SPECIFICATIONS

FOR

CONSTRUCTION OF

INDEPENDENCE COUNTY SENIOR CENTER

AEDC Project # 795-00055-20

December 2022

MILLER-NEWELL ENGINEERS, INC.
P.O. Box 705
510 Third Street
Newport, AR 72112

WILLIAM M. WAGE, ARCHITECT
5341 S. Irvin Drive
Memphis, TN 38119

M-N 22-010

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INDEPENDENCE COUNTY SENIOR CENTER

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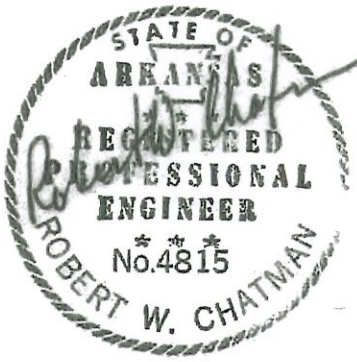

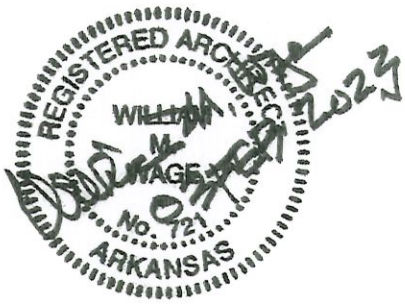

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CONSTRUCTION TECHNICAL SPECS:

Advertisement for Bids

Date: April 9, 2023

Independence County
Senior Center Project
AEDC # 795-00055-20

Sealed bids from licensed contractors for construction of SENIOR CITIZENS CENTER in Independence County, Arkansas, will be received by Independence County at White River Planning & Development District, 4441 Harrison St, Batesville, AR 72501 until 11:00 A.M. on May 9, 2023 and then at said location publicly opened and read aloud.

The scope of work consists of SENIOR CITIZENS CENTER INCLUDING PARKING AND SITE UTILITIES construction to Bidders, ACEDP grant requirements, Bid and Contract Forms, Plans, Specifications, and other contract documents may be examined and obtained ($100 cost per set obtained) at Miller-Newell Engineers, Inc., P.O. Box 705, 510 Third Street, Newport, AR 72112.

The owner reserves the right to waive any informalities or to reject any or all bids. Bidders may not withdraw their bids within 30 days after the date of bid opening and must provide bid bonds as required. All bidding processes shall be in accordance with State law.

To request bidding information or obtain further information contact:
Miller-Newell Engineers, Inc.

P.O. Box 705
510 Third Street
Newport, AR 72112

This Advertisement for Bids is being published by and paid for by the following:

Hon. Kevin Jeffery
Independence County
192 E. Main Street
Batesville, AR 72501

The amount of this publication is $_____.

Kevin Jeffery/County Judge

Independence County

Instruction to Bidders

The following information is specific to prospective bidders of ACEDP-funded construction projects:

1. **Receipt and Opening of Bids**

   Independence County (herein identified as "Owner"), invites bids on the forms attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at White River Planning & Development District, 4441 Harrison St, Batesville, AR 72501 until 11:00 A.M. on May 9, 2023, and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to Judge Kevin Jeffery, Independence County, c/o White River Planning & Development District, 4441 Harrison St, Batesville, AR 72501 and designated as Bid for Construction of Senior Citizens Center.

   The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or scheduled time for bid opening or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within **90 days** after the actual date of bid opening.

2. **Preparation of Bid**

   Each bid must be submitted on the prescribed form **and must be accompanied by completed Certification of Bidder Regarding Equal Employment Opportunity and Contractor Section 3 Certification forms**. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures.

   Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form. Identification of subcontractors must be per State law.

3. **Facsimile/Telegraphic Modification**

   Any bidder may modify his bid by facsimile/telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such communication is received by the Owner prior to closing time, and, provided further, the Owner is satisfied that a written confirmation of the facsimile/telegraphic modification over the signature of the bidder was mailed prior to closing time.The communication should not reveal the bid price but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two days after closing time, no consideration will be given to the facsimile/telegraphic modification.

4. **Method of Bidding**

The Owner invites the following bid(s):
Base Bid: Senior Citizens Center
Alt. No. 1: Delete Landscaping Center

5. **Qualifications of Bidder**

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids shall not be accepted.

6. **Bid Security**

Each bid must be accompanied by a certified check from the bidder, or a bid bond prepared on the form of the bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company, licensed in the State of Arkansas, approved by the Owner, in the amount of 5 percent of the bid. Such check or bid bond will be returned to all except the three lowest bidders within three days after the opening of bids, and the remaining checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, or, if no award has been made within 30 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.

7. **Liquidated Damages for Failure to Enter into Contract**

The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within 10 days after he has received Notice of Award shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

8. **Time of Completion and Liquidated Damages**

The bidder must agree to commence work on or before a date to be specified in a written Notice to Proceed issued by the Owner and to fully complete the project within 180 consecutive calendar days thereafter. The bidder must agree also to pay as liquidated damages, the sum of $300 for each consecutive calendar day thereafter.

9. **Conditions of Work**

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible, the contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

10. **Addenda and Interpretations**

No interpretation of the meaning of the plans, specifications, drawings and other contract documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to Miller-Newell Engineers, Inc. at P.O. Box 705, Newport, AR 72112 and, to be given consideration, must be received at least five days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instruction will be in the form of written addenda to the contract documents which, if issued, will be mailed by certified mail with return receipt requested to all prospective bidders (at the respective addresses furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

11. **Security for Faithful Performance**

In accordance with the Notice to Proceed, the contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bonds shall be a duly authorized surety company, licensed in the State of Arkansas, and satisfactory to the Owner.

12. **Power of Attorney**

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and dated copy of their power of attorney.

13. **Notice of Special Conditions**

Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

- Bonding and Insurance Requirements
- General Conditions of the Contract
- Regulatory Requirements
- Wage Rates

14. **Laws and Regulations**

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

15. **Method of Award-Lowest Qualified Bidder**

If, at the time this contract is to be awarded, the lowest base bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner as available to finance the contract, the contract will be awarded on the base bid only. If such bid exceeds such amount, the Owner may reject all bids or may award the contract on the base bid combined with such deductible alternates (if applicable) applied in the numerical order specified by the contract documents, as produces a net amount within the available funds.

16. **Obligation of Bidder**

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his bid.

17. **Safety Standards and Accident Prevention**

With respect to all work performed under this contract, the contractor shall

- Comply with the safety standards provisions of applicable laws, building and construction codes and the Manual of Accident Prevention in Construction: published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596 and the requirement of Title 29 of the Code of Federal Regulations, Section 1518, as published in the Federal Register, Volume 36, No. 75, Saturday, April 17, 1971), and specifically OSHA's Standard for Excavation and Trench Safety Systems, 29 CFR Part 1926, Subpart P.
- Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.

- Maintain at his office or other conspicuous place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site.

For Contracts with Excavation in Excess of 5 Feet

- A separate lump sum bid item must be included for Excavation/Trench Safety System (for excavation in excess of 5'). Bidder is required to complete this pay item in accordance with Act 291 of the Arkansas 79th General Assembly.
- In the event a bidder fails to complete this pay item, the Owner shall declare that the bid fails to comply fully with the provisions of the specifications and bid documents and will be considered invalid as a nonresponsive bid. Payment for the lump sum bid item for Excavation/Trench Safety System will be paid at the completion of the contract. No partial payments will be allowed thereunder.

Bid for Lump-Sum Contract

Independence County, Arkansas

Independence County Senior Center
AEDC # 795-00055-20

As bidder

_____,
(*Insert name of corporation, partnership or individual)* in accordance with your invitation for bids for construction of the above-identified project, having examined all contract documents and the site of the proposed work, and being familiar with all of the conditions surrounding construction of the proposed project including availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies and to construct the project in accordance with the contract documents, within the time set forth therein, and at the price(s) stated below. Such price(s) shall cover all expenses incurred in performing the work required by the contract documents, of which this proposal is part.

The bidder hereby agrees to commence work under this contract within 10 days after receiving a Notice to Proceed from the Owner and to fully complete the project within 180 consecutive calendar days thereafter as stipulated in the specifications. The bidder further agrees to pay as liquidated damages, the sum of $300 for each consecutive calendar day thereafter.

The bidder acknowledges receipt of the following addendum:

_____

_____

_____

Base Proposal

The Bidder agrees to perform all of the work contained in these contract documents for a Lump Sum Total Bid Base of _____ ($_____). *(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)*

The above price(s) shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the complete project.

DEDUCTIVE ALTERNATIVES

Deductive Alternate No 1: Delete Landscaping Items

Deduct the sum of: (Written in Words)_____

_____ $_____

Total Base Bid minus Deductive Alternate No. 1 (Written in Words)

_____

_____ ($_____)

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

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 90 calendar days after the bid opening.

Upon receipt of written notice of acceptance of this bid, bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by the General Conditions.

The bid security attached in the sum of $_____ is to become the property of the Owner in the event the contract and bond are not executed within the time set forth above, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted:

By: _____
(Signature)

By: _____
(Signature)

_____
(Please Print Name of Owner/Contractor)

_____
Company UEI Number

_____
Individual/Company Tax ID Number

(Seal - if bid is by a corporation)

_____
(Title)

_____
(Business Address and Zip Code)

_____
(Date)

_____
Arkansas Contractor License #

Certification of Bidder Regarding Equal Employment Opportunity

This certification is required pursuant to Executive Order 11246 (30 FR 12319-25) which provides that any bidder or prospective contractor or any of their proposed subcontractors, shall state as an initial part of the bid whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and if so, whether it has filed all compliance reports due under applicable instructions. Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven (7) calendar days after bid opening. **No contract shall be awarded unless such report is submitted.**

Certification by Bidder

Name and Address of Bidder (Including Zip Code)

_____

_____

_____

_____

Name and Title of Bidder's Agent

1. Has the bidder participated in a previous contract or subcontract subject to the Equal Opportunity Clause?
   Yes No

2. Were compliance reports required to be filed in connection with such contract or subcontract?
   Yes No

3. Has the bidder filed all compliance reports due under applicable instructions?
   Yes No N/A

4. Has the bidder ever been or is being considered for sanction due to violation of Executive Order 11246, as amended?
   Yes No

_____

Signature and Title of Bidder's Agent *Date*

Contractor Section 3 Certification
for Contracts over $200,000

_____ *(Name of contractor)* agrees to implement the following specific affirmative steps directed at increasing the utilization of lower income residents and businesses within the City or County of Izard County.

A.	To implement Section 3 requirements by seeking the assistance of local officials in determining the exact boundaries of the applicable project area
B.	To attempt to recruit from within the City/County the necessary number of lower income residents through: local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within or serving the project area
C.	To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exits
D.	To insert this Section 3 plan in all bid documents, and to require all bidders to submit a Section 3 affirmative action plan (when contracts exceed $200,000) including utilization goals and the specific steps planned to accomplish these goals
E.	To formally contact unions, subcontractors, and trade associations to secure their cooperation for this project
F.	To ensure that all appropriate project area business concerns are notified of pendingsubcontractual opportunities
G.	To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken
H.	To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this Section 3 plan
I.	To list on the Estimated Project Workforce Breakdown form, all projected workforce needs for this project by job classification

As officers and representatives of _____

(Name of contractor)

We, the undersigned, have read and fully agree to the above and become a party to the full implementation of this program.

_____ _____

Title *Date*

_____

Signature

Estimated Project Workforce Breakdown

Job Category	Total Estimated Positions	No. of Positions Currently Occupied by Permanent Employees	No. of Vacant Positions	No. of Positions to be Filled With Section 3 Workers[1]
Officers/Supervisors				
Professionals				
Technicians				
Office				
Clerical				
Trade				
Journeymen				
Apprentices				
Trainees				
Others				
Total				

_____ _____

(Name of contractor) *Date*

_____

Signature

[1] A Section 3 worker is any worker who currently fits, or when hired within the past five years fit, at least one of the following categories, as documented:

1. The worker's income for the previous or annualized calendar year is below the income limit established by HUD (see Question 6 of this part I of these FAQs, below);
2. The worker is employed by a Section 3 business concern (see Question 5 of part I, below); or
3. The worker is a YouthBuild participant

Job Category	Total Estimated Positions	No. of Positions Currently Occupied by Permanent Employees	No. of Vacant Positions	No. of Positions to be Filled With Section 3 Workers[1]
Officers/Supervisors				
Professionals				
Technicians				
Office				
Clerical				
Trade				
Journeymen				
Apprentices				
Trainees				
Others				
Total				

(Name of contractor) _____ Date _____

Signature _____

[1] A Section 3 worker is any worker who currently fits, or when hired within the past five years fit, at least one of the following categories, as documented:
1. The worker's income for the previous or annualized calendar year is below the income limit established by HUD (see Question b of this part 1 of these FAQs, below);
2. The worker is employed by a Section 3 business concern (see Question 2 of part I, below); or
3. The worker is a YouthBuild participant

Contract and General Conditions

THIS AGREEMENT, made and entered into this _____ day of _____ 2023, by and between _____, hereinafter called the "Contractor" and INDEPENDENCE COUNTY, hereinafter called the "Owner".

In consideration of the mutual premises and agreements contained herein, the undersigned Contractor and Owner agree as follows:

A. The Contractor shall

1. Furnish all labor, materials, tools, machinery, supervision and services necessary to perform all of the work in accordance with the description of work consisting of all plans, specifications, and supplemental contract documentation, dated December 2022 for work defined in Independence County, Arkansas, for the sum of $_____ _____.

2. Perform all work timely and diligently in a good and workmanlike manner using approved or equal materials as specified by the Grantee.

3. Begin work within 10 calendar days of receipt of the written Notice to Proceed and shall complete the work within 180 calendar days thereafter.

4. Carry Worker's Compensation and Employer's Liability Insurance in accordance with the laws of the State of Arkansas for all persons engaged in work at the site; and carry Contractor's Public Liability and Property Damage Insurance and Comprehensive Automobile Liability Insurance.

5. Furnish, before beginning the work, a Certificate of Insurance showing compliance with the provisions of Section A, Paragraph 4 above.

6. Keep the premises clean and orderly during the work and upon substantial completion of the contract, remove all rubbish, tools, scaffolding, and surplus materials from and about the site(s) and leave the work and premises consistent with prior appearance or equivalent. Material and equipment that have been removed and replaced as part of the work shall belong to the contractor.

   Not assign the contract without written consent from the Owner.

8. Guarantee the work performed for a period of twelve months from the date of final acceptance of all work required by this contract. Furthermore, furnish the Owner and the Grantee with all manufacturer's and supplier's written guarantees and warranties covering materials and equipment furnished under this contract.

9. Furnish the Owner, upon completion of the work and upon final payment by the Owner, a Release of Lien Form certifying that all charges for materials, labor, and/or any other expenses incurred by the Contractor pertaining to the execution of this contract have been paid in full.

10. Defend, indemnify and hold harmless the Owner, the Arkansas Economic Development Commission, their agents or employees from and against any and all claims for injuries or damages to persons or property of any kind or character, whatsoever, whether real or asserted, arising out of the performance of this contract. Furthermore, shall assume all liability and responsibility for injuries, claims or suits for damages, to persons or property of any kind or character, whatsoever, whether real or asserted, arising out of the performance of this contract.

B. **The Owner shall**

1. Not make, or permit to be made, any changes to the description of work, without written approval from the Economic Development Commission.

2. Permit the contractor to use existing utilities such as lights, heat, power and water necessary to carry out and complete the work as specified.

3. Cooperate with the contractor to facilitate the performance of the work.

4. Issue a written Notice to Proceed to the contractor within ten (10) days from the date of this agreement.

C. **Method of Compensation**:

1. Payment for work shall be on percentage complete, plus on-site stored materials minus retainage. Final payment shall be made after: a Certificate of Substantial Completion has been executed; Economic Development Commission has received the contractor's Final Invoice and a satisfactory release of liens, or claims for liens, by subcontractors, laborers and material supplies for completed work or installed materials; and, after a final inspection has been conducted.

2. The contractor shall be liable for and shall pay to the Owner the sum of $300 as fixed, agreed and liquidated damages for each calendar day of delay from the above stipulated completion date (Section A, Paragraph 3) or as modified by a properly executed Change Order until such work is satisfactorily completed and accepted by the Owner and Grantee.

D. **General Provisions**:

1. The contractor agrees to perform all contract work as specified, and the Owner agrees that neither he nor the members of his family, his tenants, agents, or employees will hinder the contractor or his work.

2. The contractor shall take affirmative steps to ensure that applicants for employment are not discriminated against in any manner prescribed by the Regulatory Requirements of this contract during employment. Employment activities shall include, but not be limited to employment, upgrading, demotion, or transfer; termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.

3. The contractor shall post in conspicuous places, for employees and applicants for employment, notices setting forth the provisions, as stated, of the non-discrimination clause contained within the contract's Regulatory Requirements.

4. The contractor shall incorporate the foregoing requirements in all subcontracts.

5. In the event of any breach of this contract by the contractor, the Owner and the Grantee may, at their option, engage the services of another contractor to complete the work and deduct the cost of such completion from any amount due the contractor.

6. This contract embodies all of the representations, rights, duties, and obligations of the parties hereto, and any prior oral or written agreement not embodied herein shall not be binding upon or endure to the benefit of any of the parties

This Contract and All Terms and Conditions Contained Herein Are Approved and Accepted as of the Date First Above Written.

This contract and all terms and conditions contained herein are approved and accepted as of the date first above written.

(Seal)

INDEPENDENCE COUNTY

Attest:

(Owner)

_____ _____

(Secretary)

_____ _____

(Witness) *(Title)*

(Seal)

_____

Attest:

(Contractor)

_____ _____

(Secretary)

_____ _____

(Witness) *(Title)*

_____

Company UEI Number

_____ _____

(Please Print Name of Owner/Contractor) *Individual/Company Tax ID Number*

Bonding and Insurance Requirements

1.1 This section defines **ACEDP grant requirements for bonding and insurance.** No other bonding and insurance requirements, unless specified by State law, shall be imposed.

2.1 Entities receiving Federal assistance which involves contracting for construction or facility improvements shall follow State law relating to bid guarantees, performance bonds, and payment bonds except for contracts exceeding $250,000. **For contracts exceeding $250,000, the following minimum bonding requirements shall apply:**

2.1.1 A bid guarantee from each bidder equivalent to 5 percent of the bid price. The **"bidguarantee"** shall consist of a firm commitment in the form of a bid bond, certified check, or other negotiable instrument provided at the time of bid as assurance that the bidder is prepared to execute a contract within the time specified for the bid amount (2 CFR 200.326(a)).

2.1.2 A **"performance bond"** furnished by the contractor in an amount at least equal to 100 percent of the contract price to secure the contractor's fulfillment of all obligations under the contract (2 CFR 200.326(c)).

2.1.3 A **"payment bond"** in an amount not less than 100 percent of the contract price or in a penal sum not less than that prescribed by State law, to assure contractor payment of all persons performing labor on the project under this contract and/or furnishing materials and supplies during the execution of this contract (2 CFR 200.326(c)).

The performance bond and the payment bond may be in one or in separate instruments in accordance with State law.

3.1 Where bonds are required as per section 2.1 above, the bonds shall be obtained from **acceptablecompanies** holding certificates of authority within the State of Arkansas.

4.1 **Additional or Substitute Bond** If, at any time, the Owner, for justifiable cause, shall be dissatisfied with any surety or sureties, then upon the Performance or Payment Bonds, the contractor shall within five (5) days after notice of dissatisfaction, substitute 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(s) shall be paid by the contractor. No further payments shall be deemed due nor made until the new surety or sureties furnish acceptable [illegible]) to the Owner.

5.1 **Insurance.** Thecontractor shall not commence work under this contract until he has obtained all insurance, as approved by the Owner, required under this paragraph, nor shall the contractor allow any subcontractor to commence work on

his subcontract until the subcontractor's required insurance has been obtained and approved.

5.1.1 **Compensation Insurance:** The contractor shall procure and maintain throughout this contract Workmen's Compensation Insurance as required by applicable State law for all of his employees engaged in work at the site of the project under this contract and, in case of any such work sublet, the contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees engaged in such work unless such employees are covered by the protection afforded by the contractor's Workman's Compensation Insurance. In case any class of employees engaged in hazardous work under this contract is not protected under the Workmen's Compensation Statute, the contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of his employees as are not otherwise protected.

5.1.2 **Contractor's Public Liability and Property Damage and Vehicle LiabilityInsurance:** The contractor shall procure and shall maintain during the life of this contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in amounts specified in the contract conditions.

5.1.3 **Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance:** The contractor shall either (1) require each of his subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance of the type and in the amounts specified in the Supplementary Contract Conditions or, (2) obtain policy insurance on such activities as specified in subparagraph 5.1.2 above.

5.1.4 **Scope of Insurance and Special Hazards:** The insurance required under subparagraphs 5.1.2 and 5.1.3 above shall provide adequate protection for the Contractor and his subcontractors, respectively, against damage claims which may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards, if specified, which may be encountered in the performance of this contract.

5.1.5 **Risk Insurance:** The Owner or contractor is required to maintain Risk Insurance on a 100 percent completed value based on the insurable portion of the project (until accepted by the Owner as substantially complete) for the benefit of the Owner, the Contractor, or subcontractors as their interests may appear. Any requirements pertaining to adequacy of Risk Insurance shall be as per State law.

5.1.6 **Proof of Carriage of Insurance:** The contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by the Owner."

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____
_____ as Principal,
and _____ as Surety,
are hereby held and firmly bound unto _____, as
Owner,in the penal sum of _____
for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.
Signed, this _____ day of _____, 2023.

The condition of the above obligation is such that whereas the Principal has submitted to _____ a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the

SENIOR CITIZENS CENTER CONSTRUCTION
INCLUDING PARKING AND SITE UTILITIES.

A. If said Bid shall be rejected, or in the alternate,

B. If said Bid shall be accepted and the Principal shall execute and deliver a contract in theForm of Contract specified (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____

Surety

_____

Surety's Agent

_____

Principal

Seal

Note: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) as authorized to transact business in Arkansas and have underwriting authority in an amount equal to or greater than the bid amount.

Arkansas Statutory Payment and Performance Bond

We _____,
as Principal, hereinafter called Principal, and _____
authorized to do business in the State of Arkansas, as Surety, hereinafter called Surety,
are held and firmly bound unto _____
as Obligee, hereinafter called Owner, in the amount of _____
Dollars ($ _____), for the payment whereof Principal and Surety bind themselves, their heirs, personal representatives, successors and assigns, jointly and severally, by these presents.

Principal has by written agreement dated _____ entered into a contract with Owner for

SENIOR CITIZENS CENTER CONSTRUCTION
INCLUDING PARKING AND SITE UTILITIES

which contract is by reference made a part hereof and hereinafter referred to as the Contract.

THE CONDITION OF THIS OBLIGATION is such that if the Principal shall faithfully perform the Contract on his part and shall fully indemnify and save harmless the Owner from all cost and damage which he may suffer by reason of failure to do so and shall fully reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any such default, and further, that if the Principal shall pay all persons all indebtedness for labor or materials furnished or performed under said Contract, failing which such persons shall have a direct right of action against the Principal and Surety, jointly and severally, under this obligation, subject to the Owner's priority, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

No suit, action or proceeding shall be brought on this bond outside the State of Arkansas. No suit, action or proceeding shall be brought on this bond except by the Owner after six months from the date final payment is made on the Contract, nor shall any suit, action or proceeding be brought by the Owner after two years from the date on which the final payment under the Contract falls due.

Any alterations which may be made in the terms of the Contract, or in the work to be done under it, or the giving by the Owner of any extension of time for the performance of the Contract, or any other forbearance on the part of either the Owner or the Principal to the other shall not in any way release the Principal and the Surety or Sureties, or either or

any of them, their heirs, personal representatives, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such alteration, extension or forbearance being hereby waived.

In no event shall the aggregate liability of the Surety exceed the sum set out herein.

Executed on this _____ day of _____, 2023.

_____

Principal

_____

Surety Agent

_____

Attorney-in-Fact

Certificate of Owner's Attorney

I, the undersigned, _____, the duly authorized and acting legal representative of Independence County, do hereby certify as follows:

I have examined the attached contract(s) and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

_____

Attorney Signature

_____

Date

Architect's Certification of Compliance with Minimum Standards for Access by Handicapped

ACEDP Project Number: 795-00055-20

Project Name: Independence County Senior Center

City/County, State: Batesville, Independence County, Arkansas

Pursuant to the requirements of the Architectural Barriers Act of 1968, 42 USC 4151, and the regulations issued subsequent thereto, including the Americans with Disability Act, the undersigned certifies that the design of the above-referenced project is in conformance with the minimum standards contained in the American Standard Specifications for Making Buildings and Facilities Accessible To and Usable By the Physically Handicapped, Number A-117.1R-1971 (as modified by 41 CFR 101-19.603).

Name and Address of Project Engineer:
Robert W. Chatman, P.E.
Miller-Newell Engineers, Inc.
P.O. Box 705
Newport, AR 72112

Registration Number: 4815

Signature: Robert W. Chatman

Typed Name: Robert W. Chatman, P.E.

Date: 3-3-2023

General Conditions of the Contract

1.1 Definitions

1.1.1 Contract and Contract Documents

The project to be constructed pursuant to this contract will be financed with assistance from Community Development Block Grant funds and is subject to all applicable Department of Housing and Urban Development (HUD), State and Federal laws.

The plans, specifications, contract documents and any addenda shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were incorporated verbatim. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or infer interpretation of the provisions to which they refer.

1.2 Execution

1.2.1 Six copies of the Contract Documents shall be signed by the Owner and contractor.

1.2.2 Words and abbreviations which have well-known technical or trade meanings areused in the Contract Documents in accordance with such recognized meanings.

1.3 Contract Authorization

1.3.1. All original Drawings and Specifications will remain in the ownership of the architect or engineer. Notice and description of any changes to the original documents or scope of work by the contractor shall be communicated to the architect/engineer prior to completion of the affected work.

1.3.2 The Owner, architect/engineer and funding agencies shall have access to the construction site at all times and shall make site visits as necessary to verify project progress.

1.3.3 The architect/engineer shall make, or have made, determinations that the work for each payment request is or is not complete and meets the requirements of the contract documents. The request for payment process shall be defined at the Preconstruction Conference.

1.3.4 The architect/engineer shall have the authority to request corrections to deficient work by notifying the contractor in writing.

1.3.5 The contractor shall meet the requirements of all State, Federal and local laws including, but not limited to those listed in these contract documents as **Regulatory Requirements**.

1.3.6 The architect/engineer shall give all orders and directions under this contract, relative to execution of work including the amount, quality, acceptability, and fitness of the work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to work and the construction thereof. The architect or engineer's decisions shall be final and conclusive, except as State law may otherwise prescribe. Any differences or conflicts in regard to the contract documents that may arise between the contractor performing work for the architect/engineer shall be adjusted and determined by the architect/owner after consultation with the contractor.

1.3.7 All work and materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Owner, engineer or architect or representative(s) thereof, who shall adjudge the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet their approval they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the contractor at his own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the architect/engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the contract documents, the compensation to be paid to the contractor shall be reduced by such amount adjudged by the architect/engineer as equitable.

1.3.8 No claim for extra work or cost shall be allowed unless authorized by change order executed by the engineer/architect and approved by the Owner and the Economic Development Commission. In the event of temporary suspension of work, or during inclement weather, or whenever the engineer or architect shall direct, the contractor will, cause his subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the architect/engineer, any work or materials were damaged or injured by reason of failure on the part of the contractor or any of his subcontractors, such materials shall be removed and replaced at contractor expense.

1.3.9 Should the contractor encounter site conditions that differ from the contract documents, he shall immediately give notice to the architect/engineer before commencing work on the affected properties. The architect/engineer will thereupon investigate, or have investigated the

conditions, and if found that they materially differ from those shown in the contract documents, will request changes as deemed necessary. Any increase or decrease of cost resulting from such changes shall be adjusted as per the General Conditions.

2.1 **Definitions**

2.1.1 The following terms as used in this contract are respectively defined as follows:

2.1.2 **Contractor:** A person, firm or corporation with whom the owner contracts with.

2.1.3 **Subcontractor:** A person, firm or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with the contractor.

2.1.4 **Work on (at) the project:** Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the contractor and any subcontractor.

3.1 **Contractor's Responsibilities**

3.1.1 The contractor shall and will, in good workmanlike manner, complete and perform all work and furnish all supplies, materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary to perform and complete all the work required by this contract. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required.

The contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract documents, and complete the entire work to the satisfaction of the engineer/architect and Owner.

It is understood that unless otherwise specifically stated in the contract documents, the contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every kind, and all other services and facilities of every kind whatsoever necessary to execute, complete, and deliver the complete project within the specified time. Any work necessary to be performed after regular working hours, on Sundays or legal Holidays, shall be performed without additional Owner expense.

3.1.2 The contractor shall at all times safe guard the Owner's property from injury or loss in connection with this contract. He shall at all times safe guard and protect his own work, and that of adjacent property from damage. In case of emergency, which threatens loss or injury of property, and/or safety or life, the contractor will be allowed to act, without previous instructions from the architect/engineer, in a diligent manner. He shall notify the engineer/architect of actions immediately thereafter. Any claim for compensation by the contractor due to such extra work may be submitted to the architect/engineer for approval and Owner for consideration. Where the contractor has not taken action but has notified the architect/engineer of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the architect/engineer.

The amount of reimbursement to the contractor on account of any emergency action shall be determined in the manner provided in the general conditions.

3.2 **Contractor Requirements**

The contractor shall

3.2.1 Take every precaution against injuries to persons or damage to property;

3.2.2 Store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work or elsewhere as will not unduly interfere with the progress of his work or the work of any other contractors;

3.2.3 Clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;

3.2.4 Before final payment, remove all surplus material, temporary structures, equipment and debris of every nature resulting from his operations, and to put the site in an orderly condition;

3.2.5 Effect all cutting, fitting or patching of his work to conform to the contract documents.

3.2.6 No materials or supplies for the work shall be purchased by the contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which interest is retained by the seller. The contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

3.2.7 The contractor shall not assign the whole or any part of this contract or any moneys due or to become due hereunder without written consent of the Owner. In case the contractor assigns all or any part of any moneys due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the contractor shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this contract.

3.2.8 If, through contractor neglect, any other contractor or subcontractor suffers loss or damage on the work, the contractor agrees to settle with such other parties by agreement or arbitration if such parties will so settle. If such other contractors or subcontractors shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the contractor, who shall indemnify and save harmless the Owner against any such claim.

3.2.9 Neither the final certificate of payment nor any provision in the contract documents, shall constitute an acceptance of work not completed in accordance with the contract documents or relieve the contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. The Owner will give notice of observed defects with reasonable promptness.

3.3 Subcontractor's Responsibilities

3.3.1 The contractor may hire specialty subcontractors to complete work which, under normal contracting practices, is performed by specialty subcontractors, however, the contractor shall be fully responsible to the Owner for the acts or omissions of his subcontractors, and of persons either directly or indirectly employed by him.

3.3.2 The contractor shall coordinate his operations with those of other contractors in the arrangement for storage of materials and in the detailed execution of the work. The contractor, including his subcontractors, shall keep informed of the progress and the detail work of other contractors and shall notify the Owner immediately of lack of progress or defective workmanship on the part of other contractors. Failure of a contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory.

3.4 Patents

The contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents. License and/or Royalty Fees for the use of a process which is authorized by the Owner must be reasonable, and paid to the holder of the patent, or his authorized licensee, direct by the Owner and not by or through the contractor.

If the contractor uses any design, device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the holder of such patented or copyrighted design, device or materials. It is mutually understood that, without exception, the contract price shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The contractor and/or his Sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

3.5 Superintendence

At the site of the work, the contractor shall employ a construction superintendent or foreman who shall have full authority to act for the contractor.

3.6 Conflicting Conditions

Any provisions in any of the contract documents, which may be in conflict, or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.

3.7 ArkansasEconomic Development Commission Inspection

Authorized representatives of the Arkansas Economic Development Commission shall be permitted to inspect all work, materials, personnel records, invoices of materials, and other data and records of the contractor and his subcontractor(s).

