work at own expense. After it has been inspected and tested, make repairs necessary to restore work of other Contractors to condition in which it was found at time of cutting.

3.04 PROJECT MODIFICATIONS

A. During the progress of construction, if such conditions arise that require revisions, modifications, or relocations to any HVAC equipment HVAC ductwork, HVAC piping, plumbing piping or materials incorporated in this project, such alterations shall be immediately called to the attention of the Architect. Contractor shall then prepare necessary Drawings showing proposed changes. Submit proposed changes for review to the Architect prior to actual revision of work in the field. There shall be no additional cost incurred for these changes.

B. Two (2) sets of Drawings showing all revisions shall be immediately presented to Architect for his records. Maintain additional copies on the project as necessary to comply with "RECORD DRAWINGS" requirement of the General Requirements.

C. Incorporate all revisions into record Drawings. These drawings shall be up to date at the end of every week and shall be available to Architect or Engineer at any time for inspection.

3.05 GUARANTEE

A. Be responsible for work done and material installed under these plans and specifications. Repair or replace, as may be necessary, any defective work, material, or part which may show itself within one (1) year of filing of Notice of Completion and be responsible for damage to other materials, furnishing, equipment, or premises caused by such defects during this period, if in the opinion of the Architect said defect is due to imperfection of material or workmanship. Provide all such work and materials at no cost to Owner.

B. Be responsible for damage to any part of premises during guarantee period caused by leaks or breaks in work furnished and/or installed under this section.

C. Replace refrigerant, lubricants, or gases lost as result of defects, breaks, or leaks in work.

3.06 RECORD DRAWINGS

A. In addition, furnish one (1) tracing showing all outside utility connections, piping, etc., installed under this contract. Locate and dimension all work with reference to permanent landmarks.

B. Match all symbols and designations used in contract Drawings when preparing "Record" Drawings.

C. Indicate clearly and correctly all work installed differently from that shown, and maintain records up to date as work progresses. Include invert elevations of pipes below grade of floor, the floor lines, plugged wyes, tees, caps, exact locations and sizing or piping, location of valves, and the like. Dimension locations from structural points.

D. Properly identify all stubs for future connections as to locations and use by setting of concrete marker at finished grade in manner suitable to Architect.

3.07 MAINTENANCE DATA

A. Submit maintenance data and parts lists for all HVAC systems materials and products. Include product data, shop drawings, and Record Drawings in the maintenance manual all in allowance with the requirements of Division 1.

3.08 CLEANING UP

A. Comply with Supplementary General Conditions.

END OF SECTION

The Engineer of Record for Restroom Facility, SAU Tech, Camden, Arkansas Division 26 of the specifications.

March 17, 2025

Section 26 05 10

COMMON WORK RESULTS
FOR ELECTRICAL

PART ONE - GENERAL

1.1 DESCRIPTION

1.1.1 Work included: This specification includes the furnishing of all labor, materials, tools, equipment, drayage, rigging, fees, permits, etc., unless specifically furnished by others, necessary or reasonably required, for the complete installation and operation of all the work as herein specified or as shown on the Drawings. The entire work shall be delivered in a complete and perfect working order to the satisfaction of the Architect.

1.1.1.2 The scope of the work shall include the general listings as shown below in addition to which this contractor shall furnish and install all required conduit, wire, fittings, boxes, connectors, hangers, supports, sleeves, poles, concrete bases and other such equipment, items, and appurtenances as may be required for a complete and operative system or systems, including all parts auxiliary to the system or systems whether or not specifically set forth herein and/or shown on the drawings.

1.2 APPLICABLE GENERAL SPECIFICATIONS AND REGULATIONS

1.2.1 The General Conditions, Supplementary Conditions, and other pertinent documents as issued by the Architect, are a part of these specifications and shall be complied with in every respect.

1.2.2 All electrical work and equipment, in whole or in part, shall conform to the applicable portions of the latest edition of the following ordinances, codes, and regulations in effect on the date of invitation for bids, which shall form a part of this specification.

A. National Electrical Code

B. American Gas Association Recommended Practices

C. National Fire Protection Association Recommended Practice

D. Local, City and State Codes and Ordinances

E. American Society of Mechanical Engineers Plumbing and Air Conditioning Codes

1.2.3 In case of difference between building codes, specifications, state laws, local ordinances, industry standards, and utility company regulations and the contract documents, the most stringent shall govern.

1.2.4 Non-compliance: Should the subcontractor perform any work that does not comply with the requirements of the applicable building codes, state laws, local ordinances, industry standards and utility company regulations, he shall bear all cost arising from correcting the deficiencies.

1.3 FEE, PERMITS, AND INSPECTIONS

1.3.1 All required fees, permits and inspections shall be obtained and paid for by the electrical subcontractor for all electrical work.

1.3.2 This subcontractor shall upon completion of his work, furnish a certificate of final inspection to the Architect from the inspection department having jurisdiction.

1.3.3 Should any part of the drawings or specifications be found to be in conflict with applicable codes or ordinances, the contractor shall notify the Architect before submitting his bid. After entering into the contract, the Contractor shall complete all work necessary to meet the requirements of all codes or ordinances without additional expense to the Owner.

1.4 INSPECTION

1.4.1 The Contractor shall notify the Architect when the work reaches the following stages of construction, so that inspection of the work may be accomplished prior to the covering up of these items:

A. All underground or under slab items in place and tested, but not covered.

B. Interior items prior to being concealed.

C. Tests.

1.4.2 The Contractor shall give to the proper authorities all requisite notices relating to the work under his charge, shall afford all authorized inspectors every facility for inspection and all violations of the law shall be the responsibility of the Contractor.

1.4.3 All materials and each part or detail of the electrical work shall be subject at all times to observation by the Engineer, and the Contractor shall be held strictly to the true intent of the electrical specifications in regard to quality of materials, workmanship, and the diligent execution of the contract. Such observation may include mill, plant, or shop. The engineer shall be allowed access to all parts of the work and shall be furnished with such assistance and information by the Contractor as is required to make a complete and detailed observation.

1.5 SUBMITTALS

1.5.1 Contractor shall provide shop drawings and required field drawings as required or instructed by the Architect. Deviation from the drawings and specifications shall be called to the attention of the Architect in writing at the time of submission of shop drawings. The Engineer's approval of any drawings shall not release the subcontractor from responsibility for such deviations. The subcontractor shall check the work described by the catalog data with the engineer's contract documents for deviation and errors. All shop drawings submitted shall bear signed certification that the Contractor has carefully checked shop drawings and found them to be correct and that they comply with plans and specifications. The Architect will not review any shop drawings which are not accompanied by this certification.

1.5.2 The Contractor shall furnish electronic shop drawings using the submittal procedure as detailed in Section 01 33 23. Shop drawings are required even though the equipment is as specified.

1.5.3 All submittals shall give complete catalog data for every manufactured item of equipment and all components to be used.

1.5.4 Where equipment requiring different arrangement of connections from those shown is approved, it shall be the responsibility of the subcontractor to install the equipment to operate properly and in harmony with the intent of the contract documents, and to make all change in the work required by the different arrangement of connections.

1.5.5 Submittals shall be submitted not later than thirty (30) days after awarding of the contract and before beginning the fabrication of any material or the installation of any equipment. Failure to submit in this period shall constitute grounds for rejecting the substitution. The Contractor may be requested to install proposed substitution adjacent to item specified for review by the Architect or the Owner.

1.5.6 The subcontractor shall correct the shop drawings, to conform to any corrections and/or changes requested by the Engineer.

1.5.7 Electrical submittals must be typewritten and factory approved. Long hand submittals and field sketches will not be accepted. Submittals shall indicate proper numbering sequence of all circuit breakers. Submittals not reflecting the sequence will be returned without further consideration.

1.5.8 Should a substitution be approved for use in lieu of that specified and should the substitute material prove defective or otherwise unsatisfactory, in judgement of the engineer, for the service required within the guaranty period, the contractor shall replace the material or equipment as originally specified without additional cost to the Owner.

1.5.9 If submittals are "not approved" or marked "revise and resubmit", the complete package must be corrected and returned for review. Partial submittals, including only the items not approved, are not acceptable.

1.5.10 The contractor shall provide shop drawings on, but not limited to, the following:

A. Distribution/Gear/Disconnects

B. Lighting Fixtures

C. Wiring Devices/Coverplates

D. Wire/Cable

E. Auxiliary Systems

1.6 INTENT

1.6.1 The intent of the electrical drawings and specifications is that the subcontractor shall furnish all labor and materials, equipment and transportation necessary for the proper execution of the work unless specifically noted otherwise. The work of this subcontractor as related to the other trades is shown in its majority on the drawings, but this subcontractor shall thoroughly examine the drawings and specifications relating to other trades in order to include all necessary work in his bid. No additional payments shall be considered for failure to properly interpret the responsibility to other trades. The subcontractor shall do all the work shown on the drawings and described in the specifications and all incidental work considered necessary to complete the work ready for use, occupancy, and operation by the Owner. The Architect reserves the right to make any reasonable changes in the locations indicated without cost to the Owner.

1.6.2 If there be conflicting variance between the drawings and specifications, the provisions of the most stringent shall control. In case of conflict between the General Conditions of the Contract or any modifications thereof and the electrical specification, the electrical specification shall control.

1.7 SITE INSPECTION

1.7.1 This contractor shall visit the site before submitting a bid on the work and shall thoroughly acquaint himself with conditions to be met and the work to be accomplished. Failure to comply with this shall not constitute grounds for any additional payment in connection with removing or modifying any part of the existing installation or installing any new work.

1.8 CONSTRUCTION DRAWINGS

1.8.1 At the completion of this project the Contractor shall provide the Owner two (2) sets of plans showing all piping systems, control systems, fixtures and equipment installed by this Contractor. These Drawings shall be correct in every detail and shall incorporate all changes made in the course of the conduct of the construction. These drawings shall be prepared in such a manner as to enable the Owner to properly operate, maintain and repair both exposed and concealed work.

1.9 UTILITIES, LOCATIONS, AND ELEVATIONS

1.9.1 Locations and elevations of the various utilities, included within the scope of this work, have been obtained from utility maps and/or other substantially reliable sources and are offered separate from the contract documents as a general guide only, without guarantees as to accuracy. This Contractor shall examine the site and shall verify to his own satisfaction the location and elevation of all utilities and shall adequately inform himself of their relation to the work before entering into a contract.

1.10 SOIL CONDITIONS

1.10.1 This specification and the drawings in no way imply as to the conditions of the soil to be encountered. When excavating may be required in execution of the work, this contractor agrees that he has informed himself regarding conditions affecting the work and labor and materials required, without recourse to any representation as to soil conditions that may appear, or seem to be implied, in any portion of the contract documents.

1.11 CUTTING AND PATCHING

1.11.1 This Contractor shall do all cutting and patching made necessary by his work, but in no case shall he cut through or into any structural member without written permission of the Architects. This Contractor shall furnish and pay for the installation of all sleeves required for his work.

1.12 EQUIPMENT FURNISHED UNDER OTHER SECTIONS

1.12.1 This Contractor shall furnish all necessary material and labor for the connection to the mechanical and electrical systems of all fixtures and equipment requiring such connections, and which fixtures and equipment are furnished by the Owner or are specified under other section of these specifications. If any such fixtures or equipment are not delivered prior to final acceptance, the services shall be capped or plugged at walls or floors as directed, and shall be left ready for future connection.

1.13 DEFECTIVE WORK

1.13.1 If inspections or tests show defects such defective work or material shall be replaced and inspections and tests repeated. All repairs shall be made with new material.

PART TWO - PRODUCTS

2.1 LIGHT FIXTURES

Contractor shall furnish, install and adjust complete and ready to operate each and every light fixture shown and scheduled on the drawings.

A. This Contractor shall exercise extreme care in laying out his work so as to insure that ceiling outlets are located symmetrically within the area and with respect to air conditioning, heating, and ventilating outlets, tile patterns, finishes, etc. Any errors shall be corrected at no additional cost. This contractor shall check with the ceiling contractor for type of ceiling and order fixtures that are compatible with ceiling material as required to support fixtures. See reflected ceiling plan for exact location of fixtures.

B. The orientation of light fixtures in the same space shall match and be approved by Architect.

C. Contractor shall power 0-10V low-voltage wiring to all fixtures throughout circuit whether shown or not.

D. Occupancy sensor and lighting control manufacturers specified shall provide layout shop drawings prior to beginning work.

2.2 CONDUCTORS

2.2.1 The Drawings reflect sizes for copper conductors (no aluminum). Conductors shall be tested for opens and grounds before energizing. Suitable lugs for aluminum to copper connections at panels, motors, etc., shall be included. In no case shall wire be smaller than #12 A.W.G. All branch circuit wiring shall be solid N.E.C. type THWN or THHN for size #10 and smaller, with THHN where fluorescent fixture channel is used as a wireway.

All feeder wire shall be type THHN 90°C to all panels and motors of one horsepower and above. Aluminum wire shall not be used.

2.2.2 Insulation resistance tests shall be made in accordance with the National Electrical Code in the presence of the Architect or his representative, and the results filed with the Architect and Engineer before final acceptance.

2.2.3 If conductors are larger than set screw terminal provisions in panelboards, switches, etc., contractor shall furnish Burndy Type YE-P compression adaptors or AYP connectors as required. Adaptor shall match aluminum or copper as required. Cutting strands of conductors will not be allowed.

2.3 CONDUIT

2.3.1 Conduit below grade shall be Schedule 40 PVC with rigid 90° elbows, rigid steel or IMC. Interior branch circuits above floor slab shall be EMT. Exterior exposed conduit shall be galvanized rigid steel (RSC) only.

A. Electrical metallic tubing shall be employed for all branch circuits. (Route all branch circuits above grade unless specifically shown or noted otherwise.)

B. All steel conduit shall be galvanized inside and out, and aluminum conduit may be used only when soft nosed fish tapes are used to prevent scoring. No conduit or E.M.T. smaller than three quarter inch (3/4") IPS shall be used unless noted otherwise.

C. The conduit system shall be electrically continuous for grounding purposes. Bond across all insulating bushings.

D. Provide four 3/4" empty conduit from each flush mounted branch panel board to the attic or joist space.

E. Flexible metal conduit shall not be smaller than 1/2" except as allowed in Article 350-3 of N.E.C. Contractor shall not use lengths longer than 6' and shall be supported as per 350-4 N.E.C. Flexible metal conduit shall not be used to go from light fixture to light fixture. Contractor shall securely anchor outlet box above each group of fixtures and then install flexible conduit to each fixture.

F. Conduit 1" and smaller below slab shall be installed 6" below compacted fill. Conduit larger than 1" shall be 18" below compacted fill.

G. Electrical contractor is responsible for installation of all conduit including power and all mechanical control systems.

H. Install 3/4" EMT from all T-stat locations to 6" above ceiling. Verify location with Mechanical Contractor.

I. Feeders and branch circuits installed outside of building slab shall be a minimum of 24" below finished grade.

J. See section 3 for support and securing of conduit.

K. MC and NM cables are not acceptable.

2.4 RACEWAY FITTINGS

2.4.1 Insulated bushings must be provided for all conductors number four (#4) and larger when entering or leaving a conduit. All rigid steel conduit without insulated bushings shall have malleable iron bushings.