3.8 Payment Provisions

3.8.1 To ensure the proper performance of this contract, the Owner shall retain ten percent (10%) of the amount of each estimate until the project is 50 percent complete. Final retainage shall be released upon acceptance of the Certificate of Substantial Completion.

3.8.2 In preparing payment estimates, materials stored on the site and preparatory work completed may be included.

3.8.3 The contractor agrees to indemnify and hold the Owner harmless from all claims arising from the lawful demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies incurred in the performance of this contract. The contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the above nature have been paid, discharged, or waived. If the contractor fails to do so, then the Owner may, after having served written notice to the contractor, pay unpaid bills (of which the owner has written notice), and direct, or withhold from the contractor's unpaid compensation, a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the contractor shall be resumed, in accordance with the terms of this contract. In no event shall the above sentences impose any obligations upon the Owner to the contractor or his surety. In paying any unpaid bills of the contractor, the Owner shall be deemed the contractor's agent, and any such payments made by the Owner shall be considered as payment made under the contract to the contractor and the Owner will not be liable to the contractor for any such payments.

3.8.4 After execution and delivery of the contract prior to making the first partial payment, the contractor shall deliver to the owner an estimated construction progress schedule in a form satisfactory to the owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the contract documents and the anticipated amount of each monthly payment that will become due in accordance with the progress schedule. The contractor shall furnish on forms supplied by the Owner a detailed estimate giving a complete breakdown of the contract price and periodic itemized estimates of work completed for the purpose of making partial payments thereon. The costs employed in maintaining these schedules will be used only to determine the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

3.8.5 The contractor shall procure and pay all permits, licenses and approvals necessary for the execution of his contract.

4.1 Changes in Work

No changes in the work defined within the contract documents shall be made without a change order. Charges or credits for the work covered by the change order shall be determined by one or more, or a combination of the following:

- Unit bid prices previously approved
- An agreed upon lump sum
- The actual cost of labor, including foremen
- Materials entering permanently into the work
- The ownership or rental cost of construction plant and equipment during the time of use on the extra work
- Power and consumable supplies for the operation of power equipment
- Insurance, Social Security and unemployment contributions

4.2 Additional Instructions and Drawings

If necessary, the contractor will be furnished additional instructions and drawings to execute contract work. These additional drawings and instructions will be prepared so that they can be generally interpreted as part of the contract documents thereof. Any additional instructions or drawings will be issued to and discussed by all parties and shall be carried out by the contractor as specified.

4.3 Contractor and Owner

4.3.1 It is hereby understood and mutually agreed, by and between the contractor and the Owner, that the date of beginning and the time for completion, as specified in the contract, of the work to be completed hereunder, are Essential Conditions of this contract; and it is further mutually understood and agreed that the work to be completed in this contract shall be started on a date to be specified in the "Notice to Proceed."

If the contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension of time granted by the Owner, then the contractor does hereby agree, as a part consideration for the awarding of this contract, to pay to the Owner the amount specified in the contract, not as a penalty, but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the contractor shall be in default after the time stipulated in the contract for completing the work.

Provided, that the contractor shall not be charged with liquidated damages or any excess cost where the Owner determines that the contractor is without fault and the contractor's reasons for the time extension are acceptable to the Owner;

Provided further, that the contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to;

a. Any preference, priority or allocation order duly issued by the Government;

b. Unforeseeable cause beyond the control and without the fault or negligence of the contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and documented severe weather; and,

c. Any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article;

Provided further, that the contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the contractor within a reasonable time of its decision in the matter.

4.3.2 Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable determination to be set forth in writing.

4.3.3 Any notice to any contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail, to the said contractor at his last given address, or delivered in person to the said contractor or his authorized representative on the work.

5.1 Owner

5.1.1 The Owner is the entity identified in the Owner-Contractor Agreement and is referred to as such in the contract documents. The term Owner means the Owner or his authorized representative.

5.1.2 Prior to the start of construction, the Owner shall obtain all land and rights-of-way necessary for carrying out and completion of work to be performed under this contract. The contractor shall comply with all laws, ordinances, rules, orders, and regulations relating to performance of the

work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

5.1.3 Unless otherwise expressly provided for in the contract documents, the Owner will furnish to the contractor all surveys necessary for the execution of the work.

5.1.4 No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any contracts or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, attorney, or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other pertinent contract.

5.1.5 Should any provisions of this contract be violated by the contractor, or any of his subcontractors, the Owner may serve written notice upon the contractor and the Surety of its intention to terminate the contract. Such notices shall contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the contractor, such violation, or delay shall cease and satisfactory arrangement of correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the contractor and the Surety shall have the right to take over and perform the contract; provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract or by force account at the expense of the contractor and the contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

5.1.6 The Owner shall meet the requirements of all State, Federal and local laws including but not limited to those listed in these contract documents as Regulatory Requirements.

6.1 Safety Standards and Accident Prevention

With respect to all work performed under this contract, the contractor shall:

6.1.1 Comply with the safety standards provisions of applicable laws, building and construction codes and the Manual of Accident Prevention in Construction: published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act (OSHA) of 1970 (Public Law 91-596) and the requirements of Title 29 of the Code of Federal Regulations, Section 1518, as published in the Federal Register, Volume 36, Number 75, Saturday, April 17, 1971, and specifically, OSHA's Standard for Excavation and Trenches Safety Systems, 29 CFR Part 1926, Subpart P.

6.1.2 Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.

6.1.3 Maintain, at his office or other conspicuous place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site.

7.1 Miscellaneous Provisions

7.1.1 The architect/engineer shall review all submittals to include but not be limited to samples, shop drawings and product data. The architect/engineer shall provide the contractor with approved or rejected submittals within ten days of their receipt. The contractor shall retain one copy in his construction files at all times and provide one copy to the resident project representative. Upon completion of the contract, the contractor shall provide the complete submittal file to the owner who will retain them in the permanent construction file. Upon receiving a rejected submittal, the contractor shall resubmit an alternate or provide what was originally specified.

7.1.2 The contractor shall insert in any subcontracts the Federal Labor Standards Provisions Contained herein (See Regulatory Requirements) and such other clauses as the Economic Development Commission may deem necessary, and also, a clause requiring subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

7.1.3 The contractor may agree to the use and occupancy of a portion or unit of the project before formal acceptance by the owner provided that the owner

secures written consent of the contractor, except in the event, in the opinion of the architect/engineer, the contractor is chargeable with unwarranted delay in final cleanup of punch list items or other contract requirements. Also, an endorsement of the insurance-carrier and consent of the surety permitting occupancy of the building or use of the project during the remaining period of construction must be secured.

7.1.4 All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the owner (in accordance with State procurement requirements) who will pay for all such services direct and exclusive to this contract. Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended.

7.1.5 The architect/engineer shall provide a qualified resident observer to be on site at times when the contractor, subcontractor and workmen are working. The resident observer shall represent the engineer/architect by verifying that the requirements of the contract documents are met but will also represent the owner by verifying that those requirements are met and that the work is completed in a manner to assure that the construction means, methods and techniques represent the best interests of the owner. The resident observer shall be responsible to check the quality and quantities of work and report immediately any discrepancies to the engineer/architect.

7.1.6 A separate lump sum bid item must be included for Excavation/Trench Safety System (for excavation in excess of five feet). The bidder is required to complete this pay item in accordance with Act 291 of the Arkansas 79th General Assembly.

7.1.7 In the event a bidder fails to complete this pay item, the Owner shall declare that the bid fails to comply fully with the provisions of the contract documents and will be considered invalid as a nonresponsive bid. Payment for the lump sum bid item for Excavation/Trench Safety System will be paid at the completion of the contract. No partial payments will be allowed.

Supplemental Conditions of the Contract

8.1 Special Hazards

The contractor's and his subcontractor's Public Liability and Property Damage Insurance shall provide adequate protection against the following special hazards:

8.1.1 **Contractor's and Subcontractor's Public Liability, Vehicle Liability and Property Damage Insurance.** As required in the General Conditions, the Contractor's Public Liability Insurance and Vehicle Liability Insurance shall be in an amount not less than $500,000 for injuries, including accidental death, to any one person, and subject to the same limit for each person, in an amount not less than $500,000 on account of one accident, and Contractor's Property Damage Insurance in an amount not less than $500,000.

8.1.2 The Contractor shall either require each of his subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's Public Liability and Property Damage of the type and in the same amounts as specified in the preceding paragraph, or insure the activities of his subcontractors in his own policy.

8.1.3 The contract documents shall consist of all specifications, plans, contract documents and addenda for the project.

9.1 Supplementary Contract Conditions

Any supplementary conditions of the contract must be inserted below:
NONE

"General Decision Number: AR20230007 01/06/2023

Superseded General Decision Number: AR20220007

State: Arkansas

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

County: Independence County 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)(2)-(60).

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 $16.20 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 2023.
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 $12.15 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 2023.

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	01/06/2023

ENGI0624-006 01/01/2017

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Crane	$ 26.20	12.30
Forklift	$ 26.20	12.30

IRON0321-010 03/01/2022

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 23.50	19.96

PAIN0424-008 07/01/2021

	Rates	Fringes
PAINTER (Spray)	$ 16.25	10.42

SHEE0036-035 06/01/2021

	Rates	Fringes
SHEET METAL WORKER (HVAC Duct Installation Only)	$ 24.44	13.66

SUAR2015-004 01/09/2017

	Rates	Fringes
BRICKLAYER	$ 19.15	0.00
CARPENTER, Includes Drywall Hanging	$ 18.19	0.00
CEMENT MASON/CONCRETE FINISHER	$ 21.08	0.00
ELECTRICIAN	$ 21.95	6.36
LABORER: Common or General	$ 11.91 **	0.00
LABORER: Mason Tender - Brick	$ 12.32 **	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	$ 23.08	0.00
OPERATOR: Bulldozer	$ 18.14	0.00
PAINTER (Brush and Roller)	$ 15.68 **	0.00
PLUMBER	$ 19.72	3.49
SPRINKLER FITTER (Fire Sprinklers)	$ 21.77	2.46
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 ($16.20) or 13658 ($12.15). Please see the Note at the top of the wage determination for more information.

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) (ii)).

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which 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. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and

the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of 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. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write 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 the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write 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 by 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

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

"General Decision Number: AR20230048 01/06/2023

Superseded General Decision Number: AR20220048

State: Arkansas

Construction Type: Heavy
HEAVY CONSTRUCTION PROJECTS (Including Water and Sewer Lines)

Counties: Clay, Cross, Fulton, Greene, Independence, Izard, Jackson, Lawrence, Lee, Mississippi, Monroe, Randolph, Sharp, St Francis, Stone, White and Woodruff 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)(2)-(60).

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 $16.20 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 2023.
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 $12.15 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 2023.

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	01/06/2023

SUAR2015-045 01/09/2017

	Rates	Fringes
CARPENTER, Includes Form Work	$ 17.32	3.15
LABORER: Common or General	$ 11.86 **	2.19
LABORER: Pipelayer	$ 12.19 **	1.71
OPERATOR: Backhoe/Excavator/Trackhoe	$ 18.27	2.50
OPERATOR: Bulldozer	$ 20.60	0.00
TRUCK DRIVER: Dump Truck	$ 16.13 **	1.93

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 ($16.20) or 13658 ($12.15). Please see the Note at the top of the wage determination for more information.

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) (ii)).

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

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Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of 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. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
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Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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200 Constitution Avenue, N.W.
Washington, DC 20210

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

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

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

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Architect's Certification of Compliance with Minimum Standards for Access by Handicapped

ACEDP Project Number: 795-00055-20

Project Name: Independence County Senior Center

City/County, State: Batesville, Independence County, Arkansas

Pursuant to the requirements of the Architectural Barriers Act of 1968, 42 USC 4151, and the regulations issued subsequent thereto, including the Americans with Disability Act, the undersigned certifies that the design of the above-referenced project is in conformance with the minimum standards contained in the American Standard Specifications for Making Buildings and Facilities Accessible To and Usable By the Physically Handicapped, Number A-117.1R-1971 (as modified by 41 CFR 101-19.603).

Name and Address of Project Architect:
William M. Wage, Architect
5341 S. Irvin Drive
Memphis, TN 38119

Registration Number: 721

Signature: William M. Wage

Typed Name: William M. Wage

Date: March 29, 2023

Regulatory Requirements

1. **Interest of Member or Delegate to Congress**

   No member of or Delegate to Congress, or Resident Commissioner, shall be a party to or benefit from this contract, except that provisions of this clause shall not extend to situations where the contract accrues to a corporation for its general benefit.

2. **Debarment and Suspension (Executive Orders 12549 and 12689)**

   A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

3. **Equal Employment Opportunity**

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

   The contractor will not discriminate against any employee or applicant for employment because of age, race, religion, sex, color, handicap, veteran status or national origin. The contractor will take affirmative steps to ensure that applicants are employed, and that employees are treated during employment, without regard to their age, race, religion, sex, color, handicap, veteran status or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms or compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

   3.2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, religion, sex, color, handicap, veteran status or national origin.

   3.3. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the labor union or workers representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965 (EO 11246), and shall post copies of the

notice in conspicuous places available to employees and applicants for employment.

3.4. The contractor will comply with all provisions of EO 11246, and of the rules, regulations, and relevant orders of the Secretary of Labor.

3.5. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or Federally-assisted construction contracts.

3.6. The contractor will include the provisions of these paragraphs in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of EO 11246, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Economic Development Commission and HUD may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by HUD, the contractor may request the United States to enter into such litigation to protect its interests.

4. **Employment Practices**

The contractor shall

4.1. To the greatest extent practicable, follow hiring and employment practices for work on the project, which will provide new job opportunities for the unemployed and underemployed (Section 3 requirements).

4.2. Insert or cause to be inserted the same provisions in each construction subcontract.

5. **Equal Opportunity Clause**

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

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in

conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The Contractor will not discourage or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

5.2.**Subcontracts.**

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

5.3.**Incorporation by reference.**

The equal opportunity clause may be incorporated by reference in all Government contracts and subcontracts, including Government bills of lading, transportation requests, contracts for deposit of Government funds, and contracts for issuing and paying U.S. savings bonds and notes, and such other contracts and subcontracts as the Deputy Assistant Secretary may designate.

5.4.**Incorporation by operation of the order.**

By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated in such contracts and whether or not the contract between the agency and the contractor is written.

5.5.**Adaptation of language.**

Such necessary changes in language may be made in the equal opportunity clause as shall be appropriate to identify properly the parties and their undertakings.

[43 FR 49240, Oct. 20, 1978, as amended at 62 FR 66971, Dec. 22, 1997; 79 FR 72993, Dec. 9, 2014; 80 FR 54934, September 11, 2015]

6. **Certification of Nonsegregated Facilities** (Applicable to contracts and subcontracts **over $10,000**).

By the submission of this bid, the bidder, offeror, applicant or subcontractor certifies that he/she does not maintain or provide for his/her establishments, and that he/she does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. He/she certifies further that he/she will not maintain or provide for employees any segregated facilities at any of his/her establishments, and he/she will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained. The bidder, offeror, applicant or subcontractor agrees that a breach of this certification is a violation of the equal opportunity clause of this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities

provided for employees which are segregated by explicit directive or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. He/she further agrees that (except where he/she has obtained for specific time periods) he/she will obtain identical certification from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the equal opportunity clause; that he/she will retain such certifications in his/her files; and that he/she will forward the following notice to such proposed subcontractors (except where proposed subcontractors have submitted identical certifications for specific time periods).

7. **2 CFR Part 75 Section 3 Clause**(Applicable to Federallyassisted housing rehabilitation, housing construction, and other public construction projects assisted under HUD programs that provide housing and community development financial assistance when the total amount of assistance the project ***exceeds a threshold of $200,000***).

a. The work to be performed under this Contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended (12 USC §1701u) ("**Section 3**"). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted developments covered by Section 3 shall, to the greatest extent feasible, be directed to low- and very low-income persons, including persons who are recipients of HUD assistance for housing, with a preference for both targeted workers living in the service area or neighborhood of the Development and YouthBuild participants, as defined at 24 CFR Part 75 ("**Section 3 Regulations**").
b. The Parties agree to comply with HUD's regulations in Section 3 Regulations, which implement Section 3. As evidenced by their execution of this Contract, the Parties certify that they are under no contractual or other impediments that would prevent them from complying with the Section 3 Regulations.
c. The Award Recipient, Contractor, or Development Owner agrees to send to each labor organization or representative of workers with which the Award Recipient, Contractor, or Development Owner has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the Award Recipient, Contractor, or Development Owner's commitments under this section of the Contract and will post copies of the notice in conspicuous places at the worksite where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference and shall set forth the following: (i) minimum number and job titles subject to hire, (ii) availability of apprenticeship and training positions, (iii) qualifications for each, (iv) name and location of the person(s) taking applications for each of the positions, and (v) the anticipated date the work shall begin.
d. The Award Recipient, Contractor, or Development Owner agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in Section 3 Regulations and agrees to take appropriate action, as provided in an applicable provision of the subcontractor in this Section 3 clause, upon a finding

that the subcontractor violates the regulations in Section 3 Regulations. The Award Recipient, Contractor, or Development Owner will not subcontract with any subcontractor where the Award Recipient, Contractor, or Development Owner has notice or knowledge that the subcontractor has been found in violation of the regulations in Section 3 Regulations.

e. The Award Recipient, Contractor, or Development Owner will certify that any vacant employment positions, including training positions, that are filled (i) after a contractor is selected but before the Contract is executed, and (ii) with persons other than those to whom the regulations of Section 3 Regulations require employment opportunities to be directed, were not filled to circumvent the Award Recipient, Contractor, or Development Owner's obligations under Section 3 Regulations.

f. Noncompliance with HUD's regulations in Section 3 Regulations may result in sanctions, termination of this Contract for default, and debarment or suspension from future HUD-assisted contracts.

8. **Access to Records/Maintenance of Records**

The contractor shall maintain accounts and records, including personnel, property, and financial records, adequate to identify and account for all costs pertaining to the contract and such other records as may be deemed necessary by the locality to assure proper accounting for all funds. These records will be available for audit purposes to the locality or the State or any other authorized representative, and will be retained for three years after contract completion. Moreover, the locality, State, or any authorized representative shall have access to any books, documents, papers, and records of the contractor which are directly pertinent to this contract for the purpose of making audit, examination, excerpts, and transcriptions.

9. **Conflict of Interest of Officers or Employees of the Local Jurisdiction, Members of the Local Governing Body, or Other Public Officials**

No officer or employee of the local jurisdiction or its designees or agents, no member of the governing body, and no other public official of the locality who exercises any function or responsibility with respect to this contract, during his/her tenure or for one year thereafter, shall have any interest, direct or indirect, in any contract or subcontract, or the proceeds thereof, for work to be performed. Further, the contractor shall cause to be incorporated in all subcontracts the language set forth in this paragraph prohibiting conflict of interest.

10. **Section 503 of the Rehabilitation Act of 1973 (If $10,000 or Over)**

10.1. The contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative steps to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their

physical or mental handicap in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

10.2. The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

10.3. In the event of the contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

10.4. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices stating the contractor's obligation under the law to take affirmative steps to employ and advance in employment qualified handicapped employees and applicants for employment, and the rights of applicants and employees.

10.5. The contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement of other contract understanding, that the contractor is bound by the terms of Section 503 of the Rehabilitation Act of 1973, and is committed to take affirmative steps to employ and advance in employment physically and mentally handicapped individuals.

10.6. The contractor will include the provisions of this clause in every subcontract or purchase order of $2,500 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to Section 503 of the Act, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Director of the office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

11. **Age Discrimination Act of 1975**

The Contractor shall comply with the provisions of the Age Discrimination Act of 1975. No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving federal financial assistance.

12. **Section 402 Veterans Readjustment Assistance Act of 1973 (If $10,000 or Over)**

12.1. **Affirmative Steps for Disabled Veterans and Veterans of the Vietnam Era**

12.1.1. The contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran

or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative steps to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veteran status in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or termination, and selection for training, including apprenticeship.

12.1.2. The contractor agrees that all suitable employment openings which exist at the time the contract is executed and those which occur during the performance of this contract (including those not generated by this contract and including those occurring at an establishment of the contractor other than the one wherein the contract is being performed but excluding those of independently operated corporate affiliates) shall be listed at an appropriate local office of the State employment service system wherein the opening occurs. The contractor further agrees to provide reports to local offices regarding employment openings and hires as may be requested.

12.1.3. State and local government agencies holding Federal contracts of $10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service.

12.1.4. Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and non-veterans. The listing of employment openings does not require the hiring of any particular job applicant or selection from any particular group of job applicants, and nothing herein is intended to relieve the contractor from any requirements in Executive Orders or regulations regarding nondiscrimination in employment.

12.1.5. The reports required in regard to this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office, or where the contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of nondisabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired for on-the-job training under 38 U.S.C. 1787. The contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made of this contract identifying data for each hiring location. The contractor shall maintain at each hiring location copies of the

reports submitted until the expiration of one year after final payment under the contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representative of the contracting officer for of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.

12.1.6. Whenever the contractor is subject to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the contractor is subject to these provisions and has so advised the State system, there is no need to advise them of subsequent contracts. The contractor may inform the State system when it is no longer bound by this contract clause.

12.1.7. This clause does not apply to the listing of employment openings occurring and filled outside the 50 States, the District of Columbia, Puerto Rico, Guam and the Virgin Islands.

12.1.8. The provisions of this clause do not apply to openings, which the contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union firing arrangement. This exclusion does not apply to a particular opening since an employer decides to consider applicants outside of his own organization or employer-union arrangement for that opening.

12.1.9. The phrase "All suitable employment openings" includes, but is not limited to, openings which occur in the following job categories; production and nonproduction; plans and office; laborers and mechanics; supervisory and nonsupervisory; technical; and executive administrative and professional openings compensated on a salary basis of less than $25,000 per year. This term includes full-time employment, temporary employment of more than 3 days' duration, and part-time employment. It does not include openings which the contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement nor openings in an educational institution which are restricted to students of the institution. Under the most compelling circumstances, an employment opening may not be suitable for listing, including such situations where the needs of the Government cannot reasonably be otherwise supplied, where listing would be contrary to national security, or where the requirement of listing would otherwise not be for the best interest of the Government.

12.1.10. "Appropriate office of the State employment service system" means the local office of the Federal-State national system of public employment offices with assigned responsibility for serving the area where the

employment openings are to be filled, including the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

12.1.11. "Openings which the contractor proposes to fill from within his own organization" means employment openings for which no consideration will be given to persons outside the contractor's organization (including any affiliates, subsidiaries, and the parent companies) and includes any openings which the contractor proposes to fill from regularly established "recall" lists.

12.1.12. "Openings, which the contractor proposes to fill pursuant to a customary and traditional employer-union, hiring arrangement," means employment openings, which the contractor proposes to fill from union halls, which is part of the customary and traditional hiring relationship, which exists between the contractor and representative of his employees.

12.1.13. The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

12.1.14. In the event of the contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

12.1.15. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notices shall state the contractor's obligation under the law to take affirmative steps to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and employees.

12.1.16. The contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act, and is committed to take affirmative steps to employ and advance in employment qualified disabled veterans and veterans of the Vietnam Era.

12.1.17. The contractor will include the provisions of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

13. **Section 109 of the Housing and Community Development Act of 1974**

13.1. No person in the United States shall on the ground of race, color, national origin, disability, age, religion, and sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

13.2. Whenever the Secretary of HUD determines that a State or unit of general local government which is a recipient of assistance under this title has failed to comply with subsection 8.1.1 or an applicable regulation, he shall notify the Governor of such State or the chief executive officer of such unit of local government of the noncompliance and shall request the Governor or the chief executive officer to secure compliance. If within a reasonable period of time, not to exceed sixty days, the Governor or the chief executive officer fails or refuses to secure compliance, the Secretary is authorized to (1) refer the matter to the Attorney General with a recommendation that an appropriate civil action be instituted; (2) exercise the powers and functions provided by Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d); (3) exercise the powers and functions provided for in section 111 (a) of this Act; or (4) take such other action as may be provided by law.

13.3. When a matter is referred to the Attorney General pursuant to above, or whenever he has reason to believe that a State government or unit of general local government is engaged in a pattern or practice in violation of the provisions of this section, the Attorney General may bring a civil action in any appropriate United States court for such relief as may be appropriate, including injunctive relief.

14. **Civil Rights Act of 1964**

Under Title VI of the Civil Rights Act of 1964, no person shall, on the grounds of race, color, sex, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance. Subsequent civil rights legislation has extended nondiscrimination to classes based on age and handicap.

15. **Certification of Compliance with Air and Water Acts**

(Applicable to Federally-assisted construction contracts and related subcontracts **exceeding $150,000)**

15.1. During the performance of this contract, the contractor and all subcontractors shall comply with the requirements of the Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended, including the requirement to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C.

1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

16. **Hazards, Safety Standards and Accident Prevention**

16.1. **Use of Explosives**

16.1.1. When the use of explosives is necessary for the prosecution of the work, the contractor shall observe all local, State and Federal laws in purchasing and handling explosives and take all necessary precaution to protect completed work, neighboring property, waterlines, or other underground structures. Where there is danger to structures or property from blasting, the charges shall be reduced and the material covered with suitable timber, steel or rope mats. The contractor shall notify all owners of public utility property of intention to use explosives at least 8 hours before blasting is done, close to such property.

16.2. **Danger Signals and Safety Devices (Modify as Required)**

16.2.1. The contractor shall take all necessary precautions to guard against damages to property and injury to persons. He shall put up and maintain in good condition, sufficient red or warning lights at night, suitable barricades and other devices necessary to protect the public. In case the contractor fails or neglects to take such precautions, the Owner may have such lights and barricades installed and charge the cost of this work to the contractor. Such action by the Owner does not relieve the contractor of any liability incurred under these specifications or contract.

17. **Or Equal Clause**

Whenever a material, article or piece of equipment is identified on the plans or specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and any material, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed, meets State plumbing requirements as equal in substance or structure.

18. **§ 200.323 Procurement of recovered materials.**

A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the

quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

19. **§ 200.216 Prohibition on certain telecommunications and video surveillance services or equipment.**

(a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

(1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

(b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

(c) See Public Law 115-232, section 889 for additional information.

(d) See also § 200.471.

20. **200.322 Domestic preferences for procurements.**

(a) As appropriate and to the extent consistent with law, the non-Federal entity should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.

(b) For purposes of this section:

(1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

FEDERAL LABOR STANDARDS PROVISIONS

U.S. Department of Housing and Urban Development
Office of Labor Relations Previous editions are obsolete
Form **HUD-4010** (06/2009) ref. Handbook 1344.1

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

A. 1. (i) Minimum Wages. 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, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section l(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) 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. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
(2) The classification is utilized in the area by the construction industry; and

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

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee 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 HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, 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.

(iii) 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.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part Previous editions are obsolete Page 2 of 5 form **HUD-4010** (06/2009) ref. Handbook 1344.1 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. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section l(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section l(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. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals.

Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at *http://www.dol.gov/esa/whd/forms/wh347instr.htm* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

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

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete; **(2)** 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 29 CFR Part 3;

(3) 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.

(c) 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 subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to

interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

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

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed

pursuant ',to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for 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 on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the 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 on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

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

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

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

10. (i) Certification of Eligibility. 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) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) 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) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than $5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds $100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in sub paragraph (1) of this paragraph.

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

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

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds $100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Enumeration of Plans, Specifications and Addenda

Following are the Plans, Specifications and Addenda which form a part of this contract, as set forth in the General Conditions, "Contract and Contract Documents":

Plans/Drawings

General Construction: Nos. _____

Heating and Ventilating: " M-200 & M-201

Plumbing: " P-200 -- P-210

Electrical: " E-200 – E-205

Other (_____) ." _____

Other (_____) ." _____

Specifications

General Construction: Section_____ to _____, incl.

Heating and Ventilating: " 230800 – 3 pages

Plumbing: " 221113 – 5 pages

Electrical: " 260000 – 6 pages

Other (_____) " _____ to _____, incl.

Other (_____) " _____ to _____, incl.

Addenda

No. _____ Date _____ No. _____ Date _____

No. _____ Date _____ No. _____ Date _____

Special Hazards

The Contractor's and his Subcontractor's Public Liability and Property Damage Insurance shall provide adequate protection against the following special hazards:

Contractor's and Subcontractor's Public Liability, Vehicle Liability and Property Damage Insurance

As required in the General conditions, the Contractor's Public Liability Insurance and Vehicle Liability Insurance shall be in an amount not less than $500,000 for injuries, including accidental death, to any one person, and subject to the same limit for each person, in an amount not less than $500,000 on account of one accident, and Contractor's Property Damage Insurance in an amount not less than $500,000.

The Contractor shall either require each of his subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's Public Liability and Property Damage of the type and in the same amounts as specified in the preceding paragraph, or insure the activities of his subcontractors in his own policy.

Photographs of Project

As provided in the General Conditions, the Contractor will furnish photographs in the number, type, and stage as enumerated below:

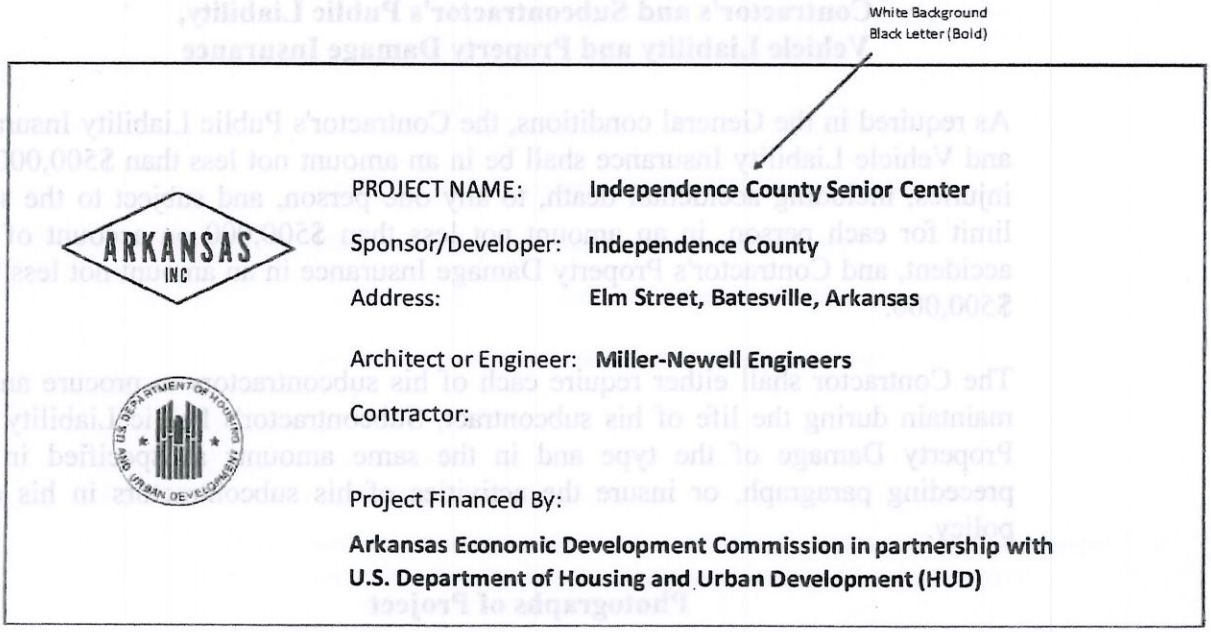
Schedule of Occupational Classifications and Minimum Hourly Wage Rates as Required in the General Conditions

Given on Pages 38-47.

Builder's Risk Insurance

As provided in Bonds and Certificates, the Contractor will maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portions of the project for the benefit of the Owner, the Contractor, and all subcontractors, as their interests may appear.

ACEDP Project Sign Specification



Sign Dimensions: Approximately 4' x 8' x 3/4" Plywood Panel (APA Rated A-B grade exterior)

REQUIREMENT OF SYSTEM FOR AWARD MANAGEMENT (SAM) CERTIFICATION

In accordance with the General Service Administration's (GSA) Office of Government wide Policy, Cities, Counties, Contractors, and Professional Service providers MUST be registered with the System for Award Management (SAM) prior to obtaining a contract and/or agreement with a project receiving Federal and/or State funding. The System for Award Management *(previously known as CCR-Central Contractor Registration)* is a database that is used to collect, validate, store, and disseminate data in support of Federal and State agency contracts and assistance awards.