2.4.2 Couplings, whether threadless or not, shall be run up tight to assure electrical continuity. Conduit threads must be devoid of non-conductive coatings, and connectors must be watertight where buried in concrete or fill.

2.4.3 Outlet, pull, and junction boxes shall be of sufficient sizes to properly nest the conductors passing in and out. Size and gauge shall not be smaller than that required by the National Electrical Code. All non-weatherproof outlet boxes shall be galvanized steel. All free-standing weatherproof outlet boxes shall be cast aluminum, hub or hubless, equal to Killark FS Series. Pull and Junction Boxes shall be as noted on plans.

2.4.4 Set screw and indenter fittings are not allowed.

2.5 SAFETY SWITCHES

2.5.1 Safety switches shall conform to governing industry NEMA Standards, heavy duty. They shall be listed by Underwriters Laboratories, Inc., where applicable. All safety switches shall be front operated with factory enamel finishes. All switches shall be either NEMA TYPE 1 or 3R, depending on moisture conditions or direct exposure to exterior conditions. Furnish complete with equipment ground kits.

2.6 DEVICES AND PLATES

2.6.1 Devices shall be equal to as follows unless noted otherwise on plans:

Switch, single pole (S), Leviton CS120-2*
Switch, double pole (S2), Leviton CS220-2*
Switch, three way (S3), Leviton CS320-2*
Receptacle, duplex, Leviton 5342*
Receptacle, clock outlet, Leviton 5361-CH
Receptacle, duplex, WP, G5362-WT* with TAYMAC MX4280S cover
Receptacle, ground fault interrupter, Leviton 7899-SG*
Receptacle, 2 pole, 3 wire, 20A, 250V, Leviton 5461
Receptacle, commercial grade, tamper-resistant, 5362-SG*
Receptacle, commercial grade, GFCI, tamper Resistant, G5362-WT*

2.6.2 Plates: All non-weatherproof coverplates shall be Leviton nylon plates, color as noted by Architect. Provide horizontal or vertical gang plates where more than one device is concurrent at the same elevation or location. For interchangeable door mullion switches use narrow cover plates as manufactured by Arrow-Hart T-1650. Furnish blank plates for outlets without a device. All non-weatherproof coverplates throughout project shall be of the same material, color, finish and design and shall match any existing device coverplates as directed by architect.

A. Blank weatherproof cover plates shall be cast aluminum with rubber gasket equal to Killark FSBC Series.

2.6.3 Switches for use on 277 volt system, grouped in outlet boxes shall have a permanently installed shield as directed by N.E.C. 380-8.

2.6.4 Heights: Switches shall be installed at 46" centerline to finish floor on strike side of doors. Receptacles and other outlets are at eighteen inches (18") centerline to finish floor unless noted otherwise on the drawings. Where receptacles occur where built-in cabinets or table tops exist, they shall be installed above working surfaces as directed. All receptacles to have grounding slots below parallel slots.

2.6.5 All of the following receptacles shall be GFCI type:

A. Receptacles in bathrooms or within 6’-0” of a sink.

Notes 1: Receptacles for electric water coolers shall be on GFCI breaker.
2: Feed through protection of outlets is not allowed.

2.6.6 All exterior outlets and kitchen stub-up outlets shall be weatherproof boxes.

2.7 CIRCUIT BREAKER/PANELBOARDS

2.7.1 Furnish and install circuit breaker panelboards as indicated in panelboard schedule. Panelboards shall be of a dead front safety type equipped with thermal magnetic molded case circuit breakers. Panelboards shall be as manufactured by Cutler-Hammer, General Electric or Square D. Use bolt on breakers only. Two section panelboards shall be of equal size in both sections.

2.7.2 Panelboard doors shall have a cylinder tumbler type lock, and all doors shall be keyed alike, but different from telephone cabinets. On doors more than 48 inches high, provide a three point catch and lock; for double tub panelboards provide two reverse acting doors mounted. A complete typed circuit directory shall be provided, on the inside of each door identifying each circuit and load fed by that circuit. All boxes shall be factory painted gray.

2.7.3 Circuit breakers shall be quick-make, quick-break, thermal magnetic trip indicating, and have common trip on all multipole breakers. Handle ties will not be accepted.

All panelboards and circuit breakers shall be fully rated to AIC rating as noted on drawings. (No series rating allowed.)

2.7.4 All sub-feed breakers shall be connected to line side of main circuit breaker.

2.7.5 All circuit breakers shall be in proper sequence according to panel schedule. Factory rearranged sequence will not be accepted. See Section 1.5.7.

2.7.6 Each panelboard shall be labeled with a bakelite name tag indicating voltages, phase, and wire, and panelboard identification. See Section 2.10. Each circuit shall be identified by numbers furnished by factory as 1 thru 42 or 1 thru 84 in 2 section panelboards. Any change or alteration in numbering shall be corrected by contractor at his expense.

2.7.7 Main Circuit Breakers “MCB” shall be Separate Vertically Factory Mounted on bus bars and not “back-fed” branch style. Service Entrance Main Breakers shall also have barriers to comply with UL 67 and NEC 230.

2.8 GROUNDING

2.8.1 The service entry equipment, including switchboard frame and grounding bus and all outgoing feeder and/or motor supply connections shall be permanently and effectively grounded as required per Article 250.50 of the National Electric Code. The grounding electrode system shall consist of the following:

A. 1” metal water pipe with connection within 5’0” of point of entry to building.

B. Concrete encased rebar.

C. Metal frame of the building or structure.

D. 3/4” x 10’0” ground rod.

E. Ground ring consisting of 20’0” of #2 AWG base copper conductor.

Use Burndy Bar Connector or Cadwell to attach to water line. Contractor to verify that the resistance to ground is less than 25 ohms. Ground wire to panel shall be in PVC. All connection shall be visibly inspected and approved by Engineer.

2.9 NAME PLATES

2.9.1 All electrical equipment, timer switches, safety switches, starters, panels, and transformers shall have black or red and white laminated bakelite nameplates securely fastened to device.

A. Nameplate size shall be 1-1/2" x 4" with beveled edges and 1/4" letters.

B. Nameplate shall include panel or equipment designation. Include amperage, voltage, phase and wire for the panels, and "panel fed from" for the equipment.

C. Nameplates shall be installed to panels, cabinets, switches, etc. with rivets or sheet metal screws. Plates attached to drywall or block on interior may be adhesive back.Nameplates for normal equipment shall be black, emergency equipment shall be red. Letters shall be white.

D. Embossed stick back will not be allowed.

E. Name plates for switches may be omitted for furnaces when the equipment which is serviced is obvious to service technicians.

F. Where equipment disconnect is at panel, secure nameplate (with unit designation and “Fed From Panel”) to the equipment.

G. Samples:

PANEL A 225A, 120/208V, 3P, 4W

CU-1 FED FROM PANEL E

2.10 SYSTEMS CONDUIT

2.10.1 All conduit shall be left sealed against moisture collection, and a number sixteen (#16) gauge galvanized pull wire left between each box or outlet for the installer. Provide a minimum of 1” EMT to all systems boxes to include, but not limited to: telecom, data, voice, video, audio, security, surveillance and fiber. (Fire alarm and intercom shall be 3/4” EMT minimum.)

PART THREE - EXECUTION

3.1 EQUIPMENT AND MATERIAL

3.1.1 In order to establish standards of quality, the engineer has, in the detailed specifications referred to certain products by name and catalog number. This procedure is not to be construed as eliminating from competition other products of equivalent or better quality by other manufacturers where fully suitable in design. Where multiple manufacturing sources are shown on the drawings or herein specified, the subcontractor shall limit his bid to one of those manufacturers.