SAM registrants must provide basic information relevant to procurement and financial transactions in order to complete their registration. Registrants must update or renew their registration at least once a year to maintain an active status. An active status mustbe maintained for the life of the contract and/or agreement.

SAM has a FREE online registration process that can be accessed at www.sam.gov.

Verification of the City's, County's, Contractor's and/or Professional Services Provider's active SAM registration must be obtained prior to execution of all agreements and contracts. If you have questions or need additional information, please go to the SAM website or call the Federal Service Desk at 866-606-8220. You may also contact your Grant Administrator for additional assistance.

NOTE: Verification that you are registered and active in SAM.gov MUST be presented at the Pre-Construction Conference or the Notice to Proceed will not be issued.

Certificate of Compliance for the 2014 Arkansas Energy Code
Design Professional

I, the undersigned, Robert W. Chatman, P.E., the duly authorized licensed design professional of record for the Independence County Senior Center Project, located at Independence County Senior Center, on Elm Street in Batesville, Arkansas, certify that the aforementioned building is designed to meet and or exceed the minimum requirements of the 2014 Arkansas Energy Code * and building specifications, based on the requirements, have been provided to me by the licensed design professional(s) of record.

Robert W. Chatman

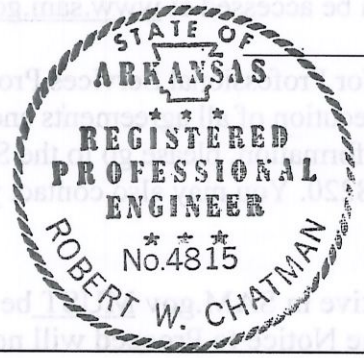
Signature

4815

License Number

3-29-2023

Date



Stamp

Per legislative authority provided by in Section 3(B)(2)(c) of Act 7 of 1981

For information regarding the specifications and requirements of the 2014 Arkansas Energy Code, contact the Arkansas Energy Office at 501-682-1976 or find related materials and resources at www.adeq.state.ar.us/energy/initiatives/building.aspx

Certificate of Compliance for the 2014 Arkansas Energy Code
Builder/Contractor

I, the undersigned, _____, the duly authorized licensed builder/contractor of record for the Independence County Senior Center Project, located at Independence County Senior Center, on Elm Street in Batesville, Arkansas, certify that the aforementioned building is designed to meet and or exceed the minimum requirements of the 2014 Arkansas Energy Code * and building specifications, based on the requirements, have been provided to me by the licensed contractor/builder(s) of record.

_____
Signature

_____
License Number

_____
Date

Per legislative authority provided by in Section 3(B)(2)(c) of Act 7 of 1981

For information regarding the specifications and requirements of the 2014 Arkansas Energy Code, contact the Arkansas Energy Office at 501-682-1976 or find related materials and resources atwww.adeq.state.ar.us/energy/initiatives/building.aspx

DISCLOSURE REQUIRED BY EXECUTIVE ORDER 98-04

Contracts and Grants

Any contract or amendment to a contract or any grant executed by an agency which exceeds $25,000 shall require the contractor to disclose information as required under the terms of Executive Order 98-04 and the Regulations pursuant thereto.

Any individual contracting with the State of Arkansas shall disclose if he or she is a current or former: member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family of any of the persons as described herein.

Any entity contracting with the State of Arkansas shall disclose

(a) any position of control, or

(b) any ownership interest of 10% or greater

that is held by a current or former: member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family of any of the persons as described herein.

Disclosure by Sub-contractor or Assignee

Any sub-contractor or assignee (hereinafter "Third Party") shall disclose whether such Third Party is a current or former: member of the general assembly, constitutional officer, board or commission member, state employee, or the spouse or immediate family member of any of the persons as described herein, or if any of the persons here described in this sentence hold any position of control or ownership interest of 10% or greater in the Third Party. This disclosure requirement shall apply during the entire term of the contract or grant, without regard to whether the subcontract or assignment is entered into prior or subsequent to the date of contract or grant.

Failure to Disclose and Violations

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 or grant and shall subject the party failing to disclose or in violation to all legal remedies available to the state agency under the provision of existing law.

Please check all that apply if you are a current or former:

_____ Member of the General Assembly of the State of Arkansas

_____ Constitutional Officer of the State of Arkansas

_____ Member of a Board or Commission of the State of Arkansas

_____ State Employee

_____ Spouse of a current or former member of the general assembly, constitutional officer, board or commission member, or state employee.

_____ I am a current or former: member of the general assembly, constitutional officer, board or commission member, state employee, or spouse or immediate member of these persons as described, and I hold a position of control in the contracting entity or grantee of this application.

_____ I am a current or former: member of the general assembly, constitutional officer, board or commission member, state employee, or spouse or immediate member of these persons as described, and I hold a 10% or higher interest in the contracting entity or grantee of this application.

I hereby acknowledge that failure to disclose the information as required by Executive Order 98-04 shall constitute a material breach of any future agreement, resulting from this application, with the State of Arkansas or any state agency acting on its behalf.

I also acknowledge that any individual drawing a salary or performing personal services for an agency must disclose any direct or indirect benefit he or she may receive as a result of any State contract with an entity in which he or she has a financial interest. I understand that failure to report this information may subject me to criminal sanctions, as provided in Ark. Code Ann. §19-11-702.

_____
Name

_____
Date

Section 3 Business Status Certification

All contract and subcontracts awarded on Section 3 covered projects must be reported in aggregate on the Section 3 Summary Report. For all businesses reported as being Section 3 businesses, documentation of their status must be retained in the project files. The Arkansas Economic Development Commission (AEDC) considers this form adequate documentation of Section 3 status.

Recipients funded with ACEDP CDBG funding, and any contractors or subcontractors with which they contract for more than $200,000, are required to report on all contracts they make both with Section 3 business concerns and with businesses that are not Section 3 business concerns.

Documentation of the status of Section 3 Businesses should be retained in the project files and attached to all contracts over $200,000.

Business being certified

Company: _____

Address: _____

Project information

Project Name: ___Independence County Senior Center _____

Project Address: __Elm Street, Batesville, AR 72501_____

Section 3 Business Concern Determination

• Is your business owned (51% or more) by individuals whose household incomes are NO GREATER THAN 80% of Area Median Income (AMI)? Use the "low" income listed on the following chart http://www.arkansasedc.com/docs/default-source/community-resources/2018_income_limits.pdf?sfvrsn=9b57f91e_0 ( ) Yes ( ) No

And/Or

• Was 75% of the labor hours performed for your business over the prior three-month period performed by Section 3 workers? Use the "low" income listed on the following chart http://www.arkansasedc.com/docs/default-source/community-resources/2018_income_limits.pdf?sfvrsn=9b57f91e_0

( )Yes ( ) No

The information below is optional for bidders. It will be required from the successful contractor and subcontractors.

Racial/Ethnic Code of Owner:
___ Caucasian ___ African American ___ Native American ___ Hispanic ___ Asian/Pacific ___ Hasidic Jew

Woman Owned Business? Yes ___ No___

Section 1001, Title 18 of the US Code of Federal Regulations makes it a crime to make willful false statements or misrepresentations to any department or agency of the United States on any matter within its jurisdiction.

If any of the questions above are marked "yes", the business qualifies as a Section 3 business. I certify that the above statements are true, complete, and correct to the best of my knowledge and belief.

Signature: _____

Print Name: _____ **Date**: _____

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

(To be submitted with each bid or offer exceeding $100,000)

The undersigned, [Company] _____ certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, [Company] _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 *et seq.*, apply to this certification and disclosure, if any.

Please check the appropriate box:

_____ No non-federal funds have been used or are planned to be used for lobbying in connection with this application/award/contract.

or

_____ Attached is Standard Form LLL, "Disclosure of Lobbying Activities," which describes the use (past or planned) of non-federal funds for lobbying in connection with this application/award/contract.

Executed this _____ day of _____, 2023

By: _____ _____

(Type or Print Name) (Title of Executing Official)

_____ _____

(Signature of Executing Official) (Name of Organization/Applicant)

SECTION 01 10 00

SCOPE OF WORK

PART 1 - WORK INCLUDED

1.1 It is intended that the contract shall include all materials, labor, equipment, services, etc. required for:

Construction of a Technology Training Center to include the building, mechanical, electrical, plumbing, sitework, grading, parking areas, drives, etc..

together with any site work and attendant facilities thereto, as shown in the Drawings and described in the Specifications prepared by Bill Wage, Architect and Miller-Newell Engineers, Inc., 510 Third Street, Newport, AR.

The Contractor will not be required to perform work that is not within the general character and scope of the Drawings and Specifications or not reasonably inferrable therefrom; however, he must recognize and accept the fact that these documents are not intended to illustrate or describe each and every possible detail of construction or finish that will be encountered in the execution of the work, nor can they show the exact location of each mechanical line, wiring device, fixture, etc. Where conditions are encountered that have not been specifically shown or detailed, they shall be worked out and finished similar to other details of like nature, or in accordance with supplementary Drawings furnished by the Engineer.

It shall be the responsibility of the General Contractor to coordinate all of the various phases of the construction and finish materials, including mechanical and electrical lines and equipment, so that all of the many components will fit together and function properly without interference one to the other to the end that the entire job when completed will present a neat and finished appearance with all movable parts and mechanical and electrical equipment operating properly, ready for the Owner's occupancy and use.

PART 2 - SCOPE OF SUBCONTRACTORS WORK

2.1 This shall be established by agreement between the General Contractor and his subcontractors. For convenience of reference, the Specifications are separated into titled sections; however, such separation shall not operate to make the Engineer an arbiter to establish limits of the contracts between the General Contractor and subcontractors.

PART 3 - GRADES, LINES, LEVELS AND SURVEYS

3.1 All grades, lines, levels and bench marks shall be established and maintained by the General Contractor who shall be responsible for same.

Contractor shall verify all grades, lines, levels and dimensions as shown on the Drawings, and he shall report any errors or inconsistencies in the above to the Engineer before commencing work.

Contractor shall provide and maintain well built batter-boards at all corners, he shall establish bench marks in not less than two widely separated places. As the work progresses he shall establish bench marks at each floor, giving exact levels of the various floors, and shall layout on the forms (or rough flooring) the locations of all partitions, etc., as a guide to all trades and subcontractors.

PART 4 - DATA FOR "AS-BUILT" DRAWINGS

4.1 Contractor shall make a clearly legible record on one set of drawings of all conditions where the actual construction differs from the Contract Drawings. This includes the exact location of all mechanical lines and principal electrical conduits, referenced to convenient points with dimensions. Upon completion of the job, this set of drawings shall be delivered to the Engineer for his use.

PART 5 - PROTECTION OF EXISTING UTILITIES

5.1 Contractor shall exercise extreme caution during excavation and/or earthwork of all kinds to prevent damage to existing mechanical lines and/or cables which may be located in the vicinity of work under this Contract. Approximate locations

of such lines, insofar as the Engineer has been able to determine, are indicated on the plot plan; however, the Engineer does not certify to the correctness of such information and does not assume any responsibility for same. In the event that such lines or cables should be disturbed by operations under this Contract, the Contractor shall immediately and at his own expense, make repairs necessary to restore them to their present condition.

PART 6 - OWNER AND LOCATION

6.1 The work is to be done for the City of Newport, Arkansas or its duly authorized representative, referred to throughout the Contract Documents as the "Owner."

The project is located at Newport, Arkansas, at the point indicated on the plans.

All items to be done shall be inspected by the Engineer's Resident Project Representative and/or the Owner's Inspector before being covered up by other trades of work.

END OF SECTION

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section specified cast-in-place concrete, including formwork, reinforcing, mix design, placement procedures, and finishes.

B. Concrete paving and walks are specified in Division 2.

C. Precast concrete is specified in Division 3 Sections.

D. Mechanical finishes and concrete floor toppings are specified in other Division 3 Sections.

1.3 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Product data for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, waterstops, joint systems, curing compounds, dry-shake finish materials, and others as requested by the Architect/Engineer.

C. Shop drawings for reinforcement, prepared for fabrication, bending and placement of concrete reinforcement, showing bar schedules, stirrup spacing, diagrams of bent bars, and arrang ement of concrete reinforcement. Include special reinforcement required for openings through concrete structures.

1.4 QUALITY ASSURANCE

A. Codes and Standards: Comply with provisions of following codes, specifications and standards, except where more

stringent requirements are shown or specified:

1. ACI 318, "Building Code Requirements for Reinforced Concrete."
2. Concrete Reinforcing Steel Institute (CRSI) "Manual of Standard Practice."

B. Concrete Testing Service: Engage a testing laboratory acceptable to Architect/Engineer to perform material evaluation tests and do design concrete mixes.

C. Materials and installed work may require testing and retesting at any time during progress of work. Tests, including retesting of rejected materials for installed work, shall be done at Contractor's expense.

D. Pre-Construction Conference: Conduct conference at project site to comply with requirements of Division 1 Section "Project Meetings" and to be attended by the following:

1. Contractor's superintendent.
2. Laboratory responsible for field quality control.
3. Ready-mix concrete producer.
4. Concrete subcontractor.
5. Architect, Engineer, or Owner's representative.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

A. Forms for Unexposed Finish Concrete: Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.

B. Form Ties: Factory-fabricated, adjustable length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent spalling concrete upon removal. Provide units that will leave no metal closer than 1-1/2 inches to exposed surface.

2.2 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

B. Supports for Reinforcement: Bolsters, chairs, spacers,

and other devises for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Use wire-bar-type supports complying with CRSI specifications.

1. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.

2.3 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, Type I.

1. Use one brand of cement throughout project unless otherwise acceptable to Architect/Engineer.

B. Normal Weight Aggregates: ASTM C 33 and as herein specified. Provide aggregates from a single source for exposed concrete.

1. Local aggregates not complying with ASTM C 33 but that special tests or actual service have shown to produce concrete of adequate strength and durability may be used when acceptable to Architect/Engineer.

C. Water: Drinkable.

D. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.

2.4 RELATED MATERIALS

A. Vapor Retarder: Provide vapor retarder cover over prepared base material where indicated below slabs on grade. Use only materials that are resistant to deterioration when tested in accordance with ASTM E 154, as follows:

1. Polyethylene sheet not less than 8 mils thicks.

B. Evaporation Control: Monomolecular film-forming compound applied to exposed concrete slab surfaces for temporary protection from rapid moisture loss.

1. Available Projects: Subject to compliance with requirements, products that may be incorporated in the

work include, but are not limited to, the following:

"Aquafilm," Conspec Marketing and Mfg. Co.
"Eucobar," Euclid Chemical Co.
"E-Con," L & M Construction Chemicals, Inc.
"Confilm," Master Builders, Inc.

C. Expansion joints in concrete slabs shall be 1 x 4 or 2 x 4 Redwood lumber.

D. Expansion joints using 1 x 4 Redwood shall be constructed with a 1 / 2" x 3 / 4" reservoir for sealant. The joints shall be sealed with Throseal Caulking, as manufactured by Sonneborne.

2.5 PROPORTIONING AND DESIGN OF MIXES

A. Submit written reports to Architect/Engineer of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until proposed mix designs have been reviewed by Architect/Engineer.

B. Design mixes to provide normal weight concrete with the following properties, as indicated on drawings and schedules.

1. 3000 psi, 28 day compressive strength; W/C ratio 0.58 maximum (non-air-entrained), 0.46 maximum (air-entrained); with a minimum cement of 470# per cu.yd.

2. 4000 psi, 28 day compressive strength; with a minimum cement of 560# per cu.yd.

C. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, as accepted by Architect/Engineer. Laboratory test data for revised mix design and strength results must be submitted to an accepted by Architect/Engineer before using in work.

2.6 ADMIXTURES

A. Use water-reducing admixture or high-range water-reducing admixture (Superplasticizer) in concrete as required for placement and workability.

B. Use non-chloride accelerating admixture in concrete slabs at ambient temperatures below 50 deg. F (10 deg C).

C. Use high-range water-reducing admixture (HRWR) in pumped concrete, concrete for industrial slabs, architectural concrete, parking structures slabs, concrete required to be watertight, and concrete with water/cement rations below 0.50.

D. Use air-entraining admixture in exterior exposed concrete unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus or minus 1-1/2 percent within following limits:

1. Concrete structures and slabs exposed to freezing and thawing, deicer chemicals, or hydraulic pressure: 6.0 percent (sever exposure) 3/4-inch max. aggregate.

2. Other concrete (not exposed to freezing, thawing, or hydraulic pressure) or to receive a surface hardener: 2 percent to 4 percent air.

E. Use admixtures for water reduction and set control in strict compliance with manufacturer's directions.

1. Water-Cement Ratio: Provide concrete for following conditions with maximum water-cement (W/C) ratios as follows:

Subjected to freezing and thawing: W/C 0.45.
Subjected to deicers/watertight: W/C 0.40.
Subjected to brackish water, salt spray or deicers: W/C 0.40.

F. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:

1. Ramps, slabs, and sloping surfaces: Not more than 3 inches.
2. Reinforced foundation systems: Not less than 1 inch and not more than 3 inches.
3. Concrete containing HRWR admixture (Superplasticizer): Not more than 8 inches after addition of HRWR to site-verified 2-inch to 3-inch slump concrete.
4. Other Concrete: Not more than 4 inches.

G. Fly ash is not acceptable as a substitute for cement.

2.7 CONCRETE MIXING

A. Ready-Mix Concrete: Comply with requirements of ASTM C 94, and as specified.

1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 GENERAL

A. Coordinate the installation of joint materials and vapor retarders with placement of forms and reinforcing steel.

3.2 FORMS

A. General: Design, erect, support, brace, and maintain form work to support vertical and lateral, static and dynamic loads that might be applied until concrete structure can support such loads. Construct form work so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain form work construction tolerances complying with ACI 347.

B. Construct forms to sizes, shapes, lines and dimensions shown and to obtain accurate alignment, location, grades, level, and plumb work in finished structures. Provide for openings, offsets, recesses, blocking, screeds, bulkheads, anchorages and inserts, and other features required in work. Use selected materials to obtain required finishes. Solidly butt joints and provide backup at joints to prevent leakage of cement paste.

C. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces.

D. Provisions for Other Trades: Provide openings in concrete form work to accommodate work of other trades. Determine

size and location of openings, recesses, and chases from trades providing such items. Accurately place and securely support items built into forms.

E. Cleaning & Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retighten forms and bracing before concrete placement as required to prevent mortar leaks and maintain proper alignment.

3.3 VAPOR RETARDER/BARRIER INSTALLATION

A. General: Following leveling and tamping of granular base for slabs on grade, place vapor retarder/ barrier sheeting with longest dimension parallel with direction of pour.

B. Lap joints 6 inches and seal vapor barrier joints with manufacturer's recommended mastic and pressure-sensitive tape.

C. After placement of vapor retarder/barrier, cover with sand cushion and compact to depth as shown on drawings.

3.4 PLACING REINFORCEMENT

A. General: Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars," for details and methods of reinforcement placement and supports and as herein specified.

1. Avoid cutting or puncturing vapor retarder during reinforcement placement and concreting operations.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials that reduce or destroy bong with concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as approved by Architect/ Engineer.

D. Place reinforcement to obtain at least minimum coverages for concrete protection. Arrange, space and securely tie bars and bar supports to hold reinforcement in position

during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

E. Install welded wire fabric in as long lengths as practicable. Lap adjoining pieces at lease one full mesh and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

3.5 JOINTS

A. Construction Joints: Locate and install construction joints as indicated or, if not indicated, locate so as not to impair strength and appearance of the structure, as acceptable to Architect/Engineer.

B. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints except as otherwise indicated. Do not continue reinforcement through sides of strip placements.

C. Use bonding agent on existing concrete surfaces that will be joined with fresh concrete.

3.6 INSTALLATION OF EMBEDDED ITEMS

A. General: Set and build into work anchorage devices and other embedded items required for other work that is attached to or supported by cast-in-place concrete. Use setting drawings, diagrams, instructions, and directions provided by suppliers of items to be attached thereto.

B. Forms for Slabs: Set edge forms, bulkheads, and intermediate screed strips for slabs to obtain required elevations and contours in finished surfaces. Provide and secure units to support screed strips using strike-off templates or compacting-type screeds.

3.7 CONCRETE PLACEMENT

A. Inspection: Before placing concrete, inspect and complete form work installation, reinforcing steel, and items to be embedded or cast in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work.

B. General: Comply with ACI 304, "Recommended Practice of

Measuring, Mixing, Transporting, and Placing Concrete," and as herein specified.

C. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete that has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete to avoid segregation at its final location.

D. Placing Concrete in Forms: Deposit concrete in forms in horizontal layers not deeper than 24 inches and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.

1. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 309.

2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.

E. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.

1. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.

2. Bring slab surfaces to correct level with straightedge and strike off. Use bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.

3. Maintain reinforcing in proper position during concrete placement.

F. Cold-Weather Placing: Comply with provisions of ACI 306 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

G. When air temperature has fallen to or is expected to fall below 40 deg F (4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and mot more than 80 deg F (27 deg C) at point of placement.

1. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.

2. Do not us calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators unless otherwise accepted in mix designs.

H. Hot-Weather Placing: When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.

1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 deg F (32 deg C). Mixing water may be chilled, or chapped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is Contractor's option.

2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.

3. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.

4. Use water-reducing retarding admixture when required by high temperatures, low humidity, or other adverse placing conditions, when acceptable to Architect/ Engineer.

3.8 MONOLITHIC SLAB FINISHES

A. Trowel Finish: Apply trowel finish to monolithic slab surfaces to be exposed to view and slab surfaces to be covered with resilient flooring, carpet, ceramic or quarry tile, paint or other film finish coating system.

1. After floating, begin first trowel finish operation using a power-driven trowel. Begin final troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks, uniform in texture and appearance, and with surface leveled to tolerances of Ff20 - F1 17. Grind smooth surface defects that would telegraph through applied floor covering system.

B. Trowel and Fine Broom Finish: Sidewalks shall receive trowel and fine broom finish.

3.9 CONCRETE CURING AND PROTECTION

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. In hot, dry and windy weather, protect concrete from rapid moisture loss before and during finishing operations with an evaporation-control material. Apply in accordance with manufacturer's instructions after screeding and bull floating, but before power floating and troweling.

B. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting, keep continuously moist for not less than 7 days.

C. Curing Methods: Perform curing of concrete by curing and sealing compound, by moist curing, by moisture-retaining cover curing, and by combinations thereof, as herein specified.

D. Provide moisture curing by following methods.

1. Keep concrete surface continuously wet by covering with water.

2. Use continuous water-fog spray.

3. Cover concrete surface with specified absorptive

cover, thoroughly saturate cover with water, and keep continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4-inch lap over adjacent absorptive covers.

E. Provide moisture-cover curing as follows:

1. Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

F. Provide curing and sealing compound to exposed interior slabs and to exterior slabs walks, and curbs as follows:

1. Apply specified curing and sealing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours and after surface water sheen has disappeared). Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.

2. Use membrane curing compounds that will not affect surfaces to be covered with finish materials applied directly to concrete.

3.10 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades in place. Mix, place, and cure concrete as herein specified, to blend with in-place construction. Provide other miscellaneous concrete filling shown or required to complete work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Steel Pan Stairs: Provide concrete fill for steel pan stair treads and landings and associated items. Cast-in

safety inserts and accessories as shown on drawings. Screed, tamp, and finish concrete surfaces as scheduled.

3.11 CONCRETE SURFACE REPAIRS

A. Patching Defective Areas: Repair and patch defective areas with cement mortar immediately after removal of forms, when acceptable to Architect/Engineer.

1. Cut out honeycomb, rock pockets, voids over 1/4 inch in any dimension, and holes left by tie rods and bolts, down to solid concrete but in no case to a depth of less than 1 inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with specified bonding agent. Place patching mortar before bonding compound has dried.

B. Repair of Formed Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repairs to satisfaction of Architect/Engineer. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets, fins and other projections of surface, and stains and other discolorations that cannot be removed by cleaning. Flush out form tie holes, fill with dry-pack mortar, or precast cement cone plugs secured in place with bonding agent.

1. Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete.

C. Repair of Unformed Surfaces: Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope and smoothness by using a template having required slope.

1. Repair finished unformed surfaces that contain defects that affect durability of concrete. Surface defects, as such, include crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through non-reinforced sections regardless of width, spalling, popouts, honeycomb, rock pockets, and other objectionable conditions.

2. Correct high areas in unformed surfaces by grinding after concrete has cured at least 14 days.

3. Correct low areas in unformed surfaces during or immediately after completion of surface finishing operations by cutting out low areas and replacing with patching compound. Finish repaired areas to blend into adjacent concrete. Proprietary underlayment compounds may be used when acceptable to Architect/Engineer.

4. Repair defective areas, except random cracks and single holes not exceeding 1 inch in diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding compound. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

3.12 QUALITY CONTROL TESTING DURING CONSTRUCTION.

A. General: Employ a testing laboratory to perform tests and to submit test reports.

B. Sampling and testing for quality control during placement of concrete may include the following, as directed by Architect/Engineer.

C. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM D 94.

1. Slump: ASTM C 143; one test at point of discharge for each day's pour of each type of concrete; additional tests when concrete consistency seems to have changed.

2. Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure method of normal weight concrete; one for each day's pour of each type of air-entrained concrete.

3. Concrete Temperature: Test hourly when air temperature is 40 deg F (4 deg C) and below, when 80 deg F (27deg C) and above, and each time a set of compression test

specimens is made.

4. Compression Test Specimen: ASTM C 31; one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory-cured test specimens except when field-cure test specimens are required.

5. Compressive Strength Tests: ASTM C 39; one set for each day's pour exceeding 5 cu. yds. plus additional sets for each 50 cu. yds. more than the first 25 cu. yds. of each concrete class placed in any one day; one specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing if required.

6. When frequency of testing will provide fewer than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.

D. Test results will be reported in writing to Architect, Structural Engineer, Ready-Mix Producer, and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-day tests and 28-day tests.

E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection.

F. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by the Architect/Engineer. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Contractor shall pay for such tests when unacceptable concrete is verified.

END OF SECTION

SECTION 05 44 00

COLD-FORMED METAL TRUSSES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes pre-engineered, pre-fabricated cold-formed steel framing elements.
Work includes:
1) Cold-formed steel open web floor trusses.
2) Cold-formed steel roof trusses.
3) Anchorage, bracing and bridging.

B. Related Work
1) Drywall attachment
2) Roofing, Fasci, Soffit

1.2 REFERENCES

A. Reference standards:
1) ASTM:
a) ASTM A653/A653M-94 "Sheet Steel, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Glavanealed) by the Hot Dip Process."
b) ASTM A780-93a "Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings."
2) American Welding Society (AWS)
a) AWS D1.1 "Structural Welding Code - Steel."
b) AWS D1.3 "Structural Welding Code - Sheet Steel."
3) Light Gauge Steel Engineers Association Field Installation Guide
4) American Iron and Steel Institute (AISI)
a) D100-13 - Cold-Formed Steel Design Manual, 2013 Edition
b) AISI S100-12 - North American Specification for the Design of Cold-Formed Steel Structural Members, 2012 Edition
c) AISI-S200-12 - North American Standard for Cold-Formed Steel Framing - General Provisions.
d) AISI-S201-12 - North American Standard for Cold-Formed Steel Framing - Product Data.
e) AISI-S214-12 - North American Standard for Cold-Formed Steel Framing - Truss Design.
5) ASCE 7-16 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.

1.3 PERFORMANCE REQUIREMENTS

A. AISI "Specifications": Calculate structural characteristics of cold-formed steel truss members

according to American Iron and Steel Institute "North American Specification for the Design of Cold-Formed Steel Structural Members, 2012"

B. Structural Performance: Design, fabricate, and erect cold-formed steel trusses to withstand specified design loads within limits and under conditions required.

C. Design Loads: As specified.

D. Deflections meeting the following (unless otherwise specified):
   1) Live Load: Floor truss vertical deflection less than or equal to Length/480.
   2) Live Load: Roof truss vertical deflection less than or equal to Length/360.
   3) Total Load: Floor truss vertical deflection less than or equal to Length/360.
   4) Total Load: Roof truss vertical deflection less than or equal to Length/240.

E. Design framing systems to provide for movement of framing members without damage or over-stressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change (range) of 120 deg F (67 deg C).

1.4 SUBMITTALS

A. Submit all documentation in accordance with Section 01 30 00.

B. Submit manufacturer's product data and installation instructions for each type of cold-formed steel framing and accessory required.

C. Submit detailed truss layouts indicating placement of all trusses.

D. Submit individual truss drawings, sealed and signed by a qualified registered Professional Engineer, verifying accordance with local building code and design requirements.
   Include:
   1) Description of design criteria.
   2) Engineering analysis depicting member stresses and truss deflection.
   3) Truss member sizes and thickness and connections at truss joints.
   4) Truss support reactions.
   5) Top chord, Bottom chord and Web bracing requirements.

E. Submit final roof and floor plan drawings sealed and signed by a qualified registered Professional Engineer depicting final installed truss assembly.
   Include:
   1) All truss to truss connections
   2) All truss to structure (bearing) connections

F. Plan and/or details for the location of all permanent lateral and diagonal bracing and/or blocking required in the top chord, web, and bottom chord planes. (Diaphragms excluded)

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Fabrication shall be performed in a quality controlled manufacturing environment by a cold-formed steel truss fabricator with experience fabricating Cold-Formed Steel trusses equal in material, design, and scope to the trusses required for this Project.

B. Installation of Cold-Formed Steel truss roof assembly shall be performed by an installer with experience installing Cold-Formed Steel trusses equal in material, design and scope to the trusses required for this Project.

C. Welding Standards
   1) Comply with applicable provisions of AWS D1.1 "Structural Welding Code - Steel" and AWS D1.3 "Structural Welding Code - Sheet Steel."
   2) Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure."

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in manufacturer's unopened containers or bundles, fully identified by name, brand, type and grade. Exercise care to avoid damage during unloading, storing and erection.

B. Store trusses on blocking, pallets, platforms or other supports off the ground and in an upright position sufficiently braced to avoid damage from excessive bending.

C. Protect trusses and accessories from corrosion, deformation, damage and deterioration when stored at job site. Keep trusses free of dirt and other foreign matter.

1.7 PROJECT CONDITIONS

A. During construction, adequately distribute all loads applied to trusses so as not to exceed the carrying capacity of any one truss.

PART 2 PRODUCTS

2.1 MANUFACTURERS

Cascade MFG CO
Wood, CFS production & EWP distribution:
109 Madison ST SE
PO Box 220
Cascade, IA 52033.

METALITE TRUSS SYSTEMS OF FL

MILLENNIUM STEEL.

2.2 COMPONENTS

A. System components: Aegis Metal Framing, LLC ULTRA-SPAN® and POSI-STRUT® cold-formed steel roof truss and floor truss components.

B. Provide manufacturer's standard steel truss members, bracing, bridging, blocking, reinforcements, fasteners and accessories with each type of steel framing required, as recommended by the manufacturer for the applications indicated and as needed to provide a complete cold-formed steel truss roof assembly.

2.3 MATERIALS

A. Materials:
   1) For all chord and web members: Fabricate components of structural quality steel sheet per ASTM A653/A653M-15e1 with a minimum yield strength of 50,000 psi.
   2) Bracing, bridging and blocking members: Fabricate components of commercial quality steel sheet per ASTM A653/A653M-15e1 with a minimum yield strength of 33,000 psi.

B. Steel truss components: Provide sizes, shapes and gauges indicated.
   1) Design Uncoated-Steel Thickness: 0.0350 inch (0.89 mm) (nominal 20 ga)
   2) Design Uncoated-Steel Thickness: 0.0460 inch (1.17 mm) (nominal 18 ga)
   3) Design Uncoated-Steel Thickness: 0.0570 inch (1.45 mm) (nominal 16 ga)
   4) Design Uncoated-Steel Thickness: 0.0730 inch (1.85 mm) (nominal 14 ga)
   5) Design Uncoated-Steel Thickness: 0.0970 inch (2.46 mm) (nominal 12 ga)

C. Finish:
   Provide components with protective zinc coating complying with ASTM A653/A653M-15e1, minimum G60 coating.

D. Fastenings:
   1) Manufacturer recommended self-drilling screws with corrosion-resistant plated finish. Fasteners shall be of sufficient size and number to ensure the strength of the connection.
   2) Welding: Comply with AWS D1.1 when applicable and AWS D1.3 for welding base metals less than 1/8" thick.
   3) Other fasteners as accepted by truss engineer.

2.4 FABRICATION

A. Factory fabricate cold-formed steel trusses plumb, square, true to line, and with connections securely fastened, according to manufacturer's recommendations and the requirements of this Section.
   1) Fabricate truss assemblies in jig templates.
   2) Cut truss members by sawing or shearing or plasma cutting.
   3) Fasten cold-formed steel truss members by screw fastening, or other methods as standard with fabricator.
   4) Locate mechanical fasteners and install according to cold-formed steel truss component manufacturer's instructions with screw penetrating joined members by not less than 3 exposed screw threads.
B. Care shall be taken during handling, delivery and erection. Brace, block, or reinforce truss as necessary to minimize member and connection stresses. Refer to LGSEA "Field Installation Guide".
C. Fabrication Tolerances: Fabricate trusses to a maximum allowable tolerance variation from plumb, level, and true to line of 1/8 inch in 10 feet (1:960) and as follows:
   1) Spacing: Space individual trusses no more than plus or minus 1/8 inch (3mm) from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
   2) Squareness: Fabricate each cold-formed steel truss to a maximum out-of-square tolerance of 1/8 inch (3mm).

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine structure, substrates and installation conditions. Do not proceed with cold-formed steel truss installation until unsatisfactory conditions have been corrected.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
C. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.2 INSTALLATION, GENERAL

A. General:
   1) Erection of trusses, including proper handling, safety precautions, installation bracing and other safeguards or procedures is the responsibility of the Contractor and Contractor's installer. Refer to LGSEA "Field Installation Guide".
   2) Exercise care and provide installation bracing required to prevent toppling of trusses during erection.

B. Erect trusses with plane of truss webs vertical and parallel to each other, accurately located at design spacing indicated.

C. Provide proper lifting equipment, including spreader bar, suited to sizes and types of trusses required, applied at lift points recommended by truss fabricator. Exercise care to avoid damage to truss members during erection and to keep horizontal bending of the trusses to a minimum.

D. Provide framing anchors as indicated or accepted on the engineering design drawing or erection drawings. Anchor trusses securely at bearing points.

E. Install trusses plumb, square, true to line, and with connections securely fastened, according to manufacturer's recommendations.

F. DO NOT cut truss members without prior approval of truss engineer.

G. Fasten cold-formed steel trusses by screw fastening, welding or other methods, as standard with fabricator.
   1) Comply with AWS requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
   2) Locate mechanical fasteners and install according to cold-formed truss manufacturer's instructions with screw penetrating joined members by not less than 3 exposed screw threads.

H. Install trusses in one-piece lengths, unless splice connections are indicated.

I. Provide installation bracing and leave in place until trusses are permanently stabilized.

J. Erection Tolerances: Install trusses to a maximum allowable tolerance variation from plumb, level, and true to line of 1/8 inch in 10 feet (1:960) and as follows:
   1) Space individual trusses no more than plus or minus 1/8 inch (3 mm) from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
   2) Limit out-of-plane bow and plumb per LGSEA "Field Installation Guide".

3.3 ROOF TRUSS INSTALLATION

A. Install trusses per installation documents provided for in Section 1.4.
B. Space trusses per sealed truss drawings.
C. Do not alter, cut, or remove truss members or connections of truss members.
D. Erect trusses with plane of truss webs plumb and parallel to each other, align, and accurately position at spacing indicated.
E. Erect trusses without damaging truss members or connections.
F. Anchor trusses securely at all points of support, per installation documents provided for in Section 1.4.
G. Install all continuous bridging and permanent truss bracing per installation documents provided for in Section 1.4.
H. Perform all truss-to-truss connections per installation documents provided for in Section 1.4.

3.4 OPEN WEB FLOOR TRUSS INSTALLATION

A. Install perimeter joist track or belly band sized to match trusses. Align and securely anchor or fasten track to supporting structure at corners, ends, and spacing indicated or as recommended by the manufacturer.
B. Install trusses bearing on supporting framing, level, straight, and plumb. Install trusses over supporting framing with a minimum end bearing of 1-1/2 inches (38mm).
C. Space trusses per sealed truss drawings.
D. Frame openings with built-up joist headers consisting of joist and joist track, nesting joists, or another combination of connected joists where indicated.
E. Install bridging and permanent bracing per installation documents provided for in Section 1.4.
F. Anchor trusses securely at all points of support per installation documents provided for in Section 1.4.

3.5 REPAIRS AND PROTECTION

A. Truss Repairs: Contact truss manufacturer and request repair details for any damage to the trusses. Damage to individual truss members or truss sections resulting from the improper shipping, handling or storage of the trusses must be repaired prior to truss installation.
B. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanizing repair paint according to ASTM A780/A780M-09 and the manufacturer's instructions.

END OF SECTION

SECTION 06 40 23

ARCHITECTURAL CASEWORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Plastic-laminate cabinets.
2. Plastic-laminate countertops.

B. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips unless concealed within other construction before woodwork installation.

1.2 SUBMITTALS

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

B. Samples:

1. Plastic-laminates, for each type, color, pattern, and surface finish.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of woodwork.

B. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards."

1.4 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Wood Products:

1. Hardboard: AHA A135.4.
2. Medium-Density Fiberboard: ANSI A208.2, Grade MD[, made with binder containing no urea formaldehyde.
3. Particleboard: ANSI A208.1, Grade M-2.
4. Softwood Plywood: DOC PS 1, Medium Density Overlay.

B. Thermoset Decorative Panels: Particleboard or medium-density fiberboard finished with thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1.

C. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.

2.2 CABINET HARDWARE AND ACCESSORIES

A. General: Provide cabinet hardware and accessory materials associated with architectural woodwork that meets the requirement for Non-Ferrous installation in the Magnet Room.

B. Door Hinges: Adjustable, and as follows:

1. Semi-concealed Hinges for Overlay Doors: BHMA A156.9, B01521.

C. Wire Pulls: Back mounted, solid Aluminum,4 inches long,5/16 inches in diameter.

D. Catches: Magnetic catches, BHMA A156.9, B03141.

E. Drawer Slides: BHMA A156.9, B05091.

1. Standard Duty: Side mounted and extending under bottom edge of drawer; full-extension type with polymer rollers.
2. Pencil Drawer Slides: for drawers not more than 3 inches high and 24 inches wide.

F. Door Locks: BHMA A156.11, E07121.

G. Drawer Locks: BHMA A156.11, E07041.

H. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.

1. Brushed Aluminum..

2.3 MISCELLANEOUS MATERIALS

A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln-dried to less than 15 percent moisture content.

B. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

2.4 FABRICATION

A. General: Complete fabrication to maximum extent possible before shipment to Project site. Where necessary for fitting at site, provide allowance for scribing, trimming, and fitting.

1. Interior Woodwork Grade: Premium.
2. Shop cut openings to maximum extent possible. Sand edges of cutouts to remove splinters and burrs. Seal edges of openings in countertops with a coat of varnish.

B. Plastic-Laminate Cabinets:

1. AWI Type of Cabinet Construction: Reveal overlay.
2. Reveal Dimension: ½ inch.
3. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate as selected by Architect from manufacturer's standard selections..
4. Materials for Semiexposed Surfaces Other Than Drawer Bodies: Thermoset decorative panels.
5. Drawer Sides and Backs: Thermoset decorative panels.
6. Drawer Bottoms: Hardwood plywood.
7. Colors, Patterns, and Finishes: As selected by Architect from laminate manufacturer's full range of standard solid colors and patterns, matte finish.

C. Plastic-Laminate Countertops:

1. High-Pressure Decorative Laminate Grade: HGS.
2. Colors, Patterns, and Finishes: As selected by Architect from laminate manufacturer's full range of solid colors, wood grains, patterns, matte finish.
3. Edge Treatment: Same as laminate cladding on horizontal surfaces.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas. Examine

shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

B. Install woodwork level, plumb, true, and straight to a tolerance of ½ inch in 96 inches. Shim as required with concealed shims.

C. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

D. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation.

E. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation.

1. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches o.c. with No. 10 wafer-head screws sized for 1-inch (25-mm) penetration into wood framing, blocking, or hanging strips.

F. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop. Calk space between backsplash and wall with sealant specified in Division 07 Section "Joint Sealants."

END OF SECTION

SECTION 07 21 00

BELOW GRADE-PERIMETER INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Extruded polystyrene insulation board (XPS) Type IV.

1.2 REFERENCES

A. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.

B. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

C. ASTM E 2178 - Standard Test Method for Air Permeance of Building Materials.

D. CAN/ULC-S701 - Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: Submit insulation manufacturer's product data, building code compliance reports or test reports and the insulation manufacturer's printed installation guidelines.
   1. Submit product literature or a letter from the insulation manufacturer indicating approval of products not manufactured by the specified insulation manufacturer.
   2. If a letter is submitted, it shall include a statement that materials are compatible with adjacent materials proposed for use.

1.4 QUALITY ASSURANCE

A. Insulation Manufacturer: Obtain insulation board from a single manufacturer regularly engaged in manufacturing the extruded polystyrene insulation board (XPS) type specified. Obtain secondary materials from a source acceptable to the primary insulation manufacturer.

B. Accredited Laboratory Testing for XPS insulation board: Laboratory accredited by International Accreditation Service Inc. (IAS), American Association for Laboratory Accreditation (A2LA), or the Standards Council of Canada (SCC).

C. Installer qualifications:
   1. Installer shall have experience with installation of insulation board; and installation shall be in accordance with insulation manufacturer's installation guidelines.
   2. Minimum 2 year experience installing similar products.

1.5 PRE-INSTALLATION MEETINGS

A. Preconstruction Meeting: To be arranged.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver insulation board to the project site in original packaging, labeled with manufacturer's information, product name, and date of manufacture, and instructions for storage.

B. Store insulation board in its original undamaged packaging or in a clean, dry, protected location and within temperature range required by insulation manufacturer. Protect stored materials from direct sunlight.

C. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Temperature: Install insulation board within range of ambient and substrate temperatures recommended by the insulation manufacturer. Do not apply insulation board to a damp or wet substrate.

B. Field Conditions: Do not install insulation board in snow, rain, fog, or mist. Do not install insulation board or auxiliary materials when the temperature of substrate surfaces and surrounding air temperatures are below those recommended by the insulation and auxiliary material manufacturers.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.9 WARRANTY

A. Material Warranty: Provide insulation manufacturer's warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable ManufacturerS: Dow Building Solutions, Kingspan Insulation LLC.

2.2 PERFORMANCE REQUIREMENTS

A. Material Performance, Thermal Insulation: Provide extruded polystyrene insulation board (XPS) that meets the requirements of ICC-ES AC12, "Acceptance Criteria for Foam Plastic Insulation", ASTM C 578, Type IV, Type VI and Type VII, and CAN/ULC-S701, Type 4.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions under which the insulation board will be applied, with installer present, for compliance with requirements. Verify that surfaces and conditions are suitable prior to commencing work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. Review requirements for sequencing of installation of all wall assembly components as demonstrated in the mock-up wall assembly.

3.2 INSTALLATION - BELOW-GRADE, PERIMETER FOUNDATION INSULATION

A. Install insulation board to the exterior side of foundation walls after the waterproofing membrane has cured according to the manufacturer's installation instructions. If the surface of the cured waterproofing membrane is not sufficiently tacky to hold the insulation board in place until backfilling takes place, then an adhesive shall be used to secure the insulation board to the wall. Apply adhesive to the insulation board as recommended by the adhesive manufacturer using the amount and pattern required for the application.

B. Place backfill directly in contact with the insulation board. Remove all large rocks and other debris that may damage insulation board during backfilling.

C. Do not leave insulation boards exposed above grade. If insulation board is exposed above the grade line, then it shall be covered with an exterior cladding material or foundation covering.

3.3 FIELD QUALITY CONTROL

A. Owner's Inspection and Testing: Cooperate with Owner's testing agency. Allow access to work areas and staging. Notify Owner's testing agency in writing of schedule for work of this section to allow sufficient time for

testing and inspection. Daily inspection and testing may be required. Do not cover Work of this section until testing and inspection is accepted.

3.4 PROTECTING AND CLEANING

A. Protect insulation board from damage during installation and remainder of construction period, according to manufacturer's written instructions.
   1. Coordinate with installation of insulation board to ensure exposure periods do not exceed the manufacturer's recommendations.

END OF SECTION

SECTION 07 21 16

BATT INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Fiberglass batt thermal insulation for exterior envelope assemblies and unfaced sound attenuation batts in interior walls around offices and toilets.

1.2 REFERENCES

Materials shall meet the property requirements of one or more of the following specifications as applicable to the specific product or end use.

A. ASTM C 423 - Test Methods for Sound Absorption Coefficient by the Reverberation Room Method.

B. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

C. ASTM C 518 - Test Method for Steady State Thermal Transmission Properties by Means of the Heat Flow Meter..

D. ASTM E119 - Test Methods for Fire Tests of Building Construction Materials.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: Submit insulation manufacturer's product data, building code compliance reports or test reports and the insulation manufacturer's printed installation guidelines.
   1. Submit product literature or a letter from the insulation manufacturer indicating approval of products not manufactured by the specified insulation manufacturer.
   2. If a letter is submitted, it shall include a statement that materials are compatible with adjacent materials proposed for use.

1.4 QUALITY ASSURANCE

A. Insulation Manufacturer: Obtain insulation product from a single manufacturer regularly engaged in manufacturing the insulation type specified. Obtain secondary materials from a source acceptable to the primary

insulation manufacturer.

B. Installer qualifications:
   1. Installer shall have experience with installation of batt insulation; and installation shall be in accordance with insulation manufacturer's installation guidelines.
   2. Minimum 2 year experience installing similar products.

1.5 PRE-INSTALLATION MEETINGS

A. Preconstruction Meeting: To be arranged.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original packaging.

B. Store and protect products in accordance with manufacturer's instructions Store in a dry indoors location. Protect insulation materials from moisture and soiling. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and maintained in acceptabe condition.

C. Handling: Handle materials to avoid damage.

D. Do not install insulation that has been damaged or wet. Remove it from jobsite.

1.7 PROJECT CONDITIONS

A. Temperature: Install insulation within range of ambient and substrate temperatures recommended by the insulation manufacturer. Do not apply insulation to a damp or wet substrate.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.9 WARRANTY

A. Material Warranty: Provide insulation manufacturer's warranty.

PART 2 PRODUCTS

2.1 MANUFACTURER AND MTERIAL

A. Thermal Insulation: EcoTouch® PINK® FIBERGLAS™ Insulation with PureFiber® Technology by Owens-Corning, Toledo, OH 43659.

B. EcoTouch® Kraft Faced Batt Insulation: ASTM C665, Type II, Class C Preformed formaldehyde free glass fiber batt type, Kraft paper faced one side.
1. Perm Rating: 1 perm maximum per ASTNM E96

C. 3½" thick Unfaced sound attenuation batts with PureFiber® Technology by Owens-Cornings, Toledo, OH 43659.

D. Accessories: Procide accessories per insulation system manufacurer's recommendations, including the following:
1. Tape: Polyethylene self-adhering type for Kraft faced insulation.
2. Insulation fasteners: Type recommended by insulation manufacturer for particular use intended.

2.2 PERFORMANCE REQUIREMENTS

A. Metal Frame Construction, R-Value for Batt Insulation: Per ASTM C518
1. R-19, 6 1/4 inch, 16" width, 96 inch length.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions under which the insulation will be installed, with installer present, for compliance with requirements. Verify that surfaces and conditions are suitable prior to commencing work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Friction-fit blanked insulation in place, until the interior finish is applied. Install batts to fill entire stud cavity, with no gaps, voids or areas of compressions. If stud cavity is less than 8 feet in height, cut lengths to friction fit against floor and ceiling tracks. Walls with penetrations require that insulation be carefully cut to fit around outlest, junction boxes and other irregularities.

B. Within exterior wall framing, install insulation between pipes and backside of sheathing. Cut or split insulation material as required to fit around wiring and plumbing.

C. Fluff insulation to full thickness for specified R-value before installation. Do not compress insulation in the cavity during installation, creating gaps or voids that could dimish thermal value.

D. For batt insullation with factory-applied facing, install with vapor retarder membrane facing warm in the

winter side of building spaces. Lap ends and side flanges of membrane over or between framing members. Tape to seal tears, cuts or misalignments in membrane.

E. Secure insulation in place using one of the following methods: friction fit; tape in place, retian in place with fasteners or wire mesh as approved by the insulation manufacturer.

3.3 PROTECTION

A. Protect installed insulation from damage due to weather and physical abuse during the remainder of the construction period until protected by permenant construction.

1. Coordinate with installation of insulation to ensure exposure periods do not exceed the manufacturer's recommendations.

END OF SECTION

SECTION 07 27 00

WEATHER-RESISTANT BARRIER (WRB)

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Work of this section includes weather-resistant barrier (WRB and all accessory materials required for sealing sheathing joints, penetrations, rough openings, and material transitions, for use behind exterior wall claddings.

1.2 RELATED SECTIONS

A. Section 04 21 00 - Architectural Face Brick - Cavity Drainage System, flashing and masonry ties.

1.3 REFERENCES

A. ASTM International (ASTM):
   1. ASTM E84-Standard Test Method for Surface Burning Characteristics of Building Materials
   2. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials
   3. ASTM E331-Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
   4. ASTM E2357 - Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

B. International Code Council (ICC):
   1. ICC IBC - International Building Code
   2. ARKANSAS FIRE PREVENTION CODE

1.4 DEFINITIONS

A. Weather-Resistant Barrier (WRB): Water-shedding barrier made of material that is moisture-resistant, installed to shed water, with sealed joints and penetrations, and with terminations sealed to adjacent surfaces.

B. Rough Openings: Openings in the wall to accommodate windows and doors.

1.5 SUBMITTALS

A. Required submittals are to be submitted through the General Contractor/Construction Manager to the Architect. Do not submit directly to the Architect.

B. Product Data and Installation Instructions: Submit manufacturer's product data, installation instructions and substrate preparation recommendations.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.

B. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.

C. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

1.7 PRE-INSTALLATION CONFERENCE

A. Meeting schedule and agenda to be arranged.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Store and handle in strict compliance with manufacturer's written instructions and recommendations.

B. Protect from damage due to weather, excessive temperature, and construction operations.

1.9 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

B. Ensure substrate surface is free from moisture, dirt, and other debris before the application of tape.

C. Do not install tape in temperatures less than 20 degrees F or if panel surface has frost or ice.

1.10 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.11 WARRANTY

A. Manufacturer's Warranty: Provide manufacturer's standard limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Du Pont.

B. Requests for substitutions must be submitted to the Architect through the General Contractor/Construction Manager. Submittal must include data showing that the product complies with the project requirements and warranties.

2.2 WEATHER BARRIER MEMBRANE

A. Tyvek® Commercial Wrap.

B. System Description: Air and water-resistive barrier system installed at exterior stud walls under exterior cladding, consisting of the following components as herein specified:
   1. Weather Barrier Membrane with all required material to seal penetrations in membrane and at overlapping edges.

2.3 WEATHER-RESISTANT BARRIER (WRB)

A. Install a single layer weather barier.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly constructed and prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Examine framing spacing and alignment to determine if work is ready to receive sheathing. Proceed with sheathing work once conditions meet requirements.

B. Remove projections, protruding fasteners, loose or damaged sheathing material at edges of panel that might interfere with proper installation to seal joints, corners, penetrations, openings, or material transitions.

C. Wipe down the sheathing surface to receive sealing materials with a clean cloth.

D. Ensure manufacturer's recommended field conditions are met.

3.3 INSTALLATION OF WEATHER RESISTANT BARRIER (WRB)

A. Install Weather Resistant Membrane in accordance with manufacturer's written instructions, requirements of applicable Product Report, and requirements of authorities having jurisdiction.

B. Coordinate membrane installation with flashing and joint sealant sequencing and installation and with adjacent building components to provide complete, continuous air- and moisture- barrier.

3.4 FIELD QUALITY CONTROL

A. Do not cover installed Weather-Resistive membrane until required inspections have been completed and installation has been accepted.

B. Where applicable, allow for owner's inspection and air barrier testing and reporting.

3.5 PROTECTION

A. Protect WRB from damage during installation and during the construction period.

END OF SECTION

SECTION 07 31 13

ASPHALT SHINGLES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Asphalt shingles and accessories.

1.2 REFERENCES

A. Reference Standards are latest editions, unless noted otherwise.

B. Flashing, ASTM International (ASTM):
   1. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
   2. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
   3. ASTM B 370 - Standard Specification for Copper Sheet and Strip for Building Construction.

C. Roofing Cement, ASTM International (ASTM):
   1. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
   2. ASTM D 3019 - Standard Specification for Lap Cement, Asbestos-Free.
   3. ASTM D2822 - Standard Specification for Asphalt Roof Cement.

D. Fasteners, ASTM International (ASTM):
   1. ASTM F 1667 - Specification for Driven Fasteners, Nails, Spikes and Staples, Type I, Style 20.

E. Shingles, ASTM International (ASTM):
   1. ASTM D 226 / D 226M - 09 Standard Specification for Asphalt Saturated Organic Felt Used in Roofing and Waterproofing.
   2. ASTM D 3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
   3. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
   4. ASTM D 7158/D 7158M-11 - Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force/Uplift Resistance Method).
   5. ASTM D 3462 - Standard Specification for Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules.
   6. ASTM D 4869 / D 4869M - 05(2011) - Standard Specification for Asphalt Saturated Organic Felt Underlayment Used in Steep Slope Roofing.

7. ASTM E 108 - 11 - Standard Test Methods for Fire Tests of Roof Coverings (ULC S107).
8. ASTM E 903 - Standard Test Method for Solar Absorptance, Reflectance, and Transmission of Materials Using Integrating Spheres.

F. Asphalt Roofing Manufacturers Association (ARMA)

G. FM Class Number 4473 Specification Test Standard for Impact Resistance Testing of Rigid Roofing Materials by Impacting with Freezer Ice Balls.

H. National Roofing Contractors Association (NRCA).

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets, including product characteristics, performance criteria, on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
1. Submit duplicate samples of full-sized shingles to match finish and profile for each type of roofing shingle to be used on the Project.

D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.
1. Submit duplicate samples of full-sized shingles to match finish and profile for each type of roofing shingle to be used on the Project.

1.4 REGULATORY REQUIREMENTS

A. Provide a roofing system achieving an ASTM E 108 Class A fire classification.

B. Provide a roofing system achieving an ENERGY STAR rating.

C. Ensure that materials and fastening methods meet requirements of jurisdictional authorities. The Installer shall be licensed or otherwise authorized to install roofing in the jurisdiction the work is to be performed in.

D. Install all roofing products in accordance with all Federal, Provisional, State and local building codes.

E. All work shall be performed in a manner consistent with current OSHA guidelines.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Provide all primary roofing products including shingles, underlayment, and leak barrier by a single manufacturer.

C. Installer Qualifications: Where required for extended limited warranty coverage, the installer shall be approved or otherwise authorized by IKO to install all roofing products to be installed on this project. Work is to be executed only by those skilled to perform it expeditiously and who has been responsible for satisfactory installations similar to that specified during a period of at least the immediate past three years.

D. Source: Primary roofing products, including shingles, underlayment, and ice and dam protection shall be supplied by a single manufacturer.

1.6 PRE-INSTALLATION MEETINGS

A. General:Pre-installation meeting to be scheduled by General Contractor.

1.7 DELIVERY, STORAGE, AND HANDLING

A. All materials shall arrive on site with their original containers or wrappings carrying the manufacturer's seals and labels intact. Store materials at least 100 mm (4 inches) off the ground or roof deck and be contained in the manufacturer's unopened and labeled packaging until they are ready for installation. Packing is to have the manufacture's name, product brand name, and standards pertaining thereof.

B. Store products in a covered, ventilated area.

C. Store bundles on a flat surface. Maximum stacking height shall not exceed manufacturer's recommendations. Store all rolls on end.

1.8 PROJECT CONDITIONS

A. Apply each part of the roofing system only when surfaces are clean and dry.

B. Cover walls and other surfaces in the vicinity of

hoisting apparatus (when used) with heavy canvas or other suitable protective material. Any damage caused shall be repaired to match the original materials and appearance at no cost to the Owner.

C. Conduct operations to leave deck exposed for the minimum period of time. Protect the work area as required to prevent water infiltration or environmental damage to building interior.

D. Material shall be neatly stored, elevated, and protected from damage due to wetness or freezing.

E. Maintain all site equipment in good working order.

F. Maintain one copy of manufacturers' application instructions at the Project site.

G. Weather Conditions:
   1. Proceed with work only when existing and forecasted weather conditions will permit work to be performed as recommended by manufacturer.
   2. When application conditions might limit the effectiveness of the sealing strip, such as in cool weather or in areas subject to high winds or blowing dust, shingle adherence shall be ensured through manual sealing.

1.9 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.10 WARRANTY

A. In addition to manufacturer's standard warranty the following supplements modify the warranty provisions.

B. Provide manufacturer's supplemental warranty to cover labor and materials in the event of a material defect for the following period after completion of application of shingles:
   1. First 15 Years (Limited Lifetime Warranty) for selected products.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Atlas Roofing Corporation, Certainteed Corporation, GAF USA, IKO Manufacturing and Owens Corning.

B. Substitutions: Submit request for substitution prior to bidding.

2.2 SHINGLES

A. Shingles:
   1. Type: Architectural
   2. Exposure: 5-5/8 inches (143 mm) minimum.
   3. Product: To be selected by Owner's representative from manufacturer's selection.
   4. Limited 10-Year Algae Resistant Warranty.
   5. Limited wind warranty coverage up to: 110 mph (177 kph).
   6. Color: As selected by Owner's Representative from manufacturer's color range available in the location of the Project.

B. To ensure coverage under the High Wind Application Limited Wind Resistance Warranty; the shingles shall be installed with additional nails, the shingles shall have an opportunity to seal or be manually sealed and starter strip shingles shall be used at all eaves and rakes.

2.3 HIP AND RIDGE SHINGLES

A. Product: Hip & Ridge Cap Shingles matching the color of selected roof shingle. Ridge shingles to be installed over continuous ridge vents.

2.4 SHINGLE UNDERLAYMENT

A. Product: Water repellent, breather type roofing underlayment recommended and provided by the roof shingle manufacturer.

2.5 ROOFING CEMENT

A. Product: Furnish product recommended and provided by the roofing manufacturer.

2.6 ATTIC VENTILATION

A. Provide continuous roll ridge vents provided or recommended by the roofing manufacturer as part of the total installation. Install in accordance with manufacturer's instructions.

2.7 NAILS/FASTNENERS

A. Product: Standard round wire, zinc-coated steel or aluminum complying with CSB B 111, recommended by roof shingle manufacturer and meeting local building codes.

2.8 METAL FLASHING

A. Product: Hot-dip galvanized steel sheet, complying with ASTM A 653/A 653M and meeting local building codes.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until the roof deck has been properly prepared.

B. If roof deck preparation is the responsibility of another installer, notify the Owner's representative of unsatisfactory preparation before proceeding.

C. The roof deck shall be smooth, firm, dry, and securely nailed. Plywood shall be exterior grade, conforming to building code requirements. Minimum 5/8 inch thickness plywood.

3.2 APPLICATION

A. Follow manufacturer's application instructions in conjunction with manufacturer's reference standards and in accordance with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

B. Install asphalt shingles on roof slopes in accordance with CAN3 A 123.51-M85 and per manufacture instructions. Follow whichever method is the more stringent.

C. Install ice dam protection underlayment directly on plywood at all eaves and roof edges as well as at all penetrations, abutments, and to vertical walls as instructed. Apply 1-ply of underlayment over the entire deck surface, except where Ice & Water protector membrane has been installed.

3.3 PREPARATION

A. Verify that the deck is dry, sound, clean, and smooth. It shall be free of any depressions, waves, and/or projections. Cover with sheet metal, all holes over 25 mm (1 inch) in diameter, cracks over 12 mm (1/2 inch) in width, loose knots, and excessively resinous areas.

B. Replace damaged deck with new materials.

C. Clean deck surfaces thoroughly prior to installation of Ice & Water protector membranes used for eaves protection and before installation of underlayment.

3.4 INSTALLATION OF UNDERLAYMENTS

A. General:
1. Install using methods recommended and in accordance

with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

2. Install an ice dam protection underlayment of self-adhesive membrane directly on to the plywood at all eaves and roof edges as well as at all penetrations, abutments, and to vertical walls. Add one ply of underlayment over the entire deck surface, except where Ice & Water protector membrane has been installed.

B. Eaves:

1. Install eave protection using methods recommended and in accordance with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
2. Install eaves edge metal flashing tight with fascia boards; lap joints 51 mm (2 inches) and seal with plastic cement; nail at the top of the flange.
3. Base flashing shall be in place before shingles are applied. Cap flashings of sheet metal and base flashing of metal or mineral surfaced roofing shall be used at chimneys, skylights, vents, walls and other vertical surfaces and sealed with asphalt plastic cement. Flashing shall conform to the requirements of applicable building codes and good roofing practice.
4. Overhang eaves with underlayment by a nominal 6 mm (1/4 inch) minimum and extending up the roof at least 600 mm (24 inches) beyond the interior wall line.
5. In colder climates where required by codes, and on all roofs with slopes between 2:12 and 4:12 (low slopes), install eaves protection using an Ice & Water protector membrane product, up the slope from eaves edge a full 914 mm (36 inches) or to at least 610 mm (24 inches) beyond the interior "warm wall". Lap ends 152 mm (6 inches) and bond.
6. Contractor Option: Use 2 layers of asphalt saturated felt (or equivalent), the first sheet overlapping the eave protection by 480 mm (19 inches), followed by full 914 mm (36 inches) widths overlapping each preceding course by 480 mm (19 inches). For areas where the roof slope is 150 mm per 300 mm down to 100 mm per 300 mm (6 inches per foot down to 4 inches per foot), it is strongly recommended to cover the remainder of the deck with one ply asphalt saturated felt (or equivalent) laid parallel to the eaves, with 51 mm (2 inches) horizontal laps and 104 mm (4 inches) end laps. Apply metal drip edges on top of any underlay along rake edges and directly to the deck along eaves.

C. Valleys:

1. Install eaves protection at least 914 mm (36 inches)

wide and centered on the valley. Lap ends 152 mm (6 inches) and seal.

2. Where valleys are indicated to be "open valleys", install metal flashing over Ice & Water protector membrane before roof deck underlayment is installed; DO NOT nail through the flashing. Secure the flashing by nailing at 450 mm (18 inches) on center just beyond edge of flashing so that nail heads hold down the edge of the flashing.

D. Roof Deck:
1. Install one layer of roof deck underlayment over the entire area not protected by Ice & Water protector membrane. Install sheets horizontally so water sheds.
2. On roofs sloped between 2:12 and 4:12, lap horizontal edges at least 480 mm (19 inches) and at least 480 mm (19 inches) over eaves protection membrane.
3. Lap ends at least 102 mm (4 inches). Stagger end laps of each layer at least 914 mm (36 inches).
4. Lap underlayment over valley protection at least 152 mm (6 inches).

E. Penetrations:
1. Vent pipes: Install a 600 mm (24 inches) square piece of Ice & Water protector membrane lapping over roof deck underlayment; seal tightly to pipe.

3.5 INSTALLATION OF SHINGLES

A. General:
1. Install in accordance with manufacturer's instructions and local building codes in conjunction with reference standards.
2. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
3. Minimize breakage of shingles in cold weather (below 4 degrees C or 40 degrees F) by avoiding dropping bundles on edge or by "breaking bundles" over the roof ridge or other bundles. Separating shingles carefully, taking extra precautions in colder temperatures.
4. Handle shingles carefully in hot weather to avoid scuffing the surfacing or damaging the shingle edges.
5. Install the asphalt shingles on roof slopes in accordance with CAN3 A 123.51-M85.