3.1.2 The subcontractor shall abide by the engineer's judgement when proposed substitute materials or items of equipment are judged to be unacceptable and shall furnish the specified material or item of equipment in such case. All proposals for substitution shall be submitted in writing by the General Contractor and not by the electrical subcontractor or material suppliers. The engineer will approve or disapprove proposed substitution in writing within a reasonable time and, if any request for a substitution is rejected, the Contractor shall automatically furnish material specified. No substitute materials shall be used unless approved in writing.

A. Delivery and storage: Equipment and materials shall be delivered to the site and stored in original containers, suitably sheltered from the elements. All items subject to moisture damage (such as coils of dry transformers) shall be stored in dry, heated spaces.

B. Protection: Equipment shall be tightly covered and protected against dirt, water, chemical, or mechanical damage or theft. At the completion of the work, fixtures, equipment, and materials shall be cleaned and polished thoroughly and turned over to the Owner in a condition satisfactory to the Architect. Damage or defects developing before acceptance of the work shall be made good at no expense to the Owner.

C. Main switchboard shall be provided with a heater of type approved by Architect. Heater shall be installed in switchboard, and shall remain as directed by Architect from time of installation until final acceptance.

D. Manufacturer's directions: Shall be followed completely in the delivery, storage, protection and installation of all equipment and materials. The electrical subcontractor shall promptly notify the Architect in writing of any conflict between any requirements of the contract documents and the manufacturer's directions and shall obtain the Architect's written instructions before proceeding with the work. Should this subcontractor perform any work that does not comply with the manufacturer's directions or such written instruction of the Architect he shall bear all costs arising in connection with correcting the deficiencies.

3.2 COORDINATION

3.2.1 This subcontractor shall compare the electrical drawings and specifications with the drawings and specifications of all other trades, and shall report any discrepancies to the Architect and obtain from him written instruction for changes necessary in the electrical work. The electrical work shall be installed in cooperation with other trades installing inter-related work. Before installation, the subcontractor shall make proper provision to avoid interferences in a manner approved by the engineer. All changes required in the work of the contractor caused by his neglect to do so shall be made by him at his own expense.

3.2.1.1 The orientation of Light Fixtures in the same space shall match and be approved by Architect.

3.2.1.2 Contractor shall power 0-10V low-voltage wiring to all fixtures throughout circuit whether shown or not.

3.2.1.3 Occupancy sensor and lighting control manufacturer specified shall be provided layout shop drawings prior to beginning work.

3.2.1.4 Anchor bolts, sleeves, inserts and supports shall be installed by this subcontractor where required. Any expense resulting from the location of such appurtenances shall be borne by the electrical subcontractor.

3.2.1.5 Slots, chases, openings, and recesses: Slots, chases, openings, and recesses through floors, walls, ceilings, and roofs, as specified, will be provided by the electrical subcontractor in the proper material, and he shall properly coordinate the location. No structural member shall be disturbed in any manner without written permission of the Architect.

3.2.1.6 Sleeves: All conduits passing through masonry construction shall be fitted with 20 gauge galvanized steel sleeve. Each sleeve shall extend through its respective floor or wall, and shall be cut flush with each surface, except floor sleeves which shall be extended to a minimum of 1 inch above the floor. Unless otherwise noted, the sleeve shall be two sizes larger than the overall outside diameter of the conduit. Sleeves thru non-fire rated structure may be PVC. Sleeves in walls below grade shall be a pre-engineered assembly equal to LINK-SEAL as manufactured by Thunderline Corporation; assembly shall be sized and installed in accordance with manufacturer's recommendations. All sleeves shall be fastened in place prior to pouring concrete and caulked with flexible caulking or LINK-SEAL device as applicable. Sleeves or conduits shall not be installed in spread footing. Core drilling will not be permitted without consent of the structural engineer. Sleeves in grade beams shall be installed near center.

3.3 PENETRATION WALL/FLOOR FIRESTOP

3.3.1 All fire walls, fire barriers, fire partitions, upper floors of multi-story buildings where pipe or ducts pass through, into, or out of, shall be protected by an approved penetration firestop system installed as tested in accordance with ASTM E 814, with a minimum positive pressure differential of 0.01 inch of water and shall have an F rating of not less that the required fire-resistance rating of the wall penetrated.

3.3.2 A UL approved firestop system shall be as specified by 3M Fire Protection Products, SpecSeal Firestop Products, or approved equal.

3.3.3 Firestopping material and method of installation shall be submitted to the Architect for approval.

3.3.4 Steel electrical boxes in fire walls, barriers or partitions shall be covered on the back with UL classified putty pads.

3.3.5 Cable tray penetrations thru fire walls, barriers and partitions shall be sealed with removable intumescent firestop pillows.

3.4 OPERATION AND MAINTENANCE INSTRUCTIONS

3.4.1 Provide complete operation and maintenance instructions on all equipment and instruct Owner's representative in their operation.

3.5 METERING

3.5.1 This contractor shall furnish and install all conduit, wire, cabinets, weatherheads, etc., as required by local utility company for metering purposes. Contractor shall verify with utility the type, location, and general requirements for metering.

3.6 SERVICE

3.6.1 The Contractor shall arrange with the utility companies for the electrical and the telephone service as shown. The Contractor shall obtain the consent of each serving utility company for the electrical and telephone service connections shown for the project. Each utility shall be requested by the Contractor to examine the contract documents and reply in writing their consent to service. This contractor shall furnish and install all material required by local utility company for metering.

3.6.2 The electrical service entrance will be installed by this subcontractor as shown and detailed on the drawings. The electrical service characteristics are to be as shown on the drawings, and conductors shall be code type THHN or THWN installed in rigid conduit or as noted.

3.6.3 Underground telephone service shall be installed by utility serving facility. Contractor shall pay all cost associated with service as required by the telephone company. Refer to Riser Diagram for specific details.

3.6.4 Contractor shall pay all costs, furnish all material, labor, drawings, etc., as required by utility companies for relocation of existing telephone and electric service. Contractor shall pay all additional costs for underground service, pad mounted transformer and pad.

3.7 CLEANUP

3.7.1 The contractor shall remove his tools, machinery, debris, etc., from the premises when his part of the work is finished. He shall leave the premises free of all obstructions and hindrances.

3.8 WARRANTY

3.8.1 The electrical subcontractor shall warrant all equipment furnished and work performed under the electrical subcontract for a period of one (1) year from the date of written acceptance of the work. This guarantee shall cover all patching, refinishing, etc., required to restore the faulty condition at no additional expense to the Owner.

3.9 EXCAVATION FOR UTILITIES

3.9.1 Existing utilities encountered in excavating for this contract shall be relocated outside the building lines as directed by the Architect.

3.9.2 Each contractor shall perform all excavations of every description and of whatever substances encountered, to the depths indicated on the drawings and required for the installation of his portion of the utilities systems. Wherever possible, all exterior lines shall be installed with a minimum of 30" of cover, unless shown otherwise. All excavated materials not required for fill or backfill shall be removed and wasted as directed by the Architect. All excavations shall be made by open cut. The banks of trenches shall be kept as nearly vertical as practicable and where required shall be properly sheeted and braced. Rock shall be excavated to a minimum overdepth of 4" below the trench depths specified. The overdepth rock excavation shall be backfilled with loose, moist earth, thoroughly tamped. All grading in the vicinity of excavations shall be controlled to prevent surface ground water from flowing into the excavations. Any water accumulated in the excavations shall be removed by pumping, or by other approved method.

3.9.3 The trenches shall be carefully backfilled with the excavated materials approved for backfilling, or other approved material free from large clods of earth or stones. The backfill shall be in layers, moistened and tamped. Any trenches where settlement occurs shall be reopened for proper compaction.