B. Placement and Nailing:
1. Use galvanized (zinc coated) roofing nails, 11 or 12 gauge, with at least 10 mm (3/8 inches) diameter heads, long enough to penetrate through plywood or 20 mm (3/4 inches) into boards.
2. Use 4, 5, or 6 nails per shingle placed in the nail

line per manufacturer's instructions and local codes. Placement of nails varies based on the type of shingle specified, roof slope, and other environmental considerations. Consult the manufacturer's application instructions for the specified shingle for details.

3. Drive nails straight so that nail head is flush with, but not cutting into shingle surface. Do not overdrive or under drive the nails.
4. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.

C. Placement and Nailing:
1. Beginning with the starter strip, trim shingles so that they "nest" within the shingle located beneath it. This procedure will yield a first course that is typically 76 mm to 102 mm (3 inches to 4 inches) wide rather than a fully exposed shingle.
2. Laterally, offset the new shingles from the existing keyways, to avoid waves or depressions caused by excessive dips in the roofing materials.
3. Using the bottom of the tab on existing shingles, align subsequent courses.
4. Secure with 4, 5, or 6 nails per shingle placed in the nail line per manufacturer's instructions and local codes. Placement of nails varies based on the type of shingle specified, roof slope, and other environmental considerations. Consult the manufacturer's application instructions for the specified shingle for details.
5. Nails shall be driven flush with the shingle surface. Do not overdrive or underdrive the nails.
6. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details

D. Valleys:
1. Install valleys using the "open metal valley" method:
   a. Snap diverging chalk lines on the metal flashing, starting at 76 mm (3 inches) each side of top of valley, spreading at 3 mm per 300 mm (1/8 inch per foot) to the eaves.
   b. Run shingles to chalk line.
   c. Trim last shingle in each course to match the chalk line; do not trim shingles to less than 300 mm (12 inches) wide.
   d. Cut a 50 mm (2 inches) triangle off the top corner to direct water into the valley and embed the valley end of each shingle into a 75 mm (3 inches) band of asphalt plastic cement.
   e. Apply a 50 mm (2 inches) wide strip of plastic cement under ends of shingles, sealing them to the metal flashing.

E. Penetrations
   1. All penetrations are to be flashed according to Asphalt Roofing Manufacturers Association (ARMA), Canadian Asphalt Shingle Manufacturers' Association (CASMA), Canadian Roofing Contractors Association (CRCA), and/or National Roofing Contractors Association (NRCA) guidelines to meet local building codes.

3.6 VENTILATION

A. General:
   1. Ventilation shall meet or exceed current F.H.A., H.U.D. and local code requirements.

B. Ridge / Soffit Ventilation:
   1. Cut continuous vent slots through the sheathing, stopping 152 mm (6 inches) from each end of the ridge.
   2. On roofs without a ridge board, make a slot 51 mm (2 inches) wide, centered on the ridge.
   3. On roofs with a ridge board, make two slots 45 mm (1-3/4 inches) wide, one on each side.
   4. Install ridge vent material along the full length of the ridge, including uncut areas.
   5. Butt ends of ridge vent material and join using roofing cement.
   6. Install eaves vents in sufficient quantity to equal or exceed the ridge vent area.

3.7 PROTECTION

A. Protect installed products from foot traffic until completion of the project.

B. Any roof areas that are not completed by the end of the workday are to be protected from moisture and contaminants.

END OF SECTION

SECTION 07 46 33

VINYL SIDING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Vinyl siding.

B. Vinyl trim and accessories.

1.2 RELATED SECTIONS

A. Section 07 92 00 - Joint Sealants.

1.3 REFERENCES

A. ASTM D 635 - Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supported Plastics in a Horizontal Position.

B. ASTM D 638 - Test Method for Tensile Properties of Plastics.

C. ASTM D 648 - Test Method for Deflection Temperature of Plastics Under Flexural Load.

D. ASTM D 696 - Test Method for Coefficient of Linear Expansion of Plastics.

E. ASTM D 1929 - Test Method for Ignition Properties of Plastics.

F. ASTM D 2843 - Test Method for Density of Smoke from the Burning or Decomposition of Plastics.

G. ASTM D 3679 - Specification for Rigid Poly Vinyl Chloride (PVC) Siding.

H. ASTM D 4226 - Test Methods for Impact Resistance of Rigid Poly Vinyl Chloride (PVC) Building Products.

I. ASTM E 84 - Test Method for Surface Burning Characteristics of Building Materials.

J. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

K. CAN/CGSB 41-24-95 - Rigid Vinyl Siding, Soffits and Fascia

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 -

Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Maintain rigorous production quality control standards to ensure that vinyl siding will perform as expected for its intended use. Products meet or exceed the requirements of ICC and VSI and listed by ICC International Code Council and VSI Vinyl Siding Certification Programs

B. Installer Qualifications: Installer with not less than three years documented experience with products specified or who has passed the Vinyl Siding Institute's (VSI) Certified Installer Program.

C. Mock-Up: Provide a mock-up for evaluation of surface installation techniques and workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
   3. Reinstall mock-up area as required to produce acceptable work.

D. Regulatory Requirements:
   1. International Building Code (IBC) - ESR 1656 - 2006, 2009 and 2012
   2. International Residential Code (IRC) - ESR 1656 - 2006, 2009 and 2012
   3. Florida Building Code- FL# 15935, FL# 13139

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Pack siding and soffits two squares per carton and clearly mark each carton with manufacturer's name, siding style, color, identifying lot number, and VSI

Certification Stamp.

C. Store vinyl siding, soffits, and accessories in clean, dry area, out of direct sunlight.

D. Handle material to prevent damage. Do not allow cartons to crease.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

A. Provide manufacturer's lifetime non-prorated transferable limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Royal Building Products - Siding & Trim Board, which is located at: 91 Royal Group Crescent; Woodbridge, ON, Canada L4H 1X9; Toll Free Tel: 800-387-2789; Tel: 905-850-9700; Fax: 905-850-9184; E m a i l : r e q u e s t i n f o (RBPCustomerCare@royalbuildingproducts.com); Web: http://www.royalbuildingproducts.com/siding/?LangType=1033

B. Substitutions: Not permitted without prior approval.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 MATERIALS

A. Typical Physical Properties:
1. Tensile Strength: Greater than 6000 PSI, per ASTM D 638.
2. Modulus of Elasticity: Greater than 365,000 PSI, per ASTM D 638.
3. Deflection Temperature Under Load: 165 degrees F (77 degrees C) @ 264 Psi per ASTM D 648.
4. Coefficient of Linear Expansion: Less than 3.5 x 10-5 in/in/degrees F, per ASTM D 696.
5. Impact Resistance: >60 in-lbs at 73 degrees F (23 degrees C) when tested in accordance with ASTM D 4226.
6. Low Temperature Flexibility: passed CAN/CGSB 41-24-95.

7. Surface Distortion (oil can): No distortion at 120 degrees F when tested in accordance with ASTM D 3679.

B. Fire Properties: Meets UBC 42-1:
1. Flame Spread Index: Less than 25 when tested in accordance with ASTM E 84.
2. Fuel Contribution: 0 when tested in accordance with ASTM E 84.
3. Smoke Developed Index: 510.2 when tested in accordance with ASTM E 84.
4. Self-ignition temperature: 810 degrees F when tested in accordance with ASTM D 1929.
5. Smoke Density Rating: 42.1 percent when tested in accordance with ASTM D 2843.
6. Maximum smoke density: 56.0 percent when tested in accordance with ASTM D 2843.
7. Visibility of exit sign: Good when tested in accordance with ASTM D 2843.
8. Total burn time: Less than 5 seconds when tested in accordance with ASTM D 635.
9. Extent of burning: Less than 10 mm when tested in accordance with ASTM D 635.
10. Fire resistance rating: 1 hour when tested in accordance with ASTM E 119.

2.3 SIDING

A. Royal Woodland double 4-1/2 inch (114 mm) Designer Profile.
1. 4-1/2 inch (114 mm) designer profile.
2. Each 10.350 inch (263 mm) wide horizontal siding panel nominally configured as two 4-1/2 inch (114 mm) panels in the designer style with .675 inch (17 mm) butt height.
3. Length:
   a. 12 feet (3.65 m).
   b. 16 feet (4.87 m).
   c. 25 feet (7.62 m).
4. Width: 10.350 inches (263 mm).
5. Thickness: 0.046 inch (1.17 mm).
6. Double nail hem.
7. Wind Resistance: Design pressure of minus105 psf with standard installation.
8. Color: As selected by Owner's Representative from manufacturer's standard colors.

2.4 ACCESSORIES

A. Standard Siding Accessories: Provide inside corners, outside corners, j-channels, finish trim, etc as indicated on the Drawing or as required for the project.
1. Color: As selected by Owner"s Representative from manufacturer's standard colors.
2. Produced from the same compound materials and with comparable properties as the siding.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Confirm that all critical dimensions are as specified on the drawings.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Repair substrate flaws or defects before applying siding or soffits.

C. Where necessary, fur surfaces to an even plane and free from obstructions before application.

D. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install siding in accordance with the latest edition of the manufacturer's Installation Instructions.

B. Install vinyl siding and accessories in accordance with best practice, with all joint members plumb and true.

C. Securely attach siding using methods and materials recommended by siding manufacturer for wind load conditions at project site.

D. Install vinyl siding and accessories with all joint members plumb and true.

3.4 FIELD QUALITY CONTROL

A. After installation of siding check entire surface for obvious flaws or defects.

B. Replace and repair any problem areas, paying close attention to the substrate for causes of the problem.

3.5 CLEANING

A. After application of siding and soffits, clean as necessary to remove all fingerprints and soiled areas.

B. Upon completion of siding application, clean entire area, removing all scrap, packaging, and unused materials related to this work.

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 07 92 00
JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes sealants for the following applications:

1. Exterior joints in the following vertical surfaces and nontraffic horizontal surfaces:

a. Joints between different materials.
b. Perimeter joints at frames of doors and windows.
c. Other joints as indicated.

2. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:

a. Perimeter joints between interior wall surfaces and frames of interior doors, windows, running trim and built-in cabinets..
b. Joints between plumbing fixtures and adjoining walls, floors, and counters.
c. Other joints as indicated

1.3 PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.

B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multicomponent materials.

B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
2. When joint substrates are wet.

B. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified in the sealant schedules at the end of Part 3.

2.2 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range for this characteristic.

2.3 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant in the Elastomeric Joint-Sealant Schedule at the end of Part 3, including those referencing ASTM C 920 classifications for type, grade, class, and uses.

2.4 LATEX JOINT SEALANTS

A. Latex Sealant Standard: Comply with ASTM C 834 for each product of this description indicated in the Latex Joint-Sealant Schedule at the end of Part 3.

2.5 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

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

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air. Porous joint surfaces include the following:

    a. Masonry.

3. Remove laitance and form-release agents from concrete.
4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

    a. Metal.
    b. Glass.
    c. Glazed surfaces of ceramic tile.

B. Joint Priming: Prime joint substrates where recommended in writing by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install sealants by proven techniques to comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses provided for each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealants from surfaces adjacent to joint.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

3.6 ELASTOMERIC JOINT-SEALANT SCHEDULE

A. Mildew-Resistant Silicone Sealant: Where joint sealants of this type are indicated, provide products formulated with fungicide that are intended for sealing interior joints that are subject to in-service exposures of high humidity and temperature extremes, and that comply with the following:

1. Products: Available products include the following:

   a. 786 Mildew Resistant; Dow Corning.
   b. Sanitary 1700; GE Silicones.
   c. NuFlex 302; NUCO Industries, Inc.
   d. 898 Silicone Sanitary Sealant; Pecora Corporation.
   e. PSI-611; Polymeric Systems, Inc.
   f. Tremsil 600 White; Tremco.

2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 25.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: G, A, and, as applicable to joint substrates indicated, O.

6. Applications: Around countertop backsplash and around toilet fixtures and pipe penetrations.

B. Single-Component Nonsag Urethane Sealant: Where joint sealants of this type are indicated, provide products complying with the following:

1. Products: Available products include the following:
   a. Chem-Calk 900; Bostik Findley.
   b. Chem-Calk 915; Bostik Findley.
   c. Vulkem 916; Tremco.
   d. Dynatrol I-XL; Pecora Corporation.
   e. Flexiprene 1000; Polymeric Systems, Inc.
   f. PSI-901; Polymeric Systems, Inc.
   g. SM7100 Permathane; Schnee-Morehead, Inc.
   h. DyMonic; Tremco.

2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 25.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
6. Applications: Exterior vertical and horizontal joints.

3.7 LATEX JOINT-SEALANT SCHEDULE

A. Latex Sealant: Where joint sealants of this type are indicated, provide products complying with the following:

1. Products: Available products include the following:

a. Chem-Calk 600; Bostik Findley
b. NuFlex 330; NUCO Industries, Inc.
c. SM 8200; Schnee-Moorhead, Inc..
d. AC-20; Pecora Corporation.
e. PSI-701; Polymeric Systems, Inc.
f. Sonolac; Sonneborn Building Products Div., ChemRex, Inc.
g. Tremflex 834; Tremco.

2. Applications: Interior calking and sealing; perimeter sealing around door and window frames and general calking applications.

END OF SECTION

SECTION 08 11 13

STEEL DOORS AND FRAMES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Steel doors and steel frames.

1.2 RELATED SECTIONS

A. Section 08 14 00 - Wood Doors.

B. Section 09 90 00 - Interior and Exterior Painting.

1.3 REFERENCES

A. ANSI A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames; 1998.

B. ANSI A250.3 - Test Procedure and Acceptance Criteria for Factory Applied Finish Painted Steel Surfaces for Steel Doors and Frames.

C. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 1998.

D. ANSI A250.11, Recommended Erection Instructions for Steel Frames.

E. ASTM A 366/A 366M - Standard Specification for Commercial Steel (CS) Sheet, Carbon, (0.15 Maximum Percent) Cold-Rolled; 1997.

F. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-coated (Galvannealed) by the Hot-Dip Process; 1998.

G. ASTM E-90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

H. DHI A115.1G - Installation Guide for Doors and Hardware; 1994.

I. NFPA 80 - Standard for Fire Doors and Windows; 1999.

J. NFPA 252 - Standard Methods of Fire Tests for Door Assemblies; 1995.

K. UL 10B - Standard for Fire Tests of Door Assemblies;

1997.

L. UL 10C - Positive Pressure Fire Tests of Door Assemblies.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Include schedule identifying each unit, with door marks or numbers referencing drawings. Show layout, profiles, product components and anchorages.

D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum five years documented experience manufacturing products specified this Section.

B. Installer Qualifications: Minimum five years documented experience installing products specified this Section.

C. All products shall conform to the requirements of ANSI A250.8, "SDI 100 Recommended Specifications for Standard Steel Doors and Frames".

D. Insulated Doors shall have:
   1. A "U Factor" of 0.10 for a Polyurethane core.

E. Fire Rated Doors:
   1. Doors shall be tested in accordance with UL 10B, "Fire Tests of Door Assemblies", NFPA 252, "Fire Tests of Door Assemblies", and UL 10C, "Positive Pressure Fire Tests of Door Assemblies".
   2. Doors must have an approved marking or physical label, applied by an authorized facility, in accordance with the procedure set forth by an independent certification agency.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Handle, store and protect products in accordance with the manufacturers printed instructions and ANSI/SDI A250.10 and NAAMM/HMMA 840.

B. Store frames in an upright position with heads uppermost

under cover. Place on 4 inch (102 mm) high wood sills to prevent rust and damage. Store assembled frames five units maximum in a stack with 2 inch (51 mm) space between frames to promote air circulation.

C. Do not store under non-vented plastic or canvas shelters.

D. Remove wrappers immediately if they become wet.

1.7 SEQUENCING

A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.

B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Republic Doors and Frames an Allegion Brand.

B. Substitutions: Not permitted without approval of Owner's Representative.

2.2 MATERIALS

A. Uncoated Steel Sheet: Cold rolled commercial steel sheet complying with ASTM A 366/A 366M.

2.3 DOORS AND FRAMES

A. Doors: Full flush (No Vertical Face Seams), complying with ANSI A250.8; face panels laminated to core and complete unit closed with steel perimeter channels projection welded to face sheets.
   1. Thickness: 1-3/4 inches (44 mm).
      a. ANSI Level 3, Model 1; 16 gage (1.3 mm) faces, visible edge seams.
   2. Faces:
      a. Full flush.
   3. Face Material:
      a. Cold Roll steel sheet.
   4. Core: Manufacturer's standard core
   5. Steel Stiffened Doors: Steel reinforced with minimum 20 gage (0.794 mm) hat shaped stiffeners welded to the inside of each face sheet at maximum of 6 inches (150 mm) on center, with mineral wool filling spaces between stiffeners. Stiffeners shall be manufacturer's standard.

6. Beveled Doors: Bevel lock edge of door 1/8 inch in 2 inches (3 mm in 50 mm).
7. Finish: Factory primed.

B. Door Reinforcements:
1. Top and Bottom Channels: 16 gage steel, projection welded to both face sheets at a maximum of 2-1/2 inched (64 mm) on center.
a. For exterior Doors fill top channel with epoxy and grind smooth.
2. Hinge Reinforcement: Manufacturer's standard.
3. Lock Reinforcing Channel: Lock reinforcing channel shall be projection welded to both face sheets.
a. DL Series: Non beveled and reinforced with a continuous 16 gage channel. 16 gage reinforcements for mortised or cylindrical locks are of an integral type in accordance with ANSI A115 standards.
4. Closer Reinforcement: 12 gage box type reinforcement, 18 inches (457 mm) long.

2.4 FRAMES CONSTRUCTION

A. Frames: Formed steel sheet, with 2 inch (50 mm) wide face jambs and heads unless otherwise indicated; complying with ANSI A250.8.
1. Frame Depth: Fixed, as indicated on drawings.
2. ANSI Level 3 Doors: 16 gage (1.5 mm) frames.
3. Material: Cold Roll steel sheet.
4. Corners: Mitered; face welded and ground smooth.
5. Provide 3 silencers for single doors, 2 silencers on head of frame for pairs of doors.
6. Finish: Factory prime finish.

B. Reinforcements for 1-3/4 Inch (44 mm) Frames:
1. Hinge Reinforcements: 9 gage (3.8 mm).
2. Strike Reinforcement: 10 gage (3.4 mm) equivalent.
3. Closer Reinforcements: 12 gage (2.6 mm).

C. Frame Anchors: Minimum of six wall anchors and two base anchors. Provide with an additional anchor for every 30 inches (760 mm) over 90 inches (2286 mm).

2.5 FACTORY FINISH

A. All steel doors, frames, and stick components shall be cleaned and finished in accordance with ANSI A250.10, "Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames".

B. Preparation: Clean and phosphatize surfaces of steel doors and frames".

C. Primer: Apply one coat of a gray, alkyd acrylic enamel primer, forced cured.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Verify that substrate conditions are acceptable for installation of doors and frames in accordance with manufacturer's installation instructions and technical bulletins.

C. Verify door frame openings are installed plumb, true, and level.

D. Select fasteners of adequate type, number, and quality to perform intended functions.

E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install frames plumb, level, rigid and in true alignment in accordance with ANSI A250.11, "Recommended Erection Instructions for Steel Frames" and ANSI A115.IG, "Installation Guide for Doors and Hardware".

C. All frames other than slip-on types shall be fastened to the adjacent structure to retain their position and stability.

D. Install fire-rated doors and frames in accordance with NFPA 80 and local code authority requirements.

E. Install doors to maintain alignment with frames to achieve maximum operational effectiveness and appearance. Adjust to maintain perimeter clearances as required. Shim as needed to assure the proper clearances are achieved.

F. Install hardware in accordance with the hardware manufacturer's recommendations and templates. ANSI A115.IG, "Installation Guide for Doors and Hardware" shall be consulted for other pertinent information.

3.4 CLEARANCES

A. Clearance between the door and frame head and jambs for both single swing and pairs of doors shall be 1/8 inch (3.2 mm).

B. Clearance between the meeting edges of pairs of doors shall be 3/16 inch plus or minus 1/16 inch (5 mm plus or minus 1.6 mm). For fire rated applications, the clearance between the meeting edges of pairs of doors shall be 1/8 inch plus or minus 1/16 inch (3.2 mm plus or minus 1.6 mm).

C. Bottom clearance shall be 3/4 inch (19 mm). (Standard)

D. The clearance between the face of the door and door stop shall be 1/16 inch to 1/8 inch (1.6 mm plus or minus 3.2 mm).

E. All clearances shall be, unless otherwise specified, subject to a tolerance of plus or minus 1/32 inch (.4 mm).

3.5 ADJUSTING AND CLEANING

A. Adjust doors for free swing without binding.

B. Adjust hinge sets, locksets, and other hardware. Lubricate using a suitable lubricant compatible with door and frame coatings.

C. Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions before owner's acceptance.

D. Remove from project site and legally dispose of construction debris associated with this work.

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 08 14 16
FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-core doors with wood-veneer faces.

1.2 SUBMITTALS

A. Product Data: For each type of door.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.

1. Indicate dimensions and locations of mortises and holes for hardware.
2. Indicate dimensions and locations of cutouts.
3. Indicate requirements for veneer matching.

1.3 QUALITY ASSURANCE

A. Quality Standard: In addition to requirements specified, comply with WDMA I.S.1-A ARCHITECTURAL WOOD FLUSH DOORS."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Ampco, Inc.
2. Graham.
3. VT Industries Inc.

2.2 DOOR CONSTRUCTION, GENERAL

A. Particleboard-Core Doors:

1. Particleboard: ANSI A208.1, Grade LD-1, made with binder containing no urea-formaldehyde resin.
2. Blocking: Provide wood blocking in particleboard-core doors as needed to eliminate through-bolting hardware.

2.3 VENEERED-FACED DOORS - FACTORY FINISH

A. Interior Solid-Core Doors:

1. Grade: Premium, with Grade A faces.
2. Species: Red Oak.
3. Cut: Plain sliced.
4. Assembly of Veneer Leaves on Door Faces: Balance match.
5. Core: Particleboard.
6. Construction: Five plies.bonded, hot-pressed, then entire unit abrasive planed before veneering.
7. Factory finish: Manufacturer's standard system.

2.4 FABRICATION

A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.

B. Openings: Cut and trim openings through doors in factory.

1. Light Openings: Trim openings with moldings of material and profile indicated.
2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Division 08 Section "Glazing."

PART 3 - EXECUTION

3.1 INSTALLATION

A. Hardware: For installation, see Division 08 Section "Door Hardware."

B. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.

C. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels; do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated

doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.

1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.

END OF SECTION

SECTION 08 33 00
Coiling Counter Shutters with Integral Frame

PART 1 GENERAL

1.1 SUMMARY

A. **Section Includes:**
1. Manual coiling counter shutters with integral frame and countertop, built-in type

1.2 SUBMITTALS

A. **Reference Section 01 33 00 Submittal Procedures; submit the following items:**
1. **Product Data**
2. **Shop Drawings:** Include special conditions not detailed in Product Data. Show interface with adjacent work.
3. **Quality Assurance/Control Submittals:**
   a. Provide proof of manufacturer ISO 9001:2015 registration
   b. Provide proof of manufacturer and installer qualifications - see 1.3 below
   c. Provide manufacturer's installation instructions
4. **Closeout Submittals:**
   a. Operation and Maintenance Manual
   b. Certificate stating that installed materials comply with this specification

1.3 QUALITY ASSURANCE

A. **Qualifications:**
1. **Manufacturer Qualifications:** ISO 9001:2015 registered and a minimum of five years experience in producing counter doors with integral frame assembly of the type specified
2. **Installer Qualifications:** Manufacturer's approval

1.4 DELIVERY STORAGE AND HANDLING

A. Reference Section 01 66 00 Product Storage and Handling Requirements
B. Follow manufacturer's instructions

1.5 WARRANTY

A. **Standard Warranty:** Two years from date of shipment against defects in material and workmanship
B. **Maintenance:** Submit for owner's consideration and acceptance of a maintenance service agreement for installed products

1.6 System Description

A. Manual coiling counter shutters with integral frame and countertop, built-in type

PART 2 PRODUCTS

2.1 MANUFACTURER

A. **Manufacturer:**
1. **Cornell:** 24 Elmwood Avenue, Mountain Top, PA 18707.
Telephone: (800) 233-8366.
a. **Model:** ESC20
2. **Cookson**
3. **Clopay Building Products**

Substitutions: Not permitted without prior approval.

2.2 FABRICATION

A. Factory weld head, and jambs and countertop into single unit, fully assembled, ready for installation

2.3 MATERIALS

A. **Curtain:**
1. **Slat Configuration:**
a. **Stainless Steel:** No. 1F, interlocked flat-faced slats, 1-1/2 inches (38 mm) high by 1/2 inch (13 mm) deep, 22 gauge AISI type 304 #4 finish stainless steel with stainless steel angle bottom bar with lift handles and vinyl astragal
2. **Finish:**
a. **Stainless Steel:** type 304 #4 finish

B. **Endlocks:**
Fabricate interlocking slat sections with high strength molded nylon endlocks riveted to ends of alternate slats

C. **Head and Jamb Frame:**
Integral welded with guide groove incorporated into jamb design. Build to fit wall thickness
1. **Fabrication:**
a. **Stainless Steel:** 16 gauge AISI 300 series formed shapes
2. **Finish:**
a. **Stainless steel:** type 304 #4 finish

D. **Countertop:**
1. **Stainless Steel:** Integral 14 gauge AISI 300 series stainless steel formed shape; type 304 #4 finish

E. **Counterbalance Shaft Assembly:**
1. **Barrel:** Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot (2.5 mm per meter) of width
2. **Spring Balance:** Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of door to ensure that maximum effort to operate will not exceed 25 lbs (110 N). Provide wheel for applying and adjusting spring torque

F. **Brackets:**
Fabricate from reinforced steel plate with bearings at rotating support points to support counterbalance shaft assembly and form end closures for hood
1. **Finish:**
a. **Stainless Steel:** type 304 #4 finish

G. **Hood and Fascia:**
16 gauge steel with reinforced top and bottom edges.
1. **Finish:**
a. **Stainless Steel:** type 304 #4 finish

2.4 OPERATION

A. **Manual Crank Hoist:** Provide crank hoist operator including crank gear box, steel crank drive shaft and geared reduction unit. Fabricate gear box to completely enclose operating mechanism and be oil-tight.

2.5 ACCESSORIES

A. **Locking:**

1. **None**

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings
B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates
C. Commencement of work by installer is acceptance of substrate

3.2 INSTALLATION

A. General: Install door unit and operating equipment with necessary hardware, anchors, inserts, hangers and supports
B. Follow manufacturer's installation instructions

3.3 ADJUSTING

A. Following completion of installation, including related work by others, lubricate, test, and adjust doors for ease of operation, free from warp, twist, or distortion

3.4 CLEANING

A. Clean surfaces soiled by work as recommended by manufacturer
B. Remove surplus materials and debris from the site

3.5 DEMONSTRATION

A. Demonstrate proper operation to Owner's Representative
B. Instruct Owner's Representative in maintenance procedures

END OF SECTION

SECTION 08 41 13

ALUMINUM STOREFRONTS & ENTRANCES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Aluminum storefronts and Entrance Doors..

1.2 REFERENCES

A. ASTM International (ASTM):
   1. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
   2. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
   3. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
   4. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Configuration and details for installation, maintenance and operation.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

1.5 PRE-INSTALLATION MEETINGS

A. Pre-installation meeting to be scheduled..

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with project requirements, available manufacturers offering products that may be incorporated into the work, include, but are not limited to the following:
1. Kawneer
2. Tubelite

B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 ALUMINUM STOREFRONT

A. Product: Thermal Barrier Design - Aluminum Storefront and Entrance Doors.

B. Design:
1. Framing sections shall be extruded from 6063-T5 aluminum alloy.
2. Glazing beads shall be NS (non-stretch, high-shore)

vinyl used on both sides of the glass. Vinyl shall incorporate a fiberglass cord bonded with the vinyl.
3. Sections shall conform to details and shall present clean, straight, sharply defined lines, and shall be free from defects impairing strength or durability.
4. Screws, nuts, bolts and fastening devices and internal components shall be of aluminum, stainless steel or other non-corrosive material.
5. Factory preparation from detail drawings shall be so fabricated that field assembly will be able to produce accurate, tightly fitted joints.

C. 1-3/4 X 4-1/2 inch, Center Glaze For 1" Glazing:

D. Finish: To be selected from manufacturer's standard offerings.

2.3 DOORS

A. Medium Stile:
1. 3-1/2 inches stile with 3-1/4 inches rail.
2. Medium stile single acting
3. ADA compliant high bottom rail
4. Finish: To be selected from manufacturer's standard offerings.

B. Accessories:
1. ADA Bottom Rail: 10-1/2 inches (267 mm) high.
2. Threshold: 4 inches (102 mm) extruded aluminum
   a. Finish: Mill.
3. Hardware: See Door Schedule in drawings for exit device and key cylinder information.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

A. All joints between metal and masonry shall be fully caulked and field tested to resist water leakage with provisions taken to drain infiltrated water.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 08 52 13
ALUMINUM-CLAD WOOD WINDOWS
JELD-WEN W-2500 Series

GENERAL

1.1 SECTION INCLUDES

A. Aluminum Clad Wood Windows: Double-hung windows.

1.2 REFERENCES

A. Window and Door Manufacturers Association (WDMA):

1. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for windows, doors, and skylights (NAFS)
2. WDMA I.S.4; Water Repellent Preservative Non-Pressure treatment for Millwork

B. National Fenestration Rating Council (NFRC):

1. NFRC 100 - Procedure for Determining Fenestration Product U-Factors.
2. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.

C. ASTM International (ASTM):

1. ASTM E330 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

D. Forest Stewardship Council (FSC): FSC Chain-of-Custody Certification.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings: Submit shop drawings indicating details of construction, flashings and relationship with adjacent construction.

D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

E. Quality Assurance Submittals:

1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.

F. Closeout Submittals: Refer to Section 01 70 00 - Execution and Closeout Requirements Closeout Submittals.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Minimum 2 years installing similar assemblies.

B. Pre-installation Meeting: To be scheduled by Construction Manager/Contractor..

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.

B. Deliver and store assembly materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact. Protect from damage.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.7 WARRANTY

A. Manufacturer's Standard Warranty: Assemblies will be free from defects in materials and workmanship from the date of manufacture for the time periods indicated below:

1. Basic Product Coverage - Window Unit: 20 years.
2. Cladding Finish: 10 years against peeling, checking, cracking caulk or color change.
3. Insulated Glass: 20 years.
4. AuraLast Protection for wood products: 20 years.
   a. Coverage is for wood decay and/or termite damage in pine wood components.

PRODUCTS

1.8 MANUFACTURERS

A. Acceptable Manufacturer: JELD-WEN, Inc.; 2645 Silver Crescent Drive, Charlotte, NC 28273; Toll Free Tel: 800-535-3936; Tel: 541-850-2606; Fax: 541-851-4333; Email: en.com; Web: .

B. Substitutions: Not permitted unless previously approved.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

1.9 ALUMINUM CLAD WOOD WINDOWS- GENERAL

A. Design Requirements:

1. Compliance: Provide assemblies capable of complying with requirements indicated, based on testing manufacturer's units that are representative of those specified.
2. Test Size: In compliance with requirements of AAMA/WDMA/CSA.

B. Installation Accessories:

1. Flashing: Refer to Section 07 6 00 - Flashing and Sheet Metal.
2. Sealants: Refer to Section 07 92 00 Joint Sealants.
3. Sealants: Manufacturer recommended sealants to maintain watertight conditions.

C. Materials

1. Exterior Cladding: Roll formed sash with extruded frame.
2. Interior Wood: AuraLast Pine.

D. Finishes

1. Interior Finish for Windows:
   a. Traditional Sash:
      1) Finish: Standard.
2. Exterior Finishes for Windows:
   a. Standard Sash: Color: To be selected from manufacturer's standard selections.

1.10 ALUMINUM-CLAD WOOD WINDOW ASSEMBLIES

A. Basis of Design: Aluminum-clad wood window assemblies as manufactured by JELD-WEN, Inc.

1. Window Type: Double-hung windows.

B. Window Fabrication

1. Double-Hung Windows:
   a. Frame: Reinforced nylon corner locks in head frame, and all corners injected with sealant.
   b. Sash: Corner joints mortise-and-tenon, and mechanically fastened.
   c. Glass: Mounted using silicone glazing compound.

C. Frames:

1. Select kiln-dried pine AuraLast treated wood.
2. Double-Hung Windows Base Frame: 4-9/16 inch (116 mm).
3. Jamb Width: 4-9/16 inch (116mm).
4. Cladding: 0.045 to.060 inch (1.27 to 1.52 mm) extruded aluminum.

D. Sashes:

1. Select kiln-dried pine AuraLast® treated wood.
2. Cladding: 0.024 inch (0.61mm) roll-formed aluminum.

Sash Thickness: Double-Hung Traditional 1-9/32 inches (33 mm)] [Double-Hung Standard 1-11/32 inches (34 mm)].

E. Exterior Trim for Windows:

Exterior Trim Type: Nail Fin (Standard).

F. Weatherstripping:

1. Double-hung: Foam filled bulb at top and bottom, Flexible TPE bulb at check rail.
   a. Jamb Liner Color: White (Standard).
2. Fixed: Rigid vinyl leaf at top and sides of sash. TPE bulb at frame.

G. Hardware:

1. Double-Hung - Traditional Sash:
   a. Balance: Dual helical steel spring.
   b. Lock: Low Profile Lock.

Finish: ard)] t Sand] [Chestnut Bronze] [Polished Brass] [Antique Brass] [Brushed Chrome] [Oil-Rubbed Bronze] [Gloss Black].

Sash Limiter: Limiter (Standard)] [Window Opening Control Device ASTM F2090 Compliant].

   e. Finger Plows: m Rail] [No Finger Plows] [Plow in Top and None in Bottom Rail] [Plow in Bottom Rail and None in Top Rail].
2. Fixed Windows: None.
3. Radius and Geometric Windows: None.

H. Glazing for Windows:

1. Insulated Glass:
   a. Two panes of glass utilizing a continuous roll formed stainless steel spacer and dual seal sealant.
   b. Overall Nominal Thickness: 5/8 inch (15 mm).
      1) Sashed Picture Units: 5/8 inch (15 mm).
      2) Direct Set Picture and Transoms: 3/4 inch (19 mm).
   c. Glass Type: standard).
   d. Glass Color: by Architect(Standard.
   Glass Options: Argon (Standard).
   f. Spacer Color: Black (Standard)] [Silver] [Gray].

I. Grilles:

1. Type: Simulated Divided Lites (SDL) with Perm. Wood: Traditional Sash Options.
   a. Exterior Muntins:
      1) Material: Extruded aluminum permanently applied to the exterior of the insulating glass unit.
      2) Profiles: Beaded:
         (a) Profile Width: 7/8 inch (22 mm).
      3) Profiles: Putty profiles:
         Profile Width: 7/8 inch (22 mm)] [1-1/8 inch (28.5 mm)] [5/8 inch (15.9 mm)].
      Finish: To be selected.
   b. Grid Finish: standard).
   c. Interior Muntins:
      1) Material: Clear pine permanently bonded to the interior of the insulating glass unit.
      2) Width: Match exterior muntin.
      3) Finish: Match interior finish.

EXECUTION

1.11 EXAMINATION AND PREPARATION

A. Inspect and prepare openings and substrates using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions.

1. Inspect assembly components prior to installation.
2. Verify rough opening conditions are within recommended tolerances.
3. Form a sill pan in accordance with manufacturer's recommendations.

4. Prepare assembly components for installation in accordance with manufacturer's recommendations.

B. Do not proceed with installation until openings and substrates have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.

C. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.

1.12 INSTALLATION

A. Install assemblies in accordance with manufacturer's installation guidelines and recommendations including the following.

B. Installation of Windows With Nailing Fins: Insert windows into rough opening.

1. Shim side jambs straight.
2. Inspect window for square, level and plumb.
3. Fasten window through nailing fins around entire window.
4. Test and adjust for smooth operation of window.
5. Set all nails below wood surface.

C. Installation of Patio Doors With Nailing Fins: Insert patio doors into rough opening.

1. Shim side jambs straight.
2. Inspect patio door for square, level and plumb.
3. Fasten patio door through nailing fins around entire patio door.
4. Test and adjust for smooth operation of patio door.

1.13 FIELD QUALITY CONTROL

A. Manufacturers' Field Services: Perform field inspections as recommended by manufacturer.

1.14 CLEANING AND PROTECTION

A. Clean the exterior surface and glass with mild soap and water.

B. Protect installed windows from damage.

C. Remove and dispose of protective film from glass; touch-up, repair or replace damaged components and assemblies before Substantial Completion.

END OF SECTION

SECTION 9 29 00

GYPSUM BOARD

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Standard Gypsum Board.

B. Interior Ceiling Gypsum Board.

1.2 RELATED SECTIONS

A. Section 06 10 00 - Rough Carpentry.

1.3 REFERENCES

A. ASTM International (ASTM):
1. ASTM C 473 - Standard Test Methods for Physical Testing of Gypsum Panel Products.
2. ASTM C 475 - Standard Specification for Joint Compound and Joint Tape for Finishing.
3. ASTM C 514 - Standard Specifications for Nails for the Application of Gypsum Board.
4. ASTM C 639 - Standard Test Method for Rheological (Flow) Properties of Elastomeric Sealants.
5. ASTM C 681 - Standard Test Method for Volatility of Oil- and Resin-Based, Knife-Grade, Channel Glazing Compounds.
6. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board.
7. ASTM C 919 - Standard Practice for Use of Sealants in Acoustical Applications.
8. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.
9. ASTM C 1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
10. ASTM C 1177 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
11. ASTM C 1178 - Standard Specification for Coated Glass Mat Water Resistant Gypsum Backing Panel.
12. ASTM C 1280 - Standard Specification for Application of Gypsum Sheathing.
13. ASTM C 1325 - Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units.
14. ASTM C 1396 - Standard Specification for Gypsum Board.
15. ASTM C 1629 - Standard Classification for Abuse Resistant Nondecorated Interior Gypsum Panel

Products and Fiber reinforced Cement Panels.

16. ASTM C 1658 - Standard Specification for Glass Mat Gypsum Panels.
17. ASTM D 750 - Standard Test Method for Rubber Deterioration in Carbon-Arc Weathering Apparatus.
18. ASTM D 925 - Standard Test Methods for Rubber Property-Staining of Surfaces (Contact, Migration, and Diffusion).
19. ASTM D 2202 - Standard Test Method for Slump of Sealants.
20. ASTM D 3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
21. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
22. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
23. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
24. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.
25. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
26. ASTM E 136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 176; C.
27. ASTM E 695-03 - Standard Test Method of Measuring Relative Resistance of Wall, Floor, and Roof Construction to Impact Loading.
28. ASTM E 2126-02a - Standard Test Methods for Cyclic (Reversed) Load Test for Shear Resistance of Walls for Buildings.
29. ASTM G 21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

B. Gypsum Association (GA):
   1. GA-214 - Recommended Levels of Gypsum Board Finish.
   2. GA-216 - Application and Finishing of Gypsum Panel Products.
   3. GA-231 - Assessing Water Damage to Gypsum Board.
   4. GA-238 - Guidelines for the Prevention of Mold Growth on Gypsum Board
   5. GA-253 - Application of Gypsum Sheathing.
   6. GA-801 - Handling and Storage of Gypsum Panel Products: A Guide For Distributors, Retailers, and Contractors.

1.4 SUBMITTALS

A. Refer to Section 01 33 00 - Administrative Requirements Submittal Procedures

B. Product Data: Submit manufacturer current technical literature for each component.

C. Quality Assurance Submittals:
   1. Provide products manufactured in North America only.
   2. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
   3. Manufacturer Instructions: Provide manufacturer's written installation instructions

1.5 QUALITY ASSURANCE

A. Installer shall have experience with installation of gypsum board under similar conditions.

B. Fire-Resistance-Rated Assemblies: For fire-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

C. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

1.6 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic and other causes in accordance with GA-238 and manufacturer recommendations. Stack product flat to prevent sagging. In addition, follow guidelines found in GA-801.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 or GA-216 requirements, whichever are more stringent.

B. Do not install interior products until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturers: American Gypsum, Certainteed Corporation, Georgian-Pacific, PABCO Gypsum, USG Corporation.

2.2 STANDARD GYPSUM BOARD

A. Basis of Design: Regular Gypsum Board.
   1. Panel Physical Characteristics:
      a. Core: Regular Gypsum Core.
      b. Surface Paper: 100 percent recycled content paper on front, back and long edges.
      c. Long Edges: Tapered.
      d. Overall Thickness/ Weight: 5/8 inch (15.8 mm) 1.5lbs/ft2.
      e. Panel complies with requirements of ASTM C 1396.

2.3 INTERIOR CEILING GYPSUM BOARD

A. Basis of Design: Regular Gypsum Board.
   1. Panel Physical Characteristics:
      a. Core: Regular Gypsum Core.
      b. Surface Paper: 100 percent recycled content paper on front, back and long edges.
      c. Long Edges: Tapered.
      d. Long Edges: Rounded.
      e. Overall Thickness: 5/8 inch (15.8mm).
      f. Weight: 1.8lbs/ft2.
      g. Panel complies with requirements of ASTM C 1396.
      h. Humidified Deflection: <=5/16 inch (8mm) when tested in accordance with ASTM C 473.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840, GA-216 or GA-214.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end

joints in central area of each ceiling. Stagger abutting end joints of adjacent panel not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.

F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
   1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
   2. Fit gypsum panels around ducts, pipes, and conduits.
   3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4 to 3/8 inch (6 to 9 mm) wide joints to install sealant.

G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4 to 1/2 inch (6 to 12 mm) wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

H. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members, or provide control joints to counteract wood shrinkage.

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Install interior gypsum board in the following locations:
   1. Regular Type: Vertical or horizontal surfaces, unless otherwise indicated.
   2. Ceiling Type: Ceiling surfaces.

3. Moisture and Mold-Resistant Type: As indicated on Drawings.

B. Single-Layer Application:
   1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing, unless otherwise indicated.
   2. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
      a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
   3. On furring members, apply gypsum panels vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members..

3.4 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Control Joints: Install control joints at locations indicated on Drawings and if not shown, according to ASTM C 840 or GA-216 and in specific locations approved by Owner's Representative for visual effect.

C. Interior Trim: Install in the following locations:
   1. Cornerbead: Use at outside corners, unless otherwise indicated.
   2. LC-Bead: Use at exposed panel edges.

D. Exterior Trim: Install in the following locations:
   1. Cornerbead: Use at outside corners.
   2. LC-Bead: Use at exposed panel edges.

E. Aluminum Trim: Install in locations indicated on Drawings.

3.5 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those

with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840, GA-216 or GA-214:
   1. Level 4 finish (all joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over all flat joints): All flat and eggshell paints, light textures, or wall coverings.

3.6 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, and mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION

SECTION 09 30 00

TILE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Tile and Accessories:
   1. Ceramic Mosaic Tile.
   2. Tile Setting Materials.

1.2 REFERENCES

A. American National Standards Institute (ANSI):
   1. ANSI A108/A118/A136.1 - Specifications for the Installation of Ceramic Tile.
   2. ANSI A137.1 - Specifications for Ceramic Tile.

B. Tile Council of North America (TCNA): TCA Handbook for Ceramic Tile Installation.

C. ASTM C 503 - Standard Specification for Marble Dimension Stone.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Selection Samples: For each product specified, two complete sets of color charts representing manufacturer's full range of available colors and patterns.

D. Manufacturer's Certificates: Certify products meet or exceed specified requirements. When applicable, submit a Master Grade Certificate signed by the manufacturer and the installer certifying that products meet or exceed the specified requirements of ANSI A137.1.

E. Maintenance Data: Include recommended cleaning methods, cleaning materials, and maintenance coatings.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section with minimum two years experience.

B. Single Source Responsibility: Obtain each type and color of tile from a single source. Obtain each type and color of mortar, adhesive and grout from the same source.

C. General: Provide tile that complies with ANSI A137.1 where applicable for types, compositions and other characteristics indicated. Provide tile in the locations indicated on the Drawings.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging until ready for installation.

B. Protect setting materials from freezing or overheating in accordance with manufacturer's instructions.

C. Store tile and setting materials on elevated platforms, under cover and in a dry location and protect from contamination, dampness, freezing or overheating.

1.6 PROJECT CONDITIONS

A. Do not install adhesives in an unventilated environment.

B. Maintain ambient and substrate temperature of 50 degrees F (10 degrees C) during tiling and for a minimum of 7 days after completion.

1.7 EXTRA MATERIALS

A. Deliver extra sets of hardware items for Owner's use in maintenance.
   1. Provide for Owner's use a minimum of 2 percent of the primary sizes and colors of tile specified, boxed and clearly labeled.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers include but are not limited to: American Olean Tile Co., Daltile.

B. Substitutions: Not permitted without prior approval.

2.2 TILE

A. Unglazed Ceramic Mosaic Floor Tile
   1. Modular size: 2 by 2 inches with cushioned edges.
   2. Tile color and pattern to be selected by Owner.
   3. Grout color to be selected by Owner.
   4. Thickness: 1/4 inch.

B. Glazed Wall Tile:
   1. Size: To be selected from manufacturer's standard selection.
   2. Tile color and pattern: To be selected from manufacturer's standard selection.
   3. Grout color to be selected by owner.

2.3 TILE SETTING MATERIALS

A. Tile Setting Materials: Comply with ANSI A108/A118/A136.1 as applicable to the installation methods referenced in Part 3 of this Section.

B. Silicone Sealant: Silicone sealant, moisture and mildew resistant type, white; use for shower floors and shower walls.

C. Patching and Leveling Compound: As recommended by tile manufacturer and compatible with both substrate and setting materials.

D. Stone Thresholds: Provide stone thresholds uniform in color and finish and fabricated from the following material:
   1. Material: Marble, ASTM C 503.
   2. Color and Finish: As selected.

PART 3 EXECUTION

3.1 EXAMINATION

A. Acceptability of Surfaces: Inspect surfaces to be tiled to ensure proper bonding can be achieved, and to verify that surfaces are free of curing membranes, oil, grease, wax and dust.

B. Substrate Tolerances: Before tiling, inspect surfaces to be tiled to verify that the following tolerances are not exceeded. If tolerances are exceeded, provide specified leveling coat to achieve specified tolerances.
   1. Walls: 1/8 inch in 8 feet (3 mm in 2.4 m) for dry-set mortar, epoxy and organic adhesives.
   2. Floors: 1/8 inch in 10 feet (3 mm in 3 m) for dry-set mortar and epoxy; 1/16 inch in 3 feet (1.5 mm in 1 m) for organic adhesive.

3.2 PREPARATION

A. Layout: Determine locations of control and expansion joints before starting tile work. Layout tile work to minimize cuts less than one-half tile in size.

3.3 INSTALLATION

A. General: Comply with ANSI A108/A118/A136.1 and manufacturer's recommendations. Comply with applicable TCA Handbook for Tile Installation requirements as listed below.

B. Floors, Interior, Concrete Subfloor:
1. TCA F113, dry-set mortar.

C. Walls, Interior, Wood Studs or Furring:
1. TCA W42, Gypsum board thin-set.

3.4 CLEANING AND PROTECTION

A. Cleaning: Clean tile within time period recommended by manufacturer, using materials recommended by manufacturer.

B. Protection: Prohibit foot and wheeled traffic from floors for a minimum of 3 days. Where traffic is unavoidable, provide large flat boards in walkways and wheelways for a minimum of 7 days after installation. Protect from construction dirt and debris with heavy-duty, non-staining construction paper, masked in place.

END OF SECTION

SECTION 09 30 16

QUARRY TILE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quarry Tile and trim units:
   1. Inglazed slip-resistant Quarry Tile.
   2. Tile Setting Materials.

1.2 REFERENCES

A. American National Standards Institute (ANSI):
   1. ANSI A108/A118/A136.1 - Specifications for the Installation of Ceramic Tile.
   2. ANSI A137.1 - Specifications for Ceramic Tile.

B. Tile Council of North America (TCNA): TCA Handbook for Ceramic Tile Installation.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Selection Samples: For each product specified, two complete sets of color charts representing manufacturer's full range of available colors and patterns.

D. Manufacturer's Certificates: Certify products meet or exceed specified requirements. When applicable, submit a Master Grade Certificate signed by the manufacturer and the installer certifying that products meet or exceed the specified requirements of ANSI A137.1.

E. Maintenance Data: Include recommended cleaning methods, cleaning materials, and maintenance coatings.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section with minimum two years experience.

B. Single Source Responsibility: Obtain each type and color of tile from a single source. Obtain each type and color of mortar, adhesive and grout from the same source.

C. General: Provide tile that complies with ANSI A137.1 where applicable for types, compositions and other characteristics indicated. Provide tile in the locations indicated on the Drawings.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging until ready for installation.

B. Protect setting materials from freezing or overheating in accordance with manufacturer's instructions.

C. Store tile and setting materials on elevated platforms, under cover and in a dry location and protect from contamination, dampness, freezing or overheating.

1.6 PROJECT CONDITIONS

A. Do not install adhesives in an unventilated environment.

B. Maintain ambient and substrate temperature of 50 degrees F (10 degrees C) during tiling and for a minimum of 7 days after completion.

1.7 EXTRA MATERIALS

A. Deliver extra sets of hardware items for Owner's use in maintenance.
   1. Provide for Owner's use a minimum of 2 percent of the primary sizes and colors of tile specified, boxed and clearly labeled.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers include but are not limited to: Metropolitan Ceramics, by Ironrock Capital, Inc..

B. Substitutions: Not permitted without prior approval.

2.2 QUARRY TILE FLOOR

A. Unglazed slip-resistant Quarry Tile: QUARRY BASICS XA ABRASIVE.
   1. Modular size: 6 by 6 inches with cushioned edges.
   2. Tile color and pattern to be selected by Owner.
   3. Grout color to be selected by Owner.
   4. Thickness: 1/2 inch.

2.3 TILE SETTING MATERIALS

A. Tile Setting Materials: Comply with ANSI A108/A118/A136.1 as applicable to the installation methods referenced in Part 3 of this Section.

B. Silicone Sealant: Silicone sealant, moisture and mildew resistant type.

C. Patching and Leveling Compound: As recommended by tile manufacturer and compatible with both substrate and setting materials.

PART 3 EXECUTION

3.1 EXAMINATION

A. Acceptability of Surfaces: Inspect surfaces to be tiled to ensure proper bonding can be achieved, and to verify that surfaces are free of curing membranes, oil, grease, wax and dust.

B. Substrate Tolerances: Before tiling, inspect surfaces to be tiled to verify that the following tolerances are not exceeded. If tolerances are exceeded, provide specified leveling coat to achieve specified tolerances.
   1. Floors: 1/8 inch in 10 feet (3 mm in 3 m) for thin-set mortar and epoxy; 1/16 inch in 3 feet (1.5 mm in 1 m) for organic adhesive.

3.2 PREPARATION

A. Layout: Determine locations of control and expansion joints before starting tile work. Layout tile work to minimize cuts less than one-half tile in size.

3.3 INSTALLATION

A. General: Comply with ANSI A108/A118/A136.1 and manufacturer's recommendations. Comply with applicable TCA Handbook for Tile Installation requirements as listed below.

B. Floors, Interior, Concrete Subfloor:
   1. TCA F131-17,thin-set, epoxy mortar, epoxy grout, type designated for this type of application.

3.4 CLEANING AND PROTECTION

A. Cleaning: Clean tile within time period recommended by manufacturer, using materials recommended by manufacturer.

B. Protection: Prohibit foot and wheeled traffic from floors for a minimum of 3 days. Where traffic is unavoidable, provide large flat boards in walkways and wheelways for a minimum of 7 days after installation. Protect from construction dirt and debris with heavy-duty, non-staining construction paper, masked in place.

END OF SECTION

SECTION 09 51 00

SUSPENDED ACOUSTICAL CEILINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Suspended acoustical ceilings including the following:
   1. Acoustical panels (suspended).
   2. Exposed tee metal grid ceiling system and perimeter trim.

1.2 REFERENCES

A. ASTM International (ASTM):
   1. ASTM E84 - Surface Burning Characteristics.
   2. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.
   3. ASTM C 635 - Standard Specification for the manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

B. Underwriters Laboratory (UL):
   1. UL - Fire Resistance Directory.
   2. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials.

1.3 DESIGN / PERFORMANCE REQUIREMENTS

A. Suspension System: Rigidly secure acoustic ceiling system including integral mechanical and electrical components with maximum deflection of 1:360.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Dimensions, load carrying capacity, and performance standards compliance.
   3. Storage and handling requirements and recommendations.
   4. Installation and maintenance instructions.

C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

D. Verification Samples: For each finish product specified, two samples, actual size of acoustical units, and two samples minimum size 12 inches (300 mm) long of main tees and cross tees square, representing actual product, color, finish and patterns.

E. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

F. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance of all components.

1.5 QUALITY ASSURANCE

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

B. Installer Qualifications: Company specializing in performing Work of this section with minimum three years documented experience.

C. Pre-installation Conference: To be scheduled by General Contractor.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver in unopened bundles and store in a dry place with adequate air circulation. Do not deliver material to building until wet conditions such as concrete, plaster, paint, and adhesives have been completed and cured.

B. Store products in manufacturer's unopened packaging until ready for installation.

C. Protect system components from excessive moisture in shipment, storage, and handling.

1.7 SEQUENCING

A. Sequence Work to ensure acoustic ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities and wet work have terminated, and overhead work is completed, tested, and approved.

B. Install acoustic units after interior wet work is dry.

C. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 WARRANTY

A. Warranty: Provide manufacturer's standard warranty against manufacturing defects in material or workmanship when installed in accordance with the current CISCA Handbook and ASTM C367.
   1. Warranty Period: 30 years when installed with Armstong World Industries System.

1.10 EXTRA MATERIALS

A. Deliver extra acoustical units for Owner's use in maintenance. Label and store where directed by the Owner including codes used on the Drawings. Do not deliver to the Project site until the Owner is prepared to receive and store maintenance materials.
   1. Panels: Furnish 5 percent of total acoustic unit area of extra panels to Owner.
   2. Suspension System Components: Furnish 5 percent of each exposed component of the quantity installed.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer shall include but not be limited to: Armstrong World Industries, Inc.

B. Substitutions: Not permitted without prior approval.

2.2 ACOUSTICAL PANELS

A. Acoustic Ceilings Type I: Provide Mineral based, factory painted ceiling panels, similar to Armstrong Cirrus.
   1. ASTM E1264 Classification: Type III, Nodular.
   2. Color: White.
   3. Texture: Non-directional.
   4. Edges: Angled Tegular for 15/16 inch grid.
   5. Size: 24 by 48 inch (609 by 609 mm).
   6. Thickness: 7/8 inch (22 mm).
   7. Lbs/Sq.ft: 0.69-0.84
   8. Noise Reduction Coefficient (NRC): 0.75.
   9. Ceiling Attenuation Class (CAC): 35.
   10. Articulation Class (AC): 170.
   11. Fire Class: Class A.
   12. Fire Performance UL 723 (ASTM E84) Flame Spread / Smoke Developed: 0/0.
   13. Light Reflectance (LR): 0.85.
   14. Sag Resistance: Dimensionally stable up to 100%

relative humidity/32 degreesF to 104 degreesF.
15. Recycled Content: Up to 75 percent.
16. R Value (BTU Units): 1.9.
17. RSI Value (Watts Units): 0.33.

B. Acoustic Ceilings Type II: Provide Mineral based, factory painted ceiling panels, similar to Armstrong Cirrus.
1. ASTM E1264 Classification: Type III, Nodular.
2. Color: White.
3. Texture: Non-directional.
4. Edges: Angled Tegular for 15/16 inch grid.
5. Size: 24 by 24 inch (609 by 609 mm).
6. Thickness: 7/8 inch (22 mm).
7. Lbs/Sq.ft: 0.69-0.84
8. Noise Reduction Coefficient (NRC): 0.75.
9. Ceiling Attenuation Class (CAC): 35.
10. Articulation Class (AC): 170.
11. Fire Class: Class A.
12. Fire Performance UL 723 (ASTM E84) Flame Spread / Smoke Developed: 0/0.
13. Light Reflectance (LR): 0.85.
14. Sag Resistance: Dimensionally stable up to 100% relative humidity/32 degreesF to 104 degreesF.
15. Recycled Content: Up to 75 percent.
16. R Value (BTU Units): 1.9.
17. RSI Value (Watts Units): 0.33.

C. Acoustic Ceilings Type III: Provide Mineral based, factory painted ceiling panels, similar to Armstrong "Kitchen Zone" Ceiling Panels.
1. ASTM E1264 Classification: Type III, Nodular.
2. Color: white
3. Texture: smooth
4. Edges: square for Lay-in 15/16" grid.
5. Size: 24 by 24 inches.
6. Thickness: 5/8 inch
7. Fire Class: Class A
8. Light Reflectance (LR): 0.89

2.3 SUSPENSION SYSTEM COMPONENTS - GENERAL

A. Provide suspension system components from the same manufacturer as the acoustical ceiling components unless approved by the ceiling manufacturer in writing to comply with manufacturer's installation and warranty requirements.

B. Performance Standards: Suspension system manufacturer's standard direct-hung metal suspension system and attachment devices complying with project requirements and applicable building codes and regulations applicable at the location of the project.
1. Suspension components shall comply with ASTM C635.

2.4 SUSPENSION SYSTEM COMPONENTS

A. 15/16 inch (23.8 mm) Exposed Grid:
   1. Armstrong World Industries, Inc.' Prelude Exposed Grid System.
   2. Chicago metallic Corporation; 200 Snap Grid.
   3. USG Interiors, Inc.; Donn Suspension Systems.
   4. Intermediate duty.
   5. Main Tees and cross tees:
      a. Roll formed from cold-rooled steel sheet, prepainted, electrolytically zinc coated with prefinished 15/16 inch wide metal caps on flanges.
   6. Color: White.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Verify layout of hangers will not interfere with other work.

C. Verify acoustical unit layout conditions, which will adversely affect installation.

D. If layout or substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

E. Verify wet work such as plastering and concrete is complete and dry. Verify building is enclosed and under standard occupancy conditions prior to start of installation.

F. Commencement of installation constitutes Installer's acceptance of substrate conditions.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and in proper relationship with adjacent construction, including the following:
   1. Comply with ASTM C636 and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook".
   2. Install hangers plumb and free from contact with

insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.

3. Additional Hanger Wires: Wrapped tightly 3 full turns to structure and component at locations where imposed loads could cause deflection exceeding 1/360 span or tolerances specified below.

B. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders.

C. Suspend ceiling hangers from building's structural members, plumb and free from contact with insulation or other objects within ceiling plenum. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

D. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

E. Acoustic Units:
1. Fit acoustic units in place, free from damaged edges or other defects detrimental to appearance and function.
2. Install units after above ceiling work is complete.
3. Install acoustic units level, in uniform plane, and free from twist, warp, and dents. Press panels from above to set into grids. Do not pull from face.
4. Cutting Acoustic Units:
   a. Cut to fit irregular grid and perimeter edge trim.
   b. Cut square reveal edges to field cut units.
   c. Cut bevel edges to field cut units.
5. Where bullnose or round corners or obstructions occur, install preformed closures to match perimeter molding.

3.4 ERECTION TOLERANCES

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet (3 mm in 3 m).

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

3.5 PROTECTION AND CLEANING

A. Protect installed products until completion of project.

B. Clean adjacent surfaces and remove unused materials and debris from site.

C. Clean exposed surfaces in accordance with manufacturer's written instructions.

D. Remove and reinstall improperly installed material.

E. Remove damaged components, replace with undamaged components.

F. Touch-up, repair or replace damaged units until satisfactory results are obtained.

G. Clean with non-solvent based non-abrasive commercial cleaning solution.

END OF SECTION

SECTION 09 65 00

RESILIENT AND LVT FLOORING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Luxury vinyl tile and plank flooring.

1.2 REFERENCES

A. ASTM International (ASTM):
   1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
   2. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
   3. ASTM E662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Not required

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Trained journeymen with a minimum of three years successful experience in the installation of resilient flooring.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Owner's Representative.
   2. Do not proceed with remaining work until workmanship is approved by Owner's Representative.
   3. Refinish mock-up area as required to produce acceptable work.

1.5 PRE-INSTALLATION MEETINGS

A. To be arranged.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handle materials to avoid damage.

1.7 PROJECT CONDITIONS

A. Temperature Requirements: Maintain materials and areas of work at temperatures between 70 degrees F and 90 degrees F for not less than 48 hours before, during and 48 hours after installation. Maintain a minimum temperature of 55 degrees F thereafter.

1.8 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.9 WARRANTY

A. Plank Flooring:
   1. Manufacturer's standard commercial warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Armstrong World Industries, Mannington Mills.

B. Substitutions: Submit for approval prior to bidding.

2.2 LVT PLANK AND TILE FLOORING

A. LVT Performance:
   1. Meet ASTM E 84.
   2. Meet ASTM E-648 Fire Resistance: Class 1.
   3. Meet ASTM E-662 Smoke: <450 smoke developed index.

B. Product:
   1. Thickness: 3.0 mm (1/8 inch).
   2. Wear Layer: 20 mil (0.5 mm). Urethane finish.
   3. 6x36 inches (152 x 914 mm).

2.3 ACCESSORIES

A. Adhesive: Product to be approved by flooring manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Owner's Representative of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent materials.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 09 68 00

CARPET

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Carpet.

1.2 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Verification Samples: For each finish product specified, two samples, representing actual product and finish.

D. Seaming Layout: Submit proposed seaming layout.

E. Extra Stock: Submit extra stock equal to 2% of total installed.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Performance: Fire performance meeting requirements of building code and local authorities.

D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Owner's Representative.
   2. Do not proceed with remaining work until workmanship is approved by Owner's Representative.
   3. Refinish mock-up area as required to produce acceptable work.

1.4 PRE-INSTALLATION MEETINGS

A. To be determined.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.7 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers who provide acceptable products include but are not limited to the following: Patcraft, Philadelphia Carpets, Shaw Industries, Mohawk.

B. Substitutions: Submit proposed substitutions prior to bidding.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 MATERIALS

A. Carpet Material:
   1. Material: 100 percent solution dyed Nylon.
   2. Material: As selected by Owner's Representative.
   3. Installation Method: Direct glue down.
   4. Auxiliary Materials:
      a. Edge guards.
      b. Adhesives, cements and fasteners.
      c. Leveling compound.
   5. Service: Heavy traffic.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Owner's Representative of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and in proper relationship with adjacent construction. Test for proper operation and adjust until satisfactory results are obtained.

B. Comply with recommendations of Carpet and Rug Institute 'Specifier's Handbook'.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 09 90 00

INTERIOR AND EXTERIOR PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Interior paint including surface preparation.

B. Exterior paint including surface preparation.

1.2 SUBMITTALS

A. Submit under provisions of Section 01 33 00 - Administrative Requirements.

B. Product Data: For each paint system indicated, including.
   1. Product characteristics.
   2. Surface preparation instructions and recommendations.
   3. Primer requirements and finish specification.
   4. Storage and handling requirements and recommendations.
   5. Application methods.
   6. Cautions for storage, handling and installation.

C. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's products, colors and sheens available.

D. Verification Samples: For each finish product specified, submit samples that represent actual product, color, and sheen.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Paint exposed surfaces. If a color of finish, or a surface is not specifically mentionedthe Owner's representative will select from standard products, colors and sheens available.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.

D. Mock-Up: Provide a mock-up for evaluation of surface

preparation techniques and application workmanship.
1. Finish surfaces for verification of products, colors and sheens.
2. Finish area designated by Owner's representative.
3. Provide samples that designate primer and finish coats.
4. Do not proceed with remaining work until the Owner's representative approves the mock-up.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information.
1. Product name, and type (description).
2. Application and use instructions.
3. Surface preparation.
4. VOC content.
5. Environmental handling.
6. Batch date.
7. Color number.

B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.

D. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

1.5 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.6 EXTRA MATERIALS

A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.

B. Furnish Owner with an additional one percent of each material and color, but not less than 1 gal (3.8 l) or 1 case, as appropriate.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers: Benjamin Moore, Sherwin-Williams, Farrell-Calhoun.