3.10 SAFETY

3.10.1 The electrical subcontractor is completely responsible for how all his work is performed; safety, in, on, or about the job site; methods of work performance; and timeliness in such performance. In the event he is unsatisfied with the performance and/or cooperation of other trades, he shall set forth such complaints in writing for the Architect's review. In no event shall this subcontractor expect to be specifically directed in the protection of personnel or material by the Owner, Architects, or Engineer.

3.11 BRANCH CIRCUIT WIRING

3.11.1 All branch circuit wiring shall be installed in conformance with the National Electrical Code. Conductors shall be code Type THW or THHN. For all runs from low voltage panels where the first outlet is not more than fifty feet (50') to the panelboards, use minimum number twelve (#12) AWG; for runs fifty-one to eighty (51' to 80') to the first outlet, use number ten (#10) AWG; for runs over eighty feet (80'), use number eight (#8) AWG unless otherwise noted. Branch circuit color coded as follows: Phase "A" black; Phase "B" red; Phase "C" blue; switch legs yellow or orange on brown; grounding - green. All joints shall be twisted and inserted into a Scotchlok insulated connector. Provide ground wire in all branch circuits.

3.11.2 This subcontractor is warned to adhere strictly to the circuitry shown on the plans to achieve optimum system balance. Failure to properly circuit according to plans shall result in rewiring as directed at no additional cost to the Owner.

3.11.3 All parallel conductors shall be of the same length, of the same conductor material, circular - mil area, same insulation type and terminated in the same manner. No parallel conductors smaller than #1/0 are acceptable.

3.12 ELECTRICAL WIRING

3.12.1 The electrical wiring for the mechanical equipment furnished by others is separated into two main wiring divisions: (1) Power wiring by electrical contractor, and (2) control wiring below 120V by the mechanical contractor.

A. Power wiring shall be the energy source and include installation of circuit protective devices, motor starters or controllers, conduit, wiring and safety disconnects from the power supply, and termination at the motor or appropriate terminals on the equipment. This also includes all 120V control wiring.

B. Control wiring shall comprise all wiring not included in power wiring and below 120V. This wiring shall specifically include all automatic temperature control wiring, safety pilot interlocking wiring, push button starting, pilot light and signal wiring, etc., that is not included as part of pre-wired equipment but necessary for the proper operation and safety of the equipment. All conduit, boxes, etc., required for control wiring shall be provided and installed by the electrical contractor. See Section 2.3.1.

3.12.2 The mechanical contractor shall furnish to the electrical contractor all magnetic motor starters and operators for installation and connection by the electrical contractor except for kitchen hood interlock system. (See wiring diagrams on drawings). Electrical contractor shall interlock 120V or above wiring between fans and operable louvers. Electrical contractor to furnish all manual motor starters.

3.13 MOTOR CONNECTIONS

3.13.1 Wherever equipment is shown requiring electrical connection as specified, all wiring shall be furnished and installed under this section of the specifications. Starting switches, protective devices, and other means for the operation and control of equipment shall be furnished under the various sections and installed under the ELECTRICAL SECTION unless specifically noted otherwise on the Drawings.

3.13.2 Additional disconnects required by the National Electrical Code shall be furnished, installed and connected under the ELECTRICAL SECTION. Motor terminal or equipment connection shall terminate in a junction box or disconnect adjacent to the equipment.

3.13.3 Install approximately twelve inches (12") maximum of flexible conduit at final connection of equipment. For motors or equipment in exterior damp/wet locations, use polyvinyl chloride jacketed flexible metallic conduit.

3.14 TEMPORARY CONSTRUCTION POWER

3.14.1 This contractor shall furnish and install temporary construction power wiring as required to provide sufficient power and lighting for all construction needs. Temporary electrical service shall be obtained in the name of the General Contractor and it will be the General Contractor's responsibility to pay all power company charges. The temporary service shall be obtained from the local utility company. All receptacles shall be grounding type. Provide temporary lighting as required or directed by the Architect for adequate illumination for construction purpose.

3.15 WORKMANSHIP

3.15.1 All conduits shall be thoroughly swabbed out before pulling wire; all ends of conduit shall be free of burrs or defects.

A. Bends shall be made with an approved bender, and no conduit shall be installed with crimps or indenters. Where applicable, factory formed long radius ells are recommended.

B. Electrical raceways shall be concealed where possible. All conduit runs shall be grouped where possible, properly supported by approved conduit or pipe hangers and run parallel or perpendicular to building lines. Where surface mounted panelboards are utilized, contractor shall mount all conduits above and below panel to Unitstrut Channels with P2900 Series Universal clamps or equal. Conduit shall be arranged in a neat and orderly manner. Failure to comply with the above will result in replacement without additional cost to the Owner.

C. All conduit shall be supported with Cast "C" clamps, "U" straps or ring hangers, attached to rods and/or plates to prevent sag and undue strain. Perforated straps or wire will not be permitted.

D. Caddie clips shall not be attached to ceiling grid wire.

E. All conduit to be supported every 10' and within 3' from outlet boxes. Conduit shall be attached to support with clamps or caddie clips. Wire is not acceptable.

3.16 ROOFING FLASHING

3.16.1 Where electrical items penetrate the roofing, the Contractor shall coordinate location and size as required for factory vent flashing assembly to be furnished and installed by the Roofing Contractor in strict accordance with the Roof Manufacturer’s recommendation.

3.16.2 If single ply membrane roof is used, Contractor shall use factory pipe flashing assembly as recommended by Roofing Manufacturer. Coordinate locations with Roofing Contractor.

3.17 NOISE AND VIBRATION CONTROL

3.17.1 The electrical systems as installed shall be free from objectionable noise or vibration. The Contractor shall isolate motor starters, conduits, fixture ballast, transformers, equipment, etc., as directed or required so as to insure an acceptable noise level free from objectionable vibration.

END OF SECTION

Section 31 11 00

CLEARING AND GRUBBING

PART ONE - GENERAL

1.1 WORK INCLUDED

1. Removing and disposing of existing trees, vegetation, buildings, fencing, pavements, sidewalks, utilities, storm drains, etc. as shown on the drawings.
2. Preserving trees and vegetation in designated areas.
3. Disposing of removed material.

1.2 RELATED WORK

1. Grading Section 31 22 00

PART TWO - PRODUCTS

No products included.

PART THREE - EXECUTION

3.1 PREPARATION

A. Protect existing trees from damage by equipment when removing designated trees and during site grading operation.

B. Mark clearly the areas of preserved vegetation, the clearing limits along the boundary of the site, and the individual trees to be saved as designated by the Architects and/or Drawings.

3.2 CLEARING

A. Clear the site within the limits of proposed improvements as shown on the Drawings, of trees, saplings, brush, shrubs, roots, undergrowth, buildings, fencing, pavements, sidewalks, utilities, storm drains, and other debris.

B. Remove stumps from building, paving, and embankment areas.

1. Remove all stumps in building and paving areas.
2. Cut stumps in other areas flush with or below existing ground elevations.
3. Backfill and compact stump holes and foundation holes except in areas to be excavated.

C. Backfill holes within the building area using suitable fill materials as defined in Paragraph 2.1 of Section 31 22 00. Fill shall be compacted according to the requirements of Paragraph 3.3 of Section 31 22 00.

D. Do not park or service equipment under the branches of trees designated to remain.

E. Restrict movement and operation of equipment so that trunks, branches and roots of trees and shrubs designated to remain will not be broken, scarred, or otherwise damaged.

F. Apply an approved tree wound paint to any lightly damaged trees.

3.3 DISPOSAL

A. Dispose of cleared materials at an offsite location secured by the Contractor.

3.4 PROTECTION

A. Erect temporary barricades, and other protection required to protect all persons and property from preparation and construction operations.