B. Substitutions: Submit for approval prior to bidding.

2.2 APPLICATIONS/SCOPE

A. Interior Paints and Coatings
1. Metal: Exposed structural Steel, factory primed hollow metal doors and frames.
2. Wood: doors which are not factory finished, trim and similar items.
3. Drywall: Drywall board, Gypsum board.

B. Exterior Paints and Coatings:
1. Wood: Trim and miscellaneous hardboard.

2.3 PAINT MATERIALS - GENERAL

A. Paints and Coatings:
1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow manufactures product instructions for optimal color conformance.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

D. Color: To be selected from manufacturer's standard selections.

2.4 INTERIOR PAINT SYSTEMS

A. METAL - (Factory Primed).
1. Latex Systems:
a. Semi-Gloss Finish:
1) 1st Coat: Touch-up factory primer as

required with acceptable primer product.
2) 2nd Coat: Latex Semigloss.
3) Topcoat: Latex Semigloss to cover.

B. WOOD - (Trim):
1. Latex Systems:
a. Semi - Gloss Finish:
1) 1st Coat: Acrylic Latex Wood Primer.
2) 2nd Coat: Acrylic Latex Semigloss to match topcoat.
3) 3rd Coat: Acrylic Latex Semiglass to cover.

C. DRYWALL - (Walls, Ceilings, Gypsum Board).
1. Latex Systems:
a. Eg-Shel/Satin Finish:
1) 1st Coat: Latex Primer.
2) 2nd Coat: Latex to match topcoat.
3) Topcoat: Acrylic eggshell to cover.

2.5 EXTERIOR PAINT SYSTEMS

A. CONCRETE (Cement-fiber soffits and ceiling panels).
1. Latex Systems:
a. Semi-Gloss Finish:
1) 1st Coat: Concrete & Masonry Primer Sealer.
2) 2nd Coat: Acrylic Semi-Gloss, match topcoat.
3) Topcoat: Acrylic Semi-Gloss to cover.

B. METAL - (Factory Primed).
1. Latex Systems:
a. Semi-Gloss Finish:
1) 1st Coat: Touch-up factory primer as required with acceptable primer product.
2) 2nd Coat: Exterior Latex Gloss.
3) Topcoat: Latex Gloss to cover.

C. WOOD - TRIM, FRIEZE, ETC,
1. Latex system:
a. Satin Acrylic Latex System
(1) 1st coat: Acrylic Latex Undercoat
(2) 2nd coat: Acrylic Latex Satin
(3) 3rd coat: Acrylic Latex Sating to cover.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared; notify Owner's representative of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Owner's representative of unsatisfactory preparation before proceeding.

B. Proceed with work only after conditions have been corrected and approved by all parties, otherwise

application of coatings will be considered as an acceptance of surface conditions.

3.2 SURFACE PREPARATION

A. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
   1. Prior to attempting to remove mildew, it is recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions are advised.
   2. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow the surface to dry before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
   3. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
   4. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F (10 degrees C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50 degrees F (10 degrees F) or higher to use low temperature products.

B. Cement Composition Soffits/Ceiling Panels: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments.

C. Wood: Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is

applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.

3.3 INSTALLATION

A. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.

B. Do not apply to wet or damp surfaces. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days. Test new concrete for moisture content. Wait until wood is fully dry after rain or morning fog or dew.

C. Apply coatings using methods recommended by manufacturer.

D. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.

E. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness.

F. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.

G. Inspection: The coated surface must be inspected and approved by the Owner's representative just prior to the application of each coat.

3.4 PROTECTION

A. Protect finished coatings from damage until completion of project.

B. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END OF SECTION

SECTION 10 14 23
SIGNAGE

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Interior door signs

1.02 SUBMITTAL

A. Manufacturer must submit 3 references showing products for projects completed within the last 5 years.
B. Submit manufacturer's technical data and recommended installation for each type of sign required.
C. Submit shop drawings listing sign size, letter form and letter heights.
D. Submit one full size sample of sign of type, style and color specified, including method of attachment. If approved, the sample may become part of the job.

1.03 SIGN TYPE DESCRIPTION

A. Signage shall consist of room number and room funcion to meet the requirements of the Americans with Disabilities Act.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Provide products similar to those manufactured by Mohawk Sign Sytsems, Inc. Submit alternate manufacturers systems for approval.

2.02 GRAPHIC PROCESS

A. All signs shall be manufactured using Graphic Process Series 200A - Sand Carved® using format D.
1. Tactile characters shall be raised the required 1/32 inches from the sign face. Glue-on letters or etched backgrounds are not acceptable.
2. All text shall be accompanied by Grade 2 braille. Braille shall be separated ½" from the corresponding raised characters or symbols. Grade 2 braille to be provided by sign manufacturer.
3. All letters, numbers and/or symbols shall contrast

with their background, either light characters on a dark background or dark characters on a light background. Characters and background shall have a non-glare finish.

B. Plaque material shall be Special Purpose SP125 decorative thermosetting high pressure laminate. Material to be 1/8" thick laminate with a melamine resin surface and a phenolic resign core which provides resistance to abrasion, stains, alcohol, solvents, boiling water and heat. The material shall be NEMA rated and have flammability and smoke values that meet the standards for flammability of interior materials.

C. Background color as selected from manufacturer's standard color samples.

D. Letterform shall be Gill Sans upper case letters and numbers.

E. Size of letters and numbers shall be as follows:
1, Room numbers shall be 1"
2. Letter for room ID signs shall 5/8"
3. Symbol size shall be 4"
4. Standard Grade 2 braille shall be ½" below copy.
5. Corners: ½" radius.

F. Copy position: CC (centered/centered)

2.03 SIGN DESIGN

A. Room ID signs with room number and function, size 6" x 6", similar to layout shown on drawings sheet A600.

B. Restroom signs design, 6"X 8" or 8" x 8" with a 4" accessibility and gender symbol with the verbal description placed directly below with Grade 2 braille symbol - similar to layout shown on drawings sheet A600.

PART 3 - EXECUTION/INSTALLATION

3.01 INSTALLATION

A. Signs shall be mounted 60 inches from the floor to the center of the sign on the latch side. The distance from the door frame and sign shall be 2 inches. Install signs utilizing materials and procedures in accordance with manufacturer's recommendations.

3.02 CLEANING AND PROTECTION

A. After installation, clean soiled signs surface according to manufacturer's instructions. Protect signs from damage until final project completion.

END OF SECTION

SECTION 10 21 00

TOILET COMPARTMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Solid plastic partitions.

1.2 REFERENCES

A. ASTM International (ASTM):
   1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. National Fire Protection Association: NFPA 286 - Standard Methods of Fire Test for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Literature indicating typical panel, pilaster, door, hardware and fastening.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Installation methods.

C. Shop Drawings:
   1. Dimensioned plans indicating layout of toilet compartments.
   2. Dimensioned elevations indicating heights of doors, pilasters, separation partitions, and other components; indicate locations and sizes of openings in compartment separation partitions for toilet and bath accessories to be installed in partitions; indicate floor and ceiling clearances.
   3. Details indicating anchoring components (bolt layouts) and methods for project conditions; indicate components required for installation, but not supplied by toilet compartment manufacturer.

D. Selection Samples: For each finish product specified, one complete set of color selection guides representing manufacturer's full range of available colors, textures and patterns.

E. Verification Samples: For each finish product specified, two samples representing actual product, color, texture and pattern.

F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.

B. Store products indoors in manufacturer's or fabricator's original containers and packaging, with labels clearly identifying product name and manufacturer. Protect from damage.

C. Lay cartons flat, with adequate support to ensure flatness and to prevent damage to pre-finished surfaces.

D. Do not store where ambient temperature exceeds 120 degrees F (49 degrees C).

1.5 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

B. Do not deliver materials or begin installation until building is enclosed, with complete protection from outside weather, and building temperature maintained at a minimum of 60 degrees F (15.6 degrees C).

1.6 WARRANTY

A. Manufacturers Standard Warranty: For Solid Plastic HDPE Material: Against breakage, corrosion, and delamination for 15 years.

1.7 COORDINATION

A. Coordinate Work with placement of support framing and anchors in walls and ceilings.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: ASI Accurate Partitions; 160 Tower Drive, Burr Ridge, IL 60527; Tel: 708-442-6800;

Email: info@asi-accuratepartitions.com; Web: http://www.asi-accuratepartitions.com.

1. Other Acceptable Manufacturer: ASI Global Partitions; Eastanollee, GA; Tel: 706-827-2700; Web: www.asi-globalpartitions.com.
2. No other manufacturer will be accepted without ASTM performance compliance.

B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 COMPARTMENTS AND SCREENS

A. Toilet Compartments: Floor anchored/overhead braced solid plastic.
1. Compartment Depth and Width: As scheduled and indicated on Drawings.
2. Door Width: 24 inches (610 mm), minimum; at ADA accessible compartments 36 inches (915 mm) minimum.
3. Height Above Floor: 12 inches (305 mm).
4. Door/Panel Height: 58 inches (1473 mm).
5. Pilaster Height: 82 inches (2083 mm).

2.3 SOLID PLASTIC TOILET COMPARTMENTS

A. Doors, Panels, Screens, and Pilasters: Single sheet solid, homogenous HDPE plastic material formed from waterproof, non-absorbent, high-density polyethylene resins; mark-resistant self-lubricating surface; edges finished smooth.
1. Material: Solid, homogenous HDPE; 1 inch (25 mm) thick.
2. Rating: Class "B" Fire Rated per ASTM E 84.
3. Rating: Meets the standard acceptance criteria per Annex C of NFPA 286.
4. Edges: 1/4 inch (6 mm) radius machined edges.
5. Heat Sink: Aluminum heat sink, to dissipate heat from incendiary devices used by vandals, attached to bottom of doors and panels.

B. Finish: Pebble-textured homogenous color throughout material.
1. Color: As selected from manufacturer's standard colors.

C. Door Hardware: 8 inches (203 mm) Aluminum Wrap-around hinge.
1. Hinges: Hinges shall be 8 inches (203 mm) and fabricated from heavy-duty extruded aluminum (6463-T5 alloy) with a brushed anodized finish with wrap-around flanges, surface mounted and through bolted to doors and pilasters. Hinges operate and are field set with adjustable nylon cams. Cams can be set in 30 degree increments.
2. Latch: Anodized extruded aluminum, with housing,

slide bolt and button.
3. Strike and Keeper: 6 inch (152 mm) wrap-around flanges fabricated from heavy-duty extruded aluminum (6463-T5 alloy) with a brushed anodized finish.
4. Coat Hook and Bumper: Non-ferrous, chrome-plated, with black rubber tip for doorstop.
5. Fastening Hardware: Manufacturer's standard, Type 304 stainless steel, No. 4 satin finish, theft-resistant barrel nuts and machine screws.
6. Door Pulls: Non-ferrous, chrome-plated. Standard on ADA compartments. Two per ADA door.

D. Mounting Brackets: Provide optional stainless steel continuous bracket with theft resistant barrel nuts and shoulder screws.

E. Pilaster Shoes: Type 304 Stainless Steel, No. 4 satin finish. Easy Stall shoe shall be of a one piece design and integral to the mounting system and formed from 304 stainless steel 3 inch (76 mm) high with a No. 4 satin finish. Pilaster shoes are anchored to the pilaster with No. 10 stainless steel, vandal-resistant screws.

F. Headrail: Manufacture's standard anodized aluminum rail with anti-grip profile.

G. Pilaster Anchors, Floor Anchored/Overhead Braced:
1. Easy Stall shoe system. 1/4 by 2 inch (6 by 51 mm) steel screws attach Easy Stall shoe to floor.
2. Pilaster to be inserted into shoe and secured after height adjusted. Leveling adjustment to be concealed by pilaster shoe.
3. Height/leveling adjustment to be made via machine thread bolts inserted into factory installed threaded insert in bottom of pilaster.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Inspect and prepare substrates using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions. Clean surfaces thoroughly prior to installation.

B. Do not proceed with installation until substrates have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.

C. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
1. Verify dimensions of areas to receive compartments.

2. Verify locations of built-in framing, anchorage, bracing, and plumbing fixtures.

3.2 INSTALLATION

A. Install in accordance with approved shop drawings and manufacturer's instructions.

B. Fasten components to adjacent materials and to other components using purpose-designed fastening devices.

C. Adjust pilaster anchors for substrate variations; conceal anchors with pilaster shoes.

D. Equip each compartment door with hinges and door latch.

E. Install door strike keeper on pilasters in alignment with door latch.

F. Equip each compartment door with one coat hook and bumper.

G. Installation Tolerances:
1. Maximum variations from plumb or level: 1/8 inch (3 mm).
2. Clearance between wall surface and panels or pilasters: 1-1/2 inch (38 mm) maximum.

3.3 ADJUSTING

A. Adjust and align hardware to uniform clearance at vertical edge of doors.

B. Adjust adjacent components for consistency of line or plane.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

C. Remove factory protective coverings and clean finish surfaces in accordance with manufacturer's instructions before substantial completion.

END OF SECTION

SECTION 11 40 00

KITCHEN EQUIPMENT

PART 1.00 - GENERAL

1.1 CONDITIONS

A. Requirements of the conditions of the Contract apply to all work under this Section.

1.2 SCOPE

A. Contractor shall provide and install all equipment listed in Table No. 1 below. The equipment listed in Table No.2 below is equipment currently owned by the senior center and is located at the existing senior center. The contractor shall be responsible for disconnecting the equipment from service at the current location, contractor shall move the equipment to the new senior center location, contractor shall install and connect the equipment to all utilities for operation. Kitchen equipment drawings are provided in the set of plan.

PART 2.00 - PRODUCTS

2.1 KITCHEN EQUIPMENT PROVIDED AND INSTALLED BY CONTRACTOR

Table No. 1 below provided a list of equipment that shall be provided and installed by the contractor. Contractor shall refer to kitchen equipment drawings provided by kitchen equipment consultant. Contractor shall be responsible for providing the listed equipment, installing the existing equipment, connecting the kitchen equipment to all plumbing system, and electrical systems for proper operation. All contractors including the general contractor, plumbing subcontractor, electrical subcontractor, mechanical subcontractor and all other subcontractors shall verify all requirements with kitchen equipment supplier prior to installation and ensure all required connections are provided.

Table No.1		
Item	Quantity	Description
K-01	3 ea	Bussing Utility Transport Cart - mycart Series Utility Cart, (3) Shelves, open base, 38-3/8"W x 23-7/16"D x 35-1/2"H, heavy duty plastic shelf, with (4) swivel/resilient tread casters, 3-shelf cart has a 400 lb. capacity per unit, black, NSF Dimensions 35.59h) x 23.44(w) x 34.38(d)
K-02	1	Dry Storage Shelving
	4 ea	Shelf, wire, 24" x 48", green epoxy finish with chromate substrate, NSF
	20 ea	Shelf, wire, 24" x 60", green epoxy finish with chromate substrate, NSF
	24 ea	Post 74", stationary, grooved at 1" intervals, includes leveling bolts & cap, green epoxy finish with chromate substrate, NSF
	1	1 year warranty against manufacturing defects
	1	7 year warranty against rust & corrosion
K-03	1 ea	Dunnage Rack - S-Series Dunnage Rack, slotted top, 3000 lb. load capacity, 21"Dx48"Wx12"H, polypropylene, one-piece, seamless double wall construction, includes (1) Camlink, 4" square legs, speckled gray, NSF
K-04	3 ea	Bun/Sheet Pan Rack - All-welded, standard heavy-duty series, 20.5"Wx26"Dx70.25"H, aluminum construction, end load, 3" angle spacing, (20) 18"x26" or (40) 13"x18" pans (2 per shelf), 5" swivel plate casters model #CPS45U, Made in USA, NSF
	3 ea	Lifetime warranty against rust & corrosion
K-05	1 ea	Walk-in Cooler/Freezer
	1 ea	Run refrigeration, charge, run drain lines
K-06	1	Walk-in Shelving
	12 ea	Shelf, wire, 24"x36", green epoxy finish with chromate substrate, NSF
	4 ea	Shelf, wire, 24"x42", green epoxy finish with chromate substrate, NSF

	8 ea	Shelf, wire, 24"x48", green epoxy finish with chromate substrate, NSF
	4 ea	Shelf, wire, 24"x54", green epoxy finish with chromate substrate, NSF
	8 ea	Shelf, wire, 24"x60", green epoxy finish with chromate substrate, NSF
	36 ea	Post 74", stationary, grooved at 1" intervals, includes leveling bolt & cap, green epoxy finish with chromate substrate, NSF
	1	1 year warranty against manufacturing defects
	1	7 year warranty against rust & corrosion
K-07	1 ea	Dunnage Rack - S-Series Dunnage Rack, slotted top, 1500 lb. load capcity, 21"Dx36"Wx12"H, polypropylene, one-piece, seamless double wall construction, includes (1) Camlink, 4" square legs, speckled gray, NSF
K-13	1 ea	Shelving, Wall Mounted - Shelf, wall-mounted, 48"Wx12"Dx9-1/2"H overall size, 1-1/2" rear up-turn, Stallion Safety Edge front, 18/300 stainless steel, NSF, KD
K-15	1 ea	Work Table, 84", Stainless Steel Top - Work table, 84"Wx30"D, 14/300 stainless steel top with 5" backsplash, with Stallion Safety Edge front, 90° turndown on sides, stainless steel legs, side & rear adjustable bracing, adjustable bullet feet, NSF, CAS-Sanitation, KD
	7 ft	Undershelf, 16 gauge 300 stainless steel (per foot) (3 foot MINIMUM) (modification)
	1 each	(2) Additional stainless steel legs (modification)
K-16	1 ea	Overshelf - Shelf, wall mount with pot rack, 84"Wx12"Dx9-1/2"H overall size, 1-1/2" rear up-turn, Stallion Safety Edge front, includes (7) stainless steel hooks, 18/300 stainless steel, KD, NSF
	1 ea	Pot Hook, double prong, stainless steel

K-17	1 ea	Food Processor, Benchtop/Countertop - Commercial food processor, 3 liter clear polycarbonate bowl with handle, vegetable prep attachment with external ejection, kidney-shaped opening, includes: (1) "S" blade (27055), (1) 2mm grating disc (27577), (1) 4mm slicing disc (27566), continuous feed, bowl attachment designed for vertical cutting & mixing, on/off & pulse switch, single speed, 1725 RPM, 120v/60/1-ph, 7.0 amps, 1 HP, NEMA 5-15P, cETLus, ETL-Sanitation, dimensions 19.25(h)x8.75(w)x15.75(d)
	1 ea	1 year parts & labor warranty
	1 ea	3 year motor warranty
K-18	3 ea	Ingredient Bin - Ingredient Bin, mobile, 21 gallon capacity, molded polyethylene with sliding cover, S-hook on front (scoop NOT included), (4) 3" heavy duty casters (2 front swivel, 2 fixed), with bin securely attached to base plate, white with clear cover, NSF
K-20	1 ea	Disposer - SS-100 Complete Disposer Package, sink mount system, 6-5/8" diameter inlet, with #7 collar adaptor for sink installation, 1 HP motor, stainless steel construction, includes syphon breaker, solenoid valve, flow control valve, removable splash baffle, stainless steel sink stopper, manual reverse switch
	1 ea	(1) year parts & labor warranty from date of installation (standard)
	1 ea	208v/60/1-ph, 5.1 amps
	1 ea	Syphon breaker standard, ½" (11477)
K-21	1 ea	Work Table with Prep Sink - Work table, 72x"Wx30"D, 14/300 stainless steel top with 5" backsplash, with Stallion Safety Edge front, 90° turndown on sides, stainless steel legs, side & rear adjustable bracing, adjustable bullet feet, NSF, CSA-Sanitation, KD
	1 pr	Vac breaker holes in backsplash, per pair (modification)
	1 ea	Disposal cut-out with collar (collar supplied by KEC) (modification)
	1 ea	Customer supplied accessories to be factory installed

	1 ea	Stainless steel disposal switch plate (7"x11") (modification)
	1 ea	Weld-in undermount sink, 1 compartment, 16"Wx20" front-to-back x 14" deep, 3-1/2" drain opening, 14/300 stainless steel fabricated bowl, includes cutout, bowl, faucet holes & welding/polishing (Not available for FBLG & UFBLG)
	1 ea	On the left (modification)
K-22	1 ea	Wall/Splash Mount Faucet - Workboard faucet, wall mount, 4" centers, 5-3/4" swivel gooseneck nozzle (includes lockwasher to convert to rigid), 2.2 GPM aerator, quarter-turn Cerama cartridges with check valves, lever handles with color coded indexes, ½" NPT male inlets, ADA compliant
	1 kt	Installation kit, for workboard wall mount faucets, (2) short EL's
K-23	1 ea	Shelving, Wall Mounted - Shelf, wall-mounted, 72"Wx12"Dx9-1/2"H overall size, 1-1/2" rear turn up, Stallion Safety Edge front, 18/300 stainless steel, NSF, KD (available in Effingham and Nevada)
K-24	3 ea	Hand Sink - Pro-Bowl Hand Sink, wall mount, 14"Wx10" front-to-back x 5" deep bowl, splash mount faucet holes with 4" centers, 1-7/8" drain opening with basket drain, includes mounting bracket, all stainless steel construction, NSF, CSA-Sanitation (splash mount faucet included) (available in Effingham and Nevada)
	3 ea	Standard flyer accessories only, NO modifications to flyer items allowed or their accessories
K-25	1 ea	Exhaust Hood Package - Exhaust only wall canopy hood w/24" split SSP
	1 ea	Fire suppression system
	1 ea	Gas valve
	1 ea	Fire field hook-up
	1 ea	Upblast exhaust fan
	1 ea	Roof curb
	1 ea	Tempered supply fan with HVAC option
	1 ea	Roof curb

	1 ea	Constant volume fan control Center
K-28	1 ea	Floor Trough - Floor trough, 30"Wx18"Dx4"H, 14 gauge 304 stainless steel, includes stainless steel subway grating constructed from 3/16"x1" bars, removable stainless steel strainer basket, 4" O.D. waste pipe 3"L, pitched towards waste, NSF
K-31	1 ea	Work Table, Stainless Steel Top - Filler table, 18"Wx36"Dx36-1/4"H overall size, 18/400 stainless steel top with 1-1/2" backsplash, Stallion Safety Edge front, 90° turndown on sides, stainless steel legs & adjustable undershelf, plastic bullet feet, NSF, KD (available in Effingham & Nevada)
K-33	1 ea	Pass-Thru Heated Cabinet - Designer line heated cabinet, extra wide pass-thru, one-section, 22 cu. ft. capacity, (3) shelves, stainless steel front & doors, aluminum ends & interior, standard depth, hinged doors, electronic control with digital display, hi-low alarm, cETLus, NSF
	1 ea	Standard warranty (for the United States & Canada only): 3 year parts & labor
	1 ea	208-230v/60/1-ph, 7.2 amps, 1.5 kW, cord & plug supplied by others
	1 ea	Door hinged on left (control side)
	1 ea	Door hinged on right, standard (rear)

	1 st	Casters, swivel, with brakes (4" diameter rubber tires) set of 4 (5" height)
K-34	1 ea	Work Table, 120" Stainless Steel Top - Work table, 120"Wx36"D, 14/300 stainless steel flat top, with Stallion Safety Edge front & back, 90° turndown on sides, stainless steel legs & adjustable undershelf, adjustable bullet feet, NSF, CSA-Sanitation, KD
	1 ea	Overshelf, double, 120"Wx18"D, 16/300 stainless steel flat top, mounted 18" above table top, 12" between shelves, 1" stainless steel post, KD, NSF
	1 ea	Mount overshelf at center location on table
K-36	1 ea	Ice Maker, Cube-Style - Prodigy Plus Ice Maker, cube style, air-cooled, self-contained condenser, production capacity up to 525 lb/24 hours at 70°/50° (380 lb AHRI certified at 90°/70°), medium cube size Auto-Alert indicating lights, WaterSense adjustable purge control, one-touch cleaning harvest assist, front facing removable air filter, unit specific QR code, stainless steel finish, AglON antimicrobial protection, 115v/60/1-ph, 15.2 amps, cULus, NSF, CE, engineered and assembled in USA
	1 ea	NOTE: sale of this product must comply with Scotman's MSRP Policy; contact your Scotsman representative for details
	1 ea	3 year parts & labor warranty

	1 ea	5 year parts & labor warranties on evaporator
	1 ea	5 year parts on compressor & condenser
	1 ea	Ice bin, top-hinged front-opening door, 536 lb application capacity, for top-mounted ice maker, 30" width, metallic finish exterior, toolless removable baffle, polyurethane insulation, polyethylene liner, includes 6" legs, NSF, engineers and assemble in USA
	1 ea	3 year parts & labor warranties
K-37	1 ea	Water Filtration System, for Ice Machines - (5616004) 3M Water Filtration Products Water Filter System, with gauge, 17"Hx4.5"D, valve-in-head, high turbidity water, single vessel, 1/4-turn shut off valve, max pressure of 125 psi at 100°F, 1 micron, 1.5 gpm flow rate, 10,000 gallons capacity, for sediment, chlorine taste & odor, scale, includes: (1) integral mounting bracket and (1) o-ring seal cartridge filter, 3/8" FNPT connection, NSF certified (for ice machines - cubers up to 750 lbs, flakers up to 1200 lbs: Manitowoc I 0302,0303,0304,0305, 0322, 0323, 0324, 0325, 0453, 0454,0455, 0502, 0503, 0504, 0505, 0522, 0523, 0524, 0525, 0594,0592, 0606, 0696, Scotsman C 0322, 0330, 0522, 0530, 0630, Hoshizaki IM500, KM 250, 320, 351, 410, 450, 451, 515, 600, 631, 650, Ice-O-Matic ICE 0250, 0305, 0320, 0400,0406, 0500, 0506, 0520, 0525, 0605, 0606, Koolaire KO 250, 0350, 0420, 0500, 0600)

K-38	1 ea	Floor Trough - Floor trough, 36"Wx12"Dx4"H, 14 gauge 304 stainless steel, includes stainless steel subway grating constructed from 3/16"x1" bars, removable stainless steel strainer basket, 4" O.D. waste pipe 3"L, pitched towards waste, NSF
K-42	1 ea	Serving Counter, Cold Food - Aerohot Portable Ice Cooled Cold Pan Unit, 44-3/8", (3) pan size, 5" deep iced cold pan, stainless steel top with ½" thick x 7"W poly carving board with fixed brackets, stainless steel open base with undershelf, 5" casters, NSF
	1 ea	Deluxe Serving Overshelf, table mount, 44-7/32"Wx10-1/2"Dx20"H, with 1/4" thick glass, 18 gauge stainless steel with all edges flanged down 2", supported on formed 3/4" square stainless steel tubular brackets, 1/4" acrylic end guards, NSF, UL, EPH Classified, cULus
K-44	1 ea	Serving Counter, Overshelf - Deluxe serving overshelf, table mount, 58-7/32"Wx10-1/2"Dx20"H, with 1/4" thick glass, 18 gauge stainless steel with all edges flanged down 2", supported on formed 3/4" square stainless steel tubular brackets, 1/4" acrylic end guards, NSF, UL EPH Classified, cULus
K-45	1 ea	Work Table, 24", Stainless Steel Top - Work table, 24"Wx30"D, 14/300 stainless steel flat top, with Stallion Safety Edge front & back, 90° turndown on sides, stainless steel legs & adjustable undershelf, adjustable bullet feet, NSF, CSA-Sanitation, KD
K-47	1 ea	Self-Service Refrigerated Merchandiser - Oasis Self-Service Refrigerated Merchandiser, 34-1/2"W, high profile, open front, Breeze~E (Type-II) with EnergyWise self-contained refrigeration system, (4) removable shelves, LED top light, Blue Fin Coated coil, one piece formed ABS plastic tub, removable deck pan, flat header, black interior, laminate exterior, full end panels with mirror, cETLus, ETL-Sanitation
	1 ea	NOTE: if GFCI is required a GFCI breaker MUST be used in lieu of a GFCI receptacle.