3.5 UTILITIES

A. Protect and preserve in operating condition, all active utility services that traverse or border the site, and repair any damages that may occur to these services due to work performed the site preparation, demolition and construction operations. Utility lines that are to be abandoned shall be completely removed from the site and plugged at the street as required by the serving utility.

END OF SECTION

Section 31 22 00

GRADING

PART ONE - GENERAL

1.1 WORK INCLUDED

A. Stripping and stockpiling surface layer of topsoil and organic matter in building and traffic areas and in all cut and fill areas.

B. Removing and disposing of boulders, fractured rock, and other material unsuitable for use in fill under structures (controlled fill).

C. Excavating site to required subgrade for controlled fill and traffic areas and grading site to required slopes.

D. Placing and compacting excavated material to required density and at required subgrade and slope for structures, pavement areas, and fill slopes.

1.2 RELATED WORK

A. Testing Laboratory Services Section 01 45 29

1.3 QUALITY ASSURANCE

A. Testing agency:

1. Soil classification tests on material for controlled fill to be performed by testing laboratory selected by the Architect.
2. In-place soil compaction tests to be performed by testing laboratory at locations selected by the Architect.
3. Refer to section 01 45 29 - Testing Laboratory Services for details of testing procedures.

B. Reference Standards:

1. American Society for Testing and Materials (ASTM):
   a. ASTM D2487-69 (175), Classification of Soils for Engineering Purposes.
   b. ASTM D-1557 Modified Compaction Procedures.
   c. ASTM D 1556-64 (1974) Method of Test for Density of Soil in Place by the Sand-cone Method.
   d. ASTM D 2167-66 (1977), Method of Test for Density of Soil in Place by the Rubber Balloon Method.
   e. ASTM D 2922-71, Methods for Determining the Density of Soil and Soil-aggregate by Nuclear Methods (shallow depth).

1.4 SUBMITTALS

A. Have the testing laboratory submit reports that material for controlled fill meets the requirements of this Section:

1. On site excavated material.
2. Borrow material.

B. Have testing laboratory submit reports of density tests of controlled fill.

1.5 SITE CONDITIONS

A. Establish positive surface drainage during and following clearing and site grading by proper ditching or sloping.

B. Provide measures to prevent mud and silt from flowing onto adjacent property.

C. Erect sheeting, shoring, and bracing as necessary for protection of persons, improvements, and excavation.

PART TWO - PRODUCTS

2.1 SUITABLE MATERIAL FOR CONTROLLED FILL

A. On site excavated soils:

1. Sandy or gravelly clays having a liquid limit less than 40.
2. Unified Soils Classification System Soils:
   a. Class SC, SW, SM
   b. Class GC, GW, GM
   c. Class CL (when approved by Soils Engineer).
3. Overburden soils with low plasticity.

B. Borrow Material:

1. Material meeting the requirements of selected material as described in Section 210 of the Arkansas State Highway Department's Standard Specifications for Highway Construction, Edition of 2003.
2. All borrow material shall be approved by the soils engineer prior to placement.

2.2 UNSUITABLE MATERIAL FOR CONTROLLED FILL

A. All areas: Organic top soils and soils containing roots, vegetable matter, or trash.

B. Building area:

1. Cobbles, boulders, and fractured rock more than 6 inches in greatest dimension anywhere in the fill.
2. Cobbles and fractured rock more than 3 inches in greatest dimension within 12 inches of the finished subgrade.

C. Paving area:

1. Cobbles, boulders, and fractured rock more than 8 inches in greatest dimension anywhere under the paving area.
2. Cobbles and fractured rock more than 4 inches in greatest dimension within 12 inches of the finished subgrade.

2.3 SUITABLE MATERIAL FOR CLEAN SAND OR GRAVEL UNDER SLABS (DRAINAGE FILL)

A. All materials clean free of shale, clay, friable materials and debris.

1. Gravel: Clean natural stone, free of organic material. Maximum size 1/2".
2. Sand: Clean natural river or bank sand, free of organic material.

PART THREE - EXECUTION

3.1 PREPARATION

A. Complete clearing work:

1. Remove unsuitable materials from the site before beginning site grading.

B.. Stake the work: By the Contractor.

C. Notify Architect 24 hours before controlled fill is to begin.

3.2 EXCAVATION

A. Excavation procedures:

1. Strip surface layer of top soil, organic matter, and any remaining trash in cut and fill areas of the site and stockpile for later use in landscaping operations.
   a. Removed material containing unacceptable quantities of trash or rock in the mixture shall be disposed of off the site or may be spread in thin layers in the outerpart of fill slopes outside of controlled fill areas.
2. Remove soft or spongy material at the exposed subgrade of cut and fill areas and replace with approved material and compact.
3. Remove rock and boulders in cut areas to a minimum depth of 8 inches below sub-grade and replace with approved material and compact.
4. Use all suitable excavated material, as far as practicable, in the formation of controlled fills and fill slopes.
5. Material determined by the Soils Engineer to be unsuitable for proper compaction may be placed in the fill slopes outside controlled fill areas.
6. Excavated boulders and rock determined by the Soils Engineer to be too large for use in fill slopes shall be disposed of off the site.
7. Do not leave undrained pockets where boulders or rocks have been removed.
8. Keep all excavation dry by pumping or draining water from the Work.
9. In cut areas where fill is not required, scarify exposed subgrade soils to a depth of at least 8 inches, adjust the soil moisture, and recompact to the same density as required for each layer of controlled fill; or, proof-roll the areas with a loaded tandem axle dump truck or similar equipment to aid in identifying soft areas.

10. Grade excavated slopes to a neat, smooth condition with no loose material or scars left on the surface.
11. Refer to the geotechnical investigation for further information regarding excavation, site preparation, fill placement, etc.

3.3 CONTROLLED FILL

A. Scarify cleared surfaces in fill areas to a depth of at least 8 inches, adjust the soil moisture, and re-compact to the same density as required for each layer of controlled fill; or proof-roll as described in sub-paragraph 9 of Article 3.2.1.

B. Fill placed on hillsides:

1. Bench continuously as the work is brought up in layers.
2. Begin each horizontal cut at the intersection of the original ground and the vertical sides of the previous cuts.
3. Re-compact the cut-out material along with the new fill material.

C. Place fill material in lifts no greater than 8 inch loose-lift uniform thickness and compact to a minimum of 95% of maximum dry density at or near optimum moisture content as determined by the Modified Compaction Procedures, ASTM D-1557.

1. Compact lifts containing low plasticity clay soils at 2% to 4% above optimum moisture content.
2. Add water when the soil is too dry and mix with the material before compacting.
3. Aerate material when too wet by manipulation with suitable equipment before compacting.

D. Each fill lift will be tested and approved for adequate density and proper moisture content before additional lifts shall be placed.

E. Grade fill slopes to a neat, smooth condition with no loose material, protruding rock, or scars left on the surface.

3.4 FIELD QUALITY CONTROL

A. In-place tests of density and moisture content of controlled fill in accordance with either ASTM D1556-64 (1974), ASTM D2167-66 (1977), or ASTM D2922-71 (1976) by testing laboratory.

B. Soil Classification of fill material and placement location of each type to be determined by Soils Engineer.

C. Provide a minimum of 2 tests of density and moisture content per lift.

END OF SECTION

Section 31 23 00

EXCAVATION AND FILL

PART ONE - GENERAL

1.1 WORK INCLUDED

A. Excavate for the following structures and stockpile subsoil on site or, if suitable, use fill material on the site.

1. Footings, for building and other structures.
2. Sidewalks and steps.

B. Shore and brace excavations as required.

C. Place and compact fills to rough grade elevations.

D. Dewater excavations.

1.2 RELATED WORK

A.	Testing Laboratory Services	Section 01 45 29
B.	Clearing and Grubbing	Section 31 11 00
C.	Grading	Section 31 22 00
D.	Seeding	Section 32 92 19
E.	Concrete	Division Three

1.3 BACKFILL COMPACTION TESTING

A. Testing of compacted backfill materials will be performed by an independent testing laboratory employed and paid for by the Owner. Testing will be performed so as to least encumber the performance of Work. Refer to Section 01 45 29.

B. When work of this Section or portions of work are completed, notify the testing laboratory to perform density tests. Do not proceed with additional backfill work until results have been verified.

C. If, during progress of work, tests indicate that compacted materials do not meet specified requirements, remove defective work, replace, and retest at no cost to Owner, as directed by the Architect.

D. Ensure compacted fills are tested before proceeding with placement of surface materials.

1.4 SUBMITTALS

A. Submit minimum 10 pounds samples of each type of excavated backfill material to be used. Forward samples to appointed testing laboratory, packed tightly in containers to prevent contamination.
   1. Protect trees, shrubs, and lawns, areas to receive planting, rock outcropping, and other features remaining as part of final landscaping.
   2. Protect bench marks and existing structures, roads, sidewalks, paving, and curbs against damage from equipment and vehicular or foot traffic.
   3. Protect excavations by shoring, bracing, sheet piling, underpinning, or other methods, as required to prevent cave-ins or loose dirt from falling into excavations.
   4. Underpin adjacent structures, which may be damaged by excavation work, including service lines and pipe chases.
   5. Notify Architect of unexpected sub-surface conditions and discontinue work in areas until Architect provides notification to resume work.
   6. Protect bottom of excavations and soil around and beneath foundations from frost or freezing.
   7. Grade around excavations to prevent surface water run-off into excavated areas.

PART TWO - PRODUCTS

2.1 SUITABLE BACKFILL MATERIALS

A. Gravel: Angular crushed natural stone free from shale, clay, friable materials, and debris.

B. Pea gravel: Clean natural stone free from clay, shale, and organic matter.

C. Sand: Clean natural river or bank sand free from silt, clay, loam, friable or soluble materials, and organic matter.

D. Under areas not to be paved: Sub-soil free from roots, rock larger than 3 inches in size, and building debris.

E. Under structures or areas to be paved: Material meeting requirements for controlled fill as specified in Section 31 22 00, Article 2.1.

F. Fill under landscaped areas: Free from alkali, salt, petroleum products. Use sub-soil excavated from site only if conforming to specified requirements in Paragraphs 4 or 5 above.

PART THREE - EXECUTION

3.1 PREPARATION AND LAYOUT

A. Establish extent of excavation by area and elevation; designate and identify datum elevation.

B. Set required lines and levels.

C. Maintain bench marks, monuments and other reference points.

3.2 UTILITIES

A. Before starting excavation, establish location and extent of underground utilities occurring in work area.

B. Notify utility companies to remove and relocate lines which are in the way of excavation.

C. Maintain, re-route, or extend as required existing utility lines to remain which pass through work area.

D. Pay costs for this work except those covered by utility companies.

E. Protect utility services uncovered by excavation.

3.3 EXCAVATION

A. Excavate sub-soil in accordance with lines and levels required for construction of the work, including space for forms, bracing and shoring, foundation drainage system, and to permit inspection.

B. Do additional excavation only by written authorization of Architect.

C. Machine-slope banks.

D. Hand trim excavations and leave free from loose or organic matter.

E. Footings shall always be poured the same day that excavations are made, and water shall never be allowed to stand in excavated footing trench.

F. When complete, verify soil bearing capacities, depths and dimensions.

G. Correct unauthorized excavation as directed, at no cost to Owner.

H. Fill over-excavated areas under structure bearing surfaces with concrete as specified for foundations.

I Excavations are not to interfere with normal 45 degree bearing splay of any foundation.

J. Stockpile excavated sub-soil for reuse where directed. Remove excess or unsuitable excavated sub-soil from site.

K. Do not disturb soil within branch spread of existing trees or shrubs that are to remain.

3.4 BACKFILLING

A. Stockpile fill material in area(s) designated by Architect.

B. Ensure areas to be backfilled are free from debris, snow, ice and water, and that ground surfaces are not in a frozen condition.

C. Do not backfill over existing sub-grade surfaces which are porous, wet, or spongy.

D. Compact existing sub-grade surfaces if densities are not equal to that required for backfill materials.

E. Cut out soft areas of existing sub-grade. Backfill with sand and compact to required density.

F. Backfill areas to grades, contours, levels and elevations.

G. Backfill systematically and as early as possible to allow maximum time for natural settlement and compaction.

H. Place and compact back fill materials in continuous layers not exceeding 6 inches loose depth.

I. Maintain optimum moisture content of backfill materials to attain required compaction density.

J. Where temporary unbalanced pressures are liable to develop on walls, erect necessary shoring to counteract imbalance. Leave in place until their removal is approved by Architect.

3.5 FILL TYPES AND COMPACTION

A. Within building area: Restore controlled fill to underside of stabilizing base course for floor slabs to density requirements specified in Section 31 22 00, Article 3.3.

B. Backfill under areas not to be paved: Compact with mechanical tampers until material is as firm and unyielding as the surrounding material undisturbed by excavation.

C. Fill under structures and backfill under paving areas: Compact to top of subgrade to density requirements specified in Section 31 22 00, Article 3.3.

D. Fill under landscaped areas: Sub-soil to within 12 inches of finish grade elevation.

3.6 FIELD QUALITY CONTROL

A. In-place tests of density and moisture content of backfill specified to be compacted to specific density requirements shall be performed by the testing laboratory in accordance with either ASTM D1556-64 (1974), ASTM D2167-66 (1977), or ASTM D2922-71 (1976).

END OF SECTION

Section 31 25 00

EROSION AND
SEDIMENTATION CONTROL

PART ONE – GENERAL

1.1 DESCRIPTION

A. All new slopes and disturbed areas shall be treated for erosion control in accordance with these specifications including silt fencing and placement of hay bales. Contractor will provide a Storm Water Pollution Prevention Plan (SWPPP) and permit complying with all Arkansas Department of Environmental Quality Standards.

1.2 RELATED SECTIONS

A. Clearing and Grubbing Section 31 11 00

B. Grading Section 31 22 00

1.3 REFERENCES

A. United States Environmental Protection Agency (EPA):

1. NPDES – National Pollutant Discharge Elimination System

B. Arkansas Highway & Transportation Department (AHTD):

1. AHTD – Arkansas Highway & Transportation Department Standard Specifications for Highway Construction.

C. Arkansas Department of Environmental Quality (ADEQ):

1. ADEQ – Arkansas Department of Environmental Quality requirements.

1.4 QUALITY ASSURANCE

A. Perform work in accordance with the following ADEQ standards:

1. Section 220 – Temporary Erosion, Sedimentation and Stormwater Pollution Prevention and Control.
2. Section 223 – Temporary Silt Fence.
3. Section 224 – Temporary Sediment Control Filters.
4. Section 226 – Temporary Sediment Removal.

B. Regulatory Requirements: Conform to requirements of local authority having jurisdiction for prevention of erosion and sediment control.

1. Conform to NPDES requirements where required.

1.5 PROJECT CONDITIONS

A. Protect adjacent properties and water resources from erosion and sediment damage throughout work. Take all necessary measures to prevent sedimentation from construction operations to enter adjacent property. Offsite discharge of sedimentation is not permitted.

PART TWO – PRODUCTS

2.1 MATERIALS

A. Seeding: Bermuda Grass, common, unhulled, (March 1st through September 1st) broadcast at a rate of 30 pounds per acre. All other times, seed shall be Rye applied at the rate of 20 pounds per acre and unhulled Bermuda at 20 pounds per acre.

B. Fertilizer: 10-20-10 spread at the rate of 400 pounds per acre.

C. Fencing for Siltation Control: UV resistant geotextile fabric.

D. Temporary Mulches: Loose straw, netting, wood cellulose, or agricultural silage free of seed. Mulch material with asphalt tack shall be spread as required to hold grass during establishment of turf.

E. Bale Stakes:

1. Minimum 3 feet length.
2. (2) No. 4 steel reinforcing bars or
3. (2) steel pickets or
4. (2) 2 x 2 inch hardwood stakes driven 18 inches to 24 inches into ground.

PART THREE – EXECUTION

3.1 The Contractor shall produce a Storm Water Pollution Prevention Plan (SWPP) that meets the requirements set forth by the Arkansas Department of Environmental Quality.

3.2 The Contractor shall fill our inspection reports and log rainfall data as required by the SWPP.

3.3 The Contractor shall install all erosion control measures prior to commencing dirtwork activities on this site.

3.4 The Contractor shall immediately clean up any sediment that leaves this site.

3.5 The Contractor shall re-establish all disturbed areas in accordance with the SWPP.

3.6 The Contractor shall removal all erosion control measures once the site has been re-established.

END OF SECTION

Section 31 31 16

TERMITE CONTROL

PART ONE - GENERAL

1.1 WORK INCLUDED

A. Soil treatment under slabs for termite control.

B. Soil treatment at concrete foundation for termite control.

C. Termite damage guarantee with annually renewable termite inspection control contract.

1.2 RELATED WORK

A.	Excavation and Fill	Section 31 23 00
B.	Concrete Work	Division Three

1.3 QUALITY ASSURANCE

A. The applicator shall be licensed by the State of Arkansas to perform the Work of this Section.

B. The applicator shall be bonded and insured by an insurance company authorized to practice business in the State of Arkansas.

1.4 REGULATORY REQUIREMENTS

A. Local Laws: All Work performed under this Section shall conform with the Arkansas Pest Control Law, Act III of 1965.

1.5 GUARANTEE

A. Submit a five year written guarantee, without monetary limits, stating that all additional treatment of areas where termites appear, and any damages caused by the termite appearance, will be performed at no cost to the Owner.

B. Provide the Owner an annually renewable termite inspection control contract, effective five years from date of the original soil treatment, to assure necessary re-treatment and liability for termite damage.

C. Draw the guarantee in favor of the Owner, with copies of the guarantee of the renewable inspection control contract provided for the Owner, the Contractor, and the Architect.

D. No payment will be made for termite control work until the above guarantee has been submitted in satisfactory form.

PART TWO - PRODUCTS

2.1 MATERIALS

A. Chemicals:

1. Use chemicals formulated as an emulsible concentrate for subsequent dilution with water.
2. Fuel oil will not be permitted as a diluent.
3. Use chemicals of a type currently known to give insurable protection for the soil and fill at the foundation and under the new addition.

PART THREE - EXECUTION

3.1 PREPARATION

A. The applicator shall visit the job site to determine the soil texture or otherwise obtain the information from the County Agent, the U.S. Soil Conservation Service, or other approved authorities.

B. The Contractor shall remove all wood and other cellulose containing materials from the area within the building walls before the solution is applied.

C. The Contractor shall set tentative dates with the applicator for initial treatment services and schedule subsequent service as deemed necessary for completion of the termite control work.

D. The Contractor shall give the applicator 24 hour notice prior to installing the moisture barrier in preparation for placement of the floor slabs.

3.2 APPLICATION

A. Soil Conditions:

1. Do not apply the working solution when soil is frozen, excessively wet, or immediately after heavy rains.
2. Do not disturb treated areas during subsequent construction operations.

B. Apply the working solution to the soil over the entire surface under slabs and at the concrete foundations at the rate of application recommended by the chemicals manufacturers and in accordance with regulatory requirements to provide the required guarantee.

C. If after an area has been treated and before the General Contractor can pour the concrete slab, it should rain, the entire area shall be retreated, without additional cost to the Owner. No more area than will be covered with slab shall be treated at one time.

END OF SECTION

Section 32 92 19

SEEDING

PART ONE - GENERAL

1.1 WORK INCLUDED

A. Preparation of sub-grade

B. Placing topsoil

C. Seeding 10' around new building and areas disturbed by construction

D. Fertilizing and watering

E. Compacting disturbed gray gravel area that is not seeded

1.2 RELATED WORK

A.	Clearing and Grubbing	Section 31 11 00
B.	Grading	Section 31 22 00
C.	Excavation and Fill	Section 31 23 00

1.3 SUBMITTALS

Submit certification that the seed meets the specifications requirements, and that it complies with the requirements of the Arkansas State Plant Board.

PART TWO - PRODUCTS

2.1 MATERIALS

A. Topsoil: Use topsoil excavated from the site only if conforming to the specified requirements:

1. Existing topsoil: Natural, fertile, agricultural soil capable of sustaining vigorous plant growth, not in frozen or muddy condition, containing not less than 6% organic matter, and corrected to pH value of 5.9 to 7.0. Free from subsoil, slag, clay stones, lumps, live plants, roots, sticks, crabgrass, cough grass, noxious weeds, and foreign matter.
2. Imported topsoil: Natural, fertile, agricultural soil typical of locality, capable of sustaining vigorous plant growth, from well drained site free of flooding, not in frozen or muddy condition, not less than 6% organic matter, and lumps, live plants, roots, sticks, crabgrass, cough grass, noxious weeds and foreign matter.

B. Fertilizer: FS 0-F-241, commercial type.

1. Proportions: 10N-20P-10K, unless soil test analysis indicated different proportions are required.

C. Seed: Common hulled bermuda.

PART THREE - EXECUTION

3.1 PREPARATION OF SUB-GRADE

A. Fine grade sub-grade, eliminating uneven areas and low spots. Maintain lines, levels, profiles, spot elevations, and contours shown on the drawings. Make changes in grade gradual. Blend slopes into level areas.

B. Remove foreign materials, undesirable plants and their roots, stones, and debris subject to termite attack, rot or corrosion. Do not bury foreign material beneath areas to be seeded or sodded. Remove sub-soil which has been contaminated with petroleum products.

C. Cultivate sub-soil to a depth of 3" where topsoil is to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted sub-soil. Depressions where water will stand or inequalities in the grade shall be corrected before topsoil is spread.

3.2 PLACING TOPSOIL

A. Furnish, place, and spread topsoil to a minimum depth of three inches over entire areas to be sodded or seeded.

B. Place topsoil during dry weather and on dry unfrozen sub-grade.

C. Grade to eliminate rough and low areas, ensuring positive drainage. Maintain levels, profiles, spot elevations, and contours of sub-grade. For seeding areas, rake until surface is smooth. Provide positive surface drainage away from the building walls in all directions.

D. Remove stones, roots, grass, weeds, debris and other foreign non-organic material while spreading.

3.3 FERTILIZING SEEDED AREAS

A. After fine grading apply fertilizer at a rate recommended by the manufacturer.

B. Mix thoroughly into upper two inches of topsoil.

C. Lightly water to aid breakdown of fertilizer and to provide moist soil for seed.

D. Apply fertilizer within 48 hours before seeding.

3.4 SEEDING

A. Apply seed at rate of one to two pounds per 1000 square feet.

B. Roll seeded area with rollers not exceeding 112 pounds.

C. Apply water with fine spray immediately after sowing.

D. Water shall be applied on all seeded areas in quantities and at intervals to provide optimum growing conditions for the establishment of a healthy, uniform stand and cover of grass. Maintain seeded areas until end of project.

END OF SECTION