	1 ea	1 yr. parts & labor warranty, 5 yr. compressor warranty, standard
	1 ea	Breeze~E (Type-II) with EnergyWise self-contained refrigeration, lower front air intake/upper front air discharge, standard
	1 ea	110-120v/60/1-ph, 1198 watts, 15.64 amps, standard
	1 ea	6 ft. straight blade power cord NEMA 5-20P (base exit), standard
	1 ea	NOTE: Compressor air intake through lower front & channeled up rear & out upper front, front panel cannot be blocked
	1 ea	Base support: casters, with levelers, standard
	1 ea	Exterior: laminate standard color 909-58 Black

	1 ea	Upper front panel style: flat front, standard
	1 ea	Left end panel: full with mirrored interior, metal edging, standard
	1 ea	Right end panel: full with mirrored interior, metal edging, standard
	1 ea	Rear doors: rear loading hinged door (service RH hinge), locking (changes air discharge to lower rear)
	1 ea	Metal shelves, non-lighted, standard
	1 ea	Digital fahrenheit thermometer, standard
	1 ea	Night curtain, retractable, non-locking (not available with security cover)

K-51	1 ea	Beverage Table - Work table, cabinet base with (2) sets of hinged doors, 96"Wx30"D, 16/300 stainless steel top with 1-1/2" rear up-turn, Stallion Safety Edge front, (1) midshelf, 18/430 stainless steel wrap, stainless steel legs with adjustable feet, NSF
	1 ea	30" left end splash, stainless steel (up to 5" in height
	1 ea	30" right end splash, stainless steel (up to 5" in height)
	1 ea	Punch, 2-1/2" hole, for appliance cord, includes grommet (specify location) (modification)
	1 ea	Plumbing cutout, 12"x12" in lower shelf or back panel (modification)
K-52	1 ea	Coffee Tea Brewer - 52200.0100 ITCB-DV Tea/Coffee Brewer with Tray, dual voltage adaptable, Infusion Series technology: (3) brew buttons & (2) batch sizes, BrewWise intelligence with pre-infusion & pulse brew, energy-saver mode, brew counter, includes integrated (3) position flip tray, 29" trunk, operates at 120v (15am), or 120/208v-240v (20amp), NSFm UL
	1 ea	120v, 120/208v, 120-240v; 1.7kW, 2.65kW, 3.5kW, standard

	1 ea	(5616004) 3M Water Filtration Products Water Filter System, with gauge, 17"Hx4.5"D, valve-in-head, high turbidity water, single vessel, 1/4-turn shut off valve, max pressure of 125 psi at 100°F, 1 micron, 1.5 gpm flow rate, 10,000 gallons capacity, for sediment, chlorine taste & odor, scale, includes: (1) integral mounting bracket and (1) o-ring seal cartridge filter, 3/8" FNPT connections, NSF
K-53	2 ea	Airpot - 36725.0000 Airpot, 3.8 liter (128 oz.), lever-action, stainless steel liner, 1-pack, NSF
K-54	3 ea	Tea/Coffee Dispenser - 39600.0001 TDO-N-3.5 Narrow Iced Beverage Dispenser, 3.5 gallon capacity, sump dispense valve, front-back handles, 8" cup clearance, for use with BUNN TB-3, TB-3Q and ITCB brewers with 29" trunk height, NSF
K-55	1 ea	Ice & Water Dispenser - Ice & water dispenser, Touchfree infrared dispensing, H2 Nugget Ice, air-cooled, production capacity up to 260 lb/24 hours at 70°/50° (225 lb AHRI certified at 90°/70°), 12 lb bin storage capacity, sealed maintenance-free bearings, removable bin, removable air filter, SmoothStream water dispensing, removable spouts and sink, enlarged 0.8" sink drain, recessed utility chase, stainless steel evaporator and auger, enlarged 11" dispensing area, USB software upgrade port, unit specific QR code, stainless steel exterior, AgION antimicrobial protection, R-134a refrigerant, includes 7.5' power cord with NEMA 5-15P plug, 115V/60/1-ph, 7.0 amps, cULus, NSF, CE, engineered and assembled in USA
	1 ea	3 year parts & labor warranties

	1 ea	5 year parts on compressor & condenser
	1 ea	(5616004) 3M Water Filtration Products Water Filter System, with gauge, 17"Hx4.5"D, valve-in-head, high turbidity water, single vessel, 1/4-turn shut off valve, max pressure of 125 psi at 100°F, 1 micron, 1.5 gpm flow rate, 10,000 gallons capacity, for sediment, chlorine taste & odor, scale, includes: (1) integral mounting bracket and (1) o-ring seal cartridge filter, 3/8" FNPT connections, NSF
K-60	1 ea	Disposer - SS-100 Complete Disposer Package, sink mount system, with #5 adaptor for 3.5" to 4" sink opening, 1 HP motor, stainless steel construction, includes syphon breaker, solenoid valve, flow control valve, manual reverse switch
	1 ea	(1) year parts & labor warranty from date of installation (standard)
	1 ea	208v/60/1-ph, 5.1 amps
	1 ea	Syphon breaker standard, ½" (11477)
K-62	1 ea	Mini Pre-Rinse Faucet Assembly - Mini pre-rinse unit, 8" wall mount, adjustable centers, Easyinstall 8" swing nozzle add-on faucet with stream regulator outlet, 8" rigid riser, quarter-turn Cerama with check valves, lever handles with color coded indexes, 6" adjustable wall bracket, ½" NPT, low lead, cCSAus

	1 ea	3 year limited warranty, standard
K-63	1 ea	Pot Rack - Pot rack, wall mount, double bar, 72"Wx12"Dx16"H overall size, 3/16"x2" stainless steel flat bar, includes (12) stainless steel double hooks, NSF, CSA-Sanitation
	1 ea	Pot hook, double prong, stainless steel
K-64	2 ea	Commercial Waste Container - ProSave BRUTE Container, without lid, 32 gallon, 22"Dx27-1/4"H, round, reinforced rims, built in handles, double rimmed base, high-impact plastic construction, gray, NSF, made in USA
	2 ea	BRUTE Dolly, 18-1/4"Dx6-5/8"H, heavy duty 3" casters, 250 lb. capacity, for 2620, 2632, 2643, 2655, black, NSF, made in USA (CANNOT BREAK CASE)
K-65	1 ea	Dishtable, Soiled "L" Shaped - Pro-Bowl Soiled Dishtable, island design, 60" machine to corner, 84" corner to end, 44"H overall size, L-shaped, right-to-left operation, (1) 20"Wx20" front-to-back 8" deep pre-rinse sink bowl, 10"H boxed backsplash with 45" & 2" return, (1) set of splash mount faucet holes with 8" centers, 2-1/4"H rolled edge, 16/300 stainless steel top, stainless steel legs, bracing, & adjustable bullet feet, NSF
	3 ft	Landing edge, 10"W, (per linear foot)(minimum 3 feet)(modification)

	1 pr	Vac breaker holes in backsplash, per pair (modification)
	1 ea	Disposal cut-out with collar (collar supplied by KEC) (modification)
	1 ea	Customer supplied accessories to be factory installed
	1 ea	Stainless steel disposal switch plate, (7"x11") (modification)
K-66	1 ea	Pre-Rinse Faucet Assembly - EasyInstall Pre-Rinse Unit, 8" centers, wall mount base, spring action, ceramas cartridges, 6" wall bracket
	1 kt	Inlet kit, ½" NPT nipple, closed elbows, 24" flex supply hoses
K-67	1 ea	Dishwasher, Door Type, Ventless - TempStar Dishwasher, door type, high temperature, with ventless & energy recovery, electric tank heat with built-in 70°F booster, approximately (39) racks/hour (0.89 gallons per rack), univeral (straight-thru/corner) type, stainless steel exterior, electro mechanical controls, pressure regulator provided (for installation by others), Sani-Sure, door interlock, dishtable not included, cETLus, ETL-Sanitation, ENERGY STAR (requires assembly)

	1 ea	1 year parts & labor warranty, continental USA, standard
	1 ea	70 degree rise booster heater, standard
	1 ea	208V/60/3-ph, 10.5 kw, 45.6 amps
K-67A	1 ea	Dish Hood - Condensate hood
	1 ea	RF FV Fan
	1 ea	Roof Curb
K-68	1 ea	Clean Dishtable - Pro-Bowl Clean Dishtable, straight design, 84"Wx30"Dx44"H overall size, right-to-left operation, 10"H boxed backsplash with 45° & 2" return, 2-1/4"H rolled edge, 16/300 stainless steel top, stainless steel legs, bracing, & adjustable bullet feet, NSF

	1 ea	Dishwasher specified is Tempstar Dishwasher. Match opening to dishwasher provided.
	1 ea	Dishtable undershelf, 41-5/8"Wx24-1/8"D, 16/300 stainless steel shelf, 16 ga. stainless steel legs with adjustable bullet feet, NSF
K-69	1 ea	Overshelf - Shelf, wall mount with pot rack, 72"Wx12"Dx9-1/2"H overall size, 1-1/2"H rear up-turn, Stallion Safety Edge front, includes (6) stainless steel hooks, 18/300 stainless steel, KD, NSF (available in Effingham & Nevada
K-70	1 ea	Disposer - SS-200 Complete Disposer Package, sink mount system, 6-5/8" diameter inlet, with #7 collar adaptor for sink installation, 2 HP motor, stainless steel construction, includes syphon breaker, solenoid valve, flow control valve, removable splash baffles, stainless steel sink stopper, manual reverse switch, adjustable leg kit
	1 ea	(1) year parts & labor warranty from date of installation (standard)
	1 ea	Short disposer body height, 1" shorter than standard
	1 ea	208v/60/1-ph, 7.7 amps

	1 ea	Syphon breaker standard, ½" (11477)
K-71	1	Dish Shelving -
	4 ea	Shelf, wire, 24"x42", green epoxy finish with chromate substrate, NSF
	4 ea	Shelf, wire, 24"x48", green epoxy finish with chromate substrate, NSF
	8 ea	Post 74", stationary, grooved at 1" intervals, includes leveling bolt & cap, green epoxy finish with chromate substrate, NSF
	1 ea	1 year warranty against manufacturing defects
	1 ea	7 year warranty against rust & corrosion

K-72	1	Utility Shelving
	8 ea	Shelf, wire, 14"x60", green epoxy finish with chromate substrate, NSF
	8 ea	Post 74", stationary, grooved at 1" intervals, includes leveling bolt & cap, green epoxy finish with chromate substrate, NSF
	1 ea	1 year warranty against manufacturing defects
	1 ea	7 year warranty against rust & corrosion
K-73	1 ea	Mop Sink - Mop sink, floor mounted, 24-5/8"Wx19-3/8"Dx10"H overall size, 20"Wx16" front-to-back deep compartment, 3-1/2" diameter drain, marine edge on front & sides, tile edge on rear, 16/300 stainless steel construction, NSF (available in Effingham & Nevada)
K-74	1 ea	Service Faucet - Service sink faucet, 8" centers, vacuum breaker nozzle with 3-4" garden hose thread, pail hook, top support arm, ½" NPT female flanged, with adjustable inlet with screwdriver stop (available in Effingham & Nevada)

2.2 EXISTING KITCHEN EQUIPMENT

Table No. 2 below provides a list of kitchen equipment that is currently owned by the senior center and is located at the existing senior center building. The contractor shall be responsible for disconnecting the equipment from service at the current location, contractor shall move the equipment to the new senior center location, contractor shall install and connect the equipment to all utilities for operation All contractors including the general contractor, plumbing subcontractor, electrical subcontractor, mechanical subcontractor and all other subcontractors shall verify all requirements of the existing kitchen equipment prior to installation and ensure all required connections are provided.

Table No. 2		
Item	Quantity	Description
K-11	1 ea	Blast Chiller, Reach-In
K-12	1 ea	Work Table
K-14	1 ea	Refrigerator, Reach-In
K-19	1 ea	Planetary Mixer
K-26	1 ea	Convection Oven, Gas
K-27	1 ea	Tilting Skillet Braising Pan, Gas
K-29	1 ea	Range, 36", 6 Open Burners
K-32	1 ea	Gas Floor Fryer
K-35	1 ea	Heated Holding Proofing Cabinet, Mobile
K-39	1 ea	Work Table
K-41	1 ea	Refrigerator, Reach-In
K-43	1 ea	Hot Food Serving Counter/Table
K-61	1 ea	Sink, (3) Three Compartment

SECTION 22 00 00

MECHANICAL - GENERAL

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

A. The General Conditions and other pertinent documents issued by the Engineer are a part of these Specifications and shall be complied with in every respect. In addition, the accompanying Architectural, Structural, Mechanical, Electrical and other Drawings shall be complied with in every respect. It shall be the responsibility of the Mechanical and Electrical Contractors to avail themselves of a complete set of Drawings and Specifications and be familiar with all parts thereof. Failure to do so shall not relieve any responsibility in the fulfillment of the Contract in any respect.

1.2 INTENT

A. The intent of the Mechanical and Electrical Drawings and Specifications is that the Contractor shall furnish all labor and materials, equipment and transportation necessary for the proper execution of the work. The work required as related to other trades is shown in it majority in the drawings, but thoroughly examine the Drawings and Specifications relating to other trades in order to include all necessary work. No additional compensation shall be considered for failure to properly interpret the responsibilities to other trades. The Contractor shall do all the work shown on the Drawings and described in the Specifications and all incidental work considered necessary to complete the project. The Engineer reserves the right to make any reasonable change in the locations indicated without additional compensation to the Contractor.

1.3 CONFLICT

A. If there is a conflicting variance between the Drawings and Specifications, the provisions of the most stringent shall control. In case of conflict between the General Provisions of the Contract or any modifications thereof, the Mechanical and Electrical Specifications shall control. The Drawings and Specifications are complementary and any work required by one, but not by the

other, shall be performed as though required by both.

1.4 SCOPE

A. The work contemplated and included under this Section of the Specifications consists of the furnishing of all labor, materials and supervision necessary for the installation of complete mechanical and electrical systems, as specified herein or shown on the Drawings, together with all necessary auxiliaries and appurtenances for same.

B. Furnish and install all systems complete in every respect and ready to operate. Furnish all miscellaneous items and accessories required for such installation, whether or not each such item or accessory is shown on the Drawings or mentioned in these Specifications.

1.5 RELATED SECTIONS

A. Section 221113 - Plumbing
B. Section 260800 - Heating, Ventilation and Air Conditioning
C. Section 260000 - Electrical

1.6 INSPECTION OF SITE

A. The Contractor, before submitting his proposal, shall inspect the site of the proposed construction and become fully informed as to the facilities, difficulties and restrictions attending the execution of the work. No additional compensation will be granted for work or items omitted from his proposal due to his failure to inform himself of the conditions affecting the performance of the work included in the Contract, or necessary to carry on and satisfactorily complete the work included herein.

B. Locations and elevations of the various utilities included within the scope of this work are offered separate from the Contract Documents as a general safety guide only without guarantee as to accuracy.

1.7 CODES, STANDARDS AND REGULATIONS

A. All workmanship and materials herein specified shall meet in every respect the codes, standards and regulations having jurisdiction of the work. In case of difference between the various standards and other regulations, the matter will be brought to the attention of the Engineer

and either the most stringent shall govern or the regulation or standard selected by the Engineer shall govern.

B. Should the Contractor perform any work that does not comply with the requirements of the applicable codes, standards and regulations, he shall bear all costs arising from the deficiencies.

C. The following codes, standards and regulations in effect on the date of bid invitation shall be considered a part of this Specification:

a. State Public Health Department Regulations
b. State Plumbing Code and HVACR Code
c. National Fire Protection Association
d. American Society of Mechanical Engineers
e. American Society for Testing Materials
f. Air Conditioning and Refrigeration Institute
g. National Electrical Code
h. National Electrical Safety Code
i. Local, City, State and Federal Codes and Standards
j. Underwriters' Laboratories
k. Local Utilities Requirements
l. National Electrical Manufacturers Association
m. OSHA - Occupational Safety and Health Standards

1.8 PERMITS AND FEES

A. Provide all necessary notices, obtain all permits, pay all taxes, file all necessary plans and obtain all necessary approvals in connection with the mechanical and electrical work required for the project.

1.9 CONTRACTOR DEFINITION

A. Where the word "Contractor" is used in connection with the work included under the Mechanical and Electrical Sections of these Specifications, reference is thereby made to the Contractor who is engaged to execute the work included under that Section of the Specifications only, notwithstanding the fact that this Contractor may be either the prime contractor, general contractor or his subcontractor.

1.10 DRAWINGS

A. The accompanying Mechanical and Electrical Drawings in general indicate approximately the locations of equipment

and devices, except in those cases where specified notes appear. Exact locations of outlets and apparatus shall be determined by reference to the general plans and to detailed shop drawings, by measurements at the building and in cooperation with other contractors and the Engineer.

B. Exact locations are subject to approval by the Engineer and may differ a reasonable amount from the approximate locations shown on the Drawings without additional compensation to the Contractor.

C. Major changes resulting in a savings in labor or material shall be made only in accordance with a Change Order. Major deviations shall be made only where necessary to avoid interference and only after drawings showing the proposed deviations have been submitted to and approved by the Engineer.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide materials and equipment which are new and in perfect condition. Where the Underwriters' Laboratories have established standards and issued labels for a particular group, class or type of equipment, the Underwriters' label shall be required on all equipment in that category. Each component shall have a nameplate giving the name and address of the manufacturer, catalog number and designation.

B. Where the words "or equal" are used in the Specifications or on the Drawings, it shall be understood that the Engineer will be the sole judge in the matter. In all cases where more than one manufacturer or material is specified, the Contractor shall be permitted to furnish any of those specified, however, power equipment, panels, transformers and safety switches should be of the same manufacturer. It is not the intention to discriminate against any "equal" product of other manufacturers, but rather to definitely set a standard of quality and shall not be construed to limiting competition. Any proposed substitution will be assumed to be acceptable without specific authorization from the Engineer. Should a substitution be accepted and should the substitution prove defective or otherwise unsatisfactory for the intended service within the warranty period, the

Contractor shall replace the substitution with the equipment or material originally specified, and on which the Specification required him to base his proposal, at no additional compensation.

2.2 TEMPORARY CONSTRUCTION POWER

A. Furnish and install temporary power, water, heating, gas and lighting as the needs require for construction and safety purposes. It shall be the responsibility of the General or Prime Contractor to obtain and be responsible for all utility charges.

PART 3 - EXECUTION

3.1 WORKMANSHIP - GENERAL

A. All work shall be installed in a neat, careful, safe and workmanlike manner by craftsmen skilled in the trade.

3.2 STANDARDS

A. Perform all work in such a manner that the many components will function as a complete workable system, including any accessories required to accomplish such installations. Perform all work in accordance with acceptable industry standards except where other standards or procedures are herein specified.

3.3 COORDINATION AND COOPERATION

A. Coordinate all mechanical and electrical work with general, structural and other grades to insure proper execution of the work and general progress for the entire project and to avoid delaying any other Contractor. Cooperate with all other trades so that the entire project will not be handicapped, hindered or delayed. Assist other trades in working out space conditions to permit all work to be installed satisfactorily. No extra compensation will be allowed the Contractor for any remedial work required to eliminate interferences due to lack of coordination and cooperation.

3.4 STORAGE OF MATERIALS

A. Protect all mechanical and electrical materials and apparatus to prevent any damage to them. Unless approved, no material or apparatus shall be stored outside or exposed

to the elements. Cover apparatus with tarpaulins or other protective coverings, provide pallets or other methods to raise materials above the floor, and where directed, provide barriers or guard rails to protect the materials. Failure on the part of the Contractor to comply with the above to the complete satisfaction of the Engineer or his representative will be sufficient cause for rejection of the piece of apparatus in question.

3.5 DAMAGED AND DEFECTIVE WORK

A. Remove and replace damaged and defective work or materials as directed by the Engineer with no extra compensation. All repairs to the work shall be made with new materials or a complete new piece of equipment shall be provided as directed by the Engineer.

3.6 ACCESSIBILITY

A. Install all equipment and devices in an accessible location or in a location where they can be made accessible with removable panels. Provide Milcor or approved equal access panels as required for access to concealed equipment which requires servicing and testing. Equipment and devices shall be "readily accessible" where required by the National Electrical Code. In non-removable ceilings, the removal of a lighting fixture or air device is not an approved access panel.

3.7 SAFETY

A. Provide necessary precautions for the safety of life or property. All construction work shall conform to the standards of the Occupational Safety and Health Act. Provide approved ground fault interrupter devices on all electrical construction devices consuming power and including temporary lighting systems.

3.8 CLEAN-UP

A. The Contractor shall keep his work area clean at all times. Upon completion of work in any area, remove all equipment, excess materials and debris from the area and leave area broom clean. Protect all equipment during operations of painting, plastering, cutting or drilling and any like operation which might damage the equipment. Upon completion of the project, remove all equipment, excess material, scrap and debris from the job site. The job site shall be left clean and finished.

3.9 CONTRACTOR FURNISHED DATA

A. Submit to the Engineer shop drawings for all equipment and materials to be installed on the project. No equipment or materials shall be installed until the shop drawings have been approved, even if the material submitted is identical to that originally specified. Consideration for substitution of materials will not be allowed if shop drawings are not received within 30 days after award of Construction Contract.

B. Rough-in materials including pipe, wire, conduits, connectors and boxes may be submitted in a list form including the names of manufacturers and catalog type or number. All other equipment and materials shall be submitted with detailed prints or drawings. Prints or drawings shall be permanent reproductions and not Thermofax copies. The total number of shop drawings and lists shall be not less than six.

C. Should the Contractor propose to submit items other than those specified, he shall include cuts of both the specified item and the proposed "equal item" in the brochures. The "originally specified product" and the "proposed substitution" shall be clearly marked.

D. Where the Specifications or Drawings call for the work to be installed in accordance with the manufacturer's specifications, recommendations or directions, copies of the same shall be submitted to the Engineer for review and surveillance.

E. Provide the Engineer four (4) copies of hard bound manuals for the project ten (10) days prior to final acceptance of the completion of the project. The manuals shall include copies of all corrected and approved shop drawings, schedules, catalog data, illustrations, performance curves and rating data, wiring and control diagrams, manufacturer's recommendations, operating and maintenance instructions, including safe operating procedures and requirements, spare parts lists and other pertinent information for the specified equipment and systems. The manual shall include a typewritten schedule of each motor, giving nameplate data, switch and fuse or breaker sizes and voltage and phase at motor terminals.

3.10 TESTS

A. Test and demonstrate each and every system in the pres-

ence of and to the complete satisfaction of a representative of the Engineer. Prior to demonstration, start all equipment and make necessary tests and adjustments to place the system in first class operating conditions.

B. Furnish all services, instruments, equipment and personnel required for the tests; in addition, submit a typewritten test report, where applicable and recorded data is taken or required for approval prior to final acceptance.

C. Test all electrical conductors after installation but prior to termination with a 500 volt meggar. Conductors shall test free of grounds and shorts, and their insulation resistance shall be recorded for all feeders and circuits where the conductor size is size 8 and larger.

D. No piping work, fixtures or equipment shall be concealed or covered until they have been inspected and approved. Engineer's representative shall be notified one week prior to when the work is ready for inspection. All work shall be completely installed, tested as required by the Section and the State Ordinances and State Safety Orders, and shall be leak-tight before inspection if requested. All tests shall be repeated upon request to the complete satisfaction of those making the inspection.

E. All domestic water piping shall be flushed out, tested and shall be left under pressure of supply main or a minimum of 40 psi for the balance of the construction period.

3.11 AS-BUILT DRAWINGS

A. Before the project will be finally accepted, a set of permanent as-built drawings must be submitted to the Engineer. The Contractor must certify accuracy by endorsement. The as-built drawings must be correct in every detail so that the Owner can properly operate, maintain and repair exposed and concealed work.

B. All underground work shall be dimensioned. All change orders, field changes, equipment, circuit numbers, motors, feeders, breakers and starters shall be clearly indicated on the drawings. As-built drawings shall be submitted on tracings or other reproducible forms.

3.12 GUARANTEE

A. Furnish to the Engineer a typewritten guarantee, countersigned by the General Contractor, to the effect that all work or equipment installed by him under this Contract shall be free from any or all mechanical and electrical defects for a period of one (1) year from the date of final acceptance. Should any mechanical or electrical defect develop in any of the systems or equipment within the period, due to faulty equipment, poor installation or workmanship, this Contractor shall agree to repair or replace same with new and like material without additional compensation. Lamps in all fixtures shall be guaranteed for 100 percent of manufacturer's published life data.

3.13 GENERAL CONSTRUCTION WORK FOR MECHANICAL AND ELECTRICAL FACILITIES - SLEEVES

A. Provide 22 gauge galvanized sheet iron sleeves where pipes and conduits pass through interior masonry walls. Sleeves shall be trimmed flush with each finished surface. Sleeves shall be sufficient size to allow insertion of pipe or conduit passing through concrete beams and walls, masonry exterior walls and all floors. Sleeves shall be sized at least 1/2 inch greater than the outside diameters of the pipes or conduits. Floor sleeves shall extend 1 inch above floors. After conduits/pipes are installed, seal the space between the conduits/pipes and sleeves with a filler to provide a non-runable watertight joint.

3.14 ROOF FLASHING

A. Provide complete watertight flashing and counter-flashing for all roof penetrations. All flashings shall be made to the complete satisfaction of the Engineer.

3.15 PAINTING

A. All exposed mechanical and electrical equipment in finished areas shall be painted.

B. Provide a prime coat to all unfinished equipment or material and all ferrous metal subject to rusting and corrosion during construction.

C. All duct work visible through registers, grilles and diffuser openings shall be given two coats of dull black

paint.

3.16 FASTENING DEVICES AND METHODS

A. Provide fastening devices which are permanent, non-corroding, high strength type using threads or tightening. Minimum size bolt shall be 3/16 inch, and medium size screw shall be No. 10. Cement or glue type fasteners shall not be used. Driven studs may be used for fastening only in steel.

B. In concrete and solid masonry, use threaded inserts secured in drilled holes or cast into the concrete. Conduits 1 inch and larger, junction boxes 12 inches and larger, and all equipment subject to motion, operation or vibration shall be fastened with lead tamped or wedge type expanding shield secured threaded inserts.

C. In hollow masonry, plaster or plaster board, toggle bolts or expanding lag anchors shall be used with excess hole area covered with washers. Whenever possible, fastening in plaster or plaster board shall be into studs or structural supports.

D. In wood construction, wood screws and lag bolts may be used. Screws shall not be hammered into wood.

E. In steel construction, driven threaded studs, welded threaded studs, drilled threaded or through holes, or threaded clamps shall be used.

F. In light weight applications on sheet metal, self-threading screws or bolts may be used.

3.17 PIPING

A. Cut pipe accurately to measurements established at the site, work into place, without springing or facing and clear all windows, doors and other openings. Ream all piping to remove burrs and install so as to permit free expansion and contraction without causing damage. Make all changes in direction with fittings.

B. Provide, whether shown or not, sufficient awing joints, expansion loops and devices necessary for a flexible piping system. Provide union shut off valves suitable located to facilitate maintenance and removal of all equipment or apparatus. Install drain valves at all low points of each system to enable complete drainage, and

air vents at all high points in the piping system to enable complete air venting.

C. Pipe all drains from condensate pans, and relief valves, to spill over an open sight drain, floor drain or other acceptable discharge points, and terminate with a plain end (unthreaded pipe) 6 inches above the drain. Rigidly support all drains.

D. Weld-O-Let type fittings may be used for branch take offs where size of take off does not exceed 3 inch IPS and the take off is at least two standard pipe sizes smaller than the main size. Standard welding steel shall be used in all other locations. Copper piping shall have soldered joints with 95-5 solder. Galvanized piping shall have screwed joints.

E. Joints in copper tubing shall be made using sweat fittings and tin-antimony solder and non-corrosive flux. For soldered joints, the outside surface at end of pipe and inside surface of fitting shall be thoroughly cleaned with steel wool or emery cloth and all burrs shall be removed. After cleaning, surfaces to be joined shall be evenly and completely covered with flux. Solder joints shall be well supported during the heating process and shall not be strained during the cooling period. Excess solder shall be removed while in a plastic state, leaving a fillet around the cup of the fitting as it cools.

F. All pipe and fittings with screwed ends shall have its threads cut clean and true and in conformance with the ASA Specification B2-1 for taper threads. Screwed pipe and fitting of brass shall be made up without marring or damaging pipe and fitting surfaces. All screwed pipe joints, except where specified otherwise, shall be made up with non-soluble, non-toxic, approved thread compound, applied to male threads only.

G. Connections between pipe fittings, hangers and equipment of dissimilar metals shall be avoided wherever practical. Wherever such connections are unavoidable, they shall be insulated against direct contact, using a high grade dielectric insulating material of Teflon, Milarta, asbestos fiber, neoprene, or equal.

H. Hangers: Furnish and install suitable hangers and supports for all horizontal lines. Hangers and supports shall be Grinnel, Fee and Mason, or equal. Heavy pipes shall be carried by pipe hangers supported by rods

secured to slab or by approved design. No piping shall be hung from other piping. In no case shall hangers be supported by means of vertical expansion bolts.

I. Horizontal steel piping shall be supported in accordance with the following schedule:

PIPE SIZE	MAX. HANGER SPACING	ROD SIZE
1" & smaller	6 ft. 0 inches	3/8 inch
1 1/2" to 2"	9 ft. 0 inches	3/8 inch
2 1/2" to 4"	10 ft. 0 inches	1/2 inch
Larger than 4"	12 ft. 0 inches	1/2 inch

J. All lines of copper tubing shall be supported by approved type hangers. Hangers for uncovered lines shall be especially designed for copper tubing. Hangers for covered tubing shall have broad scraps fitting outside of covering with insulation protection. Horizontal copper tubing shall be installed in accordance with the following schedule.

PIPE SIZE	HANGER HORIZONTAL SPACING	ROD SIZE
½"	6'	3/8 inch
3/4" & 1"	8'	3/8 inch
1 1/4" & Larger	10'	3/8 inch

3.18 ESCUTCHEONS

A. Escutcheons shall be installed on pipes and conduits wherever they pass through floors, ceilings, walls or partitions in finished areas.

B. Escutcheons shall be chrome plated brass.

3.19 RELOCATION OF GAS LINE

A. Trenches for gas line shall be excavated to the required depth.

B. The bottom of the trenches shall be tamped hard and graded to secure all available fill. Bell holes shall be excavated to ensure pipe resting for its entire length on solid ground. If rock is encountered, it shall be excavated to a depth of 6 inches below the bottom of the pipe, and before laying the pipe, the space between the bottom of the pipe and the rock surface shall be filled

with gravel and shall be well tamped. No extra compensation will be made for rock excavation.

C. After the gas line has been tested, inspected and approved by the Engineer and utility company representative, the trenches shall be backfilled with approved fill material, in 12 inch layers, firmly compacted, flooded if necessary, and thoroughly tamped.

3.20 NAMEPLATES AND IDENTIFICATION

A. Provide nameplates and identification on all major mechanical and electrical equipment.

B. Exposed or surface mounted panel boards, cabinets, starters, contactors, time clocks, fans, motors, air handling units, shall be coded and painted with one inch high stenciled black letters across the front.

C. The above equipment where flush mounted, shall be coded on the inside of the cover.

D. Stencils shall be made from heavy waxed cardboard with all letters in capitals and of the same size. At the completion of the project, the stencils shall be turned over to the Owner.

E. In lieu of stencils, engraved bakelite nameplates may be used; nameplates shall be minimum one inch high with 1/4 inch high capital letters permanently fastened to equipment.

3.21 PIPE VIBRATION AND NOISE ISOLATION

A. Insert 1 inch strip of hair felt to isolate all piping, conveying fluids, from direct contact with building walls, framing and sleeves. Pipe isolation shall be installed at all ring hangers consisting of 1 inch felt. Separate cold and hot water piping by 6 inches.

B. All rotating equipment, piping, hangers, supports and tank connections to rotating equipment shall be vibration isolated from beams, columns, floors, ceilings, joists and walls using isolation equipment as specified in other sections of this specification or as shown on the Drawings.

3.22 CONTROL WIRING

A. The Electrical Contractor shall furnish and install all control and interlock wiring for electrical equipment furnished. All wiring shall be in conduit and shall be in conformance with Section 16. Where control voltage is greater than 48 volts, wire shall be minimum 14 gauge AWG and shall have 600 volt insulation. Motors, starters, heaters, thermostats, and other control devices shall be furnished and delivered from the Mechanical Contractor to the Electrical Contractor for installation by the Electrical Contractor. The Mechanical Contractor shall furnish complete wiring diagrams to the Electrical Contractor for each and every piece of equipment to be installed and inter-connected if necessary. The Mechanical Contractor shall notify the Electrical Contractor concerning any changes in the electrical requirements due to substitution of equipment or variations in the equipment. Control raceways and boxes exposed to the elements shall be NEMA 3R or weatherproof.

END OF SECTION

SECTION 22 11 13

PLUMBING

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

A. Furnish all labor, materials, equipment and services to complete the plumbing work as shown on the drawings or as specified. Refer to the General Conditions, Supplemental General Conditions, Mechanical, Electrical, and other sections as they apply.

1.2 RELATED SECTIONS

A. Section 220000 - Mechanical General

1.3 SCOPE

A. Furnish and install all plumbing systems complete in every respect and ready to operate. Furnish all miscellaneous items and accessories required for such installation, whether or not each item or accessory is shown on the drawings or mentioned in these specifications.

B. The work shall consist of, but is not limited to the following general items.

1. Plumbing fixtures and related drainage and water supply systems.

2. Hot water heater system.

3. Floor drains, cleanouts and hose bibbs.

4. Gas piping system.

1.4 SUBMITTALS

A. Submit shop drawings for:

1. Fixtures.
2. Water heaters.
3. Drains, cleanouts, and hose bibbs.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Fixtures: As scheduled on Drawings and as manufactured by American Standard, Kohler, Crane, Bradley, or equal.

B. Trim as for fixtures, plus Delta Faucet, or equal.

C. Seats: Olsonite or Church.

D. Hot water heater system: Refer to Plumbing Fixture Schedule on Drawings for manufacturer and model number.

E. Hose bibbs: Josam, Chicago Faucet, Speakman, Zurn, or equal, with vacuum breaker. Material rough brass outside, chrome plated brass inside.

F. Floor drains and cleanouts: Josam, Zurn or Wade.

2.2 PIPE AND FITTINGS

A. Hot and cold water piping above slab shall be Schedule 40 galvanized steel with galvanized M.I. fittings or Type "L" copper with wrought copper fittings, or equal. Piping below slab shall be Type "K" copper tubing. Exterior piping shall be Schedule 40 galvanized steel, Type "K" or "L" copper, or Class 150 cast iron.

B. Soil and storm drainage piping shall be Schedule 40 PVC, or Schedule 40 ABS DWV plastic pipe, or service weight cast iron with service weight fittings or no hub. Pipe and fittings to be coated with hot coal tar pitch inside and out.

C. Vent piping 2 1/2 inch and under may be Schedule 40 galvanized steel pipe with banded cast iron fittings or galvanized victaulic couplings and fittings. Three inch and larger pipe shall be service weight cast iron, no hub. Copper DWV with copper drainage fittings may be used for all size vent piping. Vent pipe may be Schedule 40 PVC or ABS DWV plastic pipe.

D. Gas piping shall be Schedule 40 black steel assembled with M.I. or welded fittings. Piping below grade coated and wrapped. Straight lengths furnished with factory coating. Fittings and damaged coatings shall be wrapped with tape-coat applied according to manufacturer's

instructions.

2.3 VALVES AND STRAINERS

A. Gate and globe valves shall be bronze with a steam working pressure of 125 psi as manufactured by Jenkins, Stockham or Wellworth, or equal.

B. Valves 2" and smaller shall have screwed ends. Valves 2 1/2" and larger shall be iron body bronze mounted 125 psi ASA flanged.

C. Strainer shall be "Y" pattern Sarco, or equal, and furnished with stainless steel baskets.

D. Ball valves shall be full flow round port with teflon seats and seals.

E. Pet cocks shall be brass and rated 125 lb. W.P.

F. Check valves shall be all brass, swing check, screwed ends and suitable for 150 lb. W.P.

G. Gas cocks 1" and below - Crane No. 272 low pressure, 1 1/4" and above and all medium pressure, Rockwell No. 114 or 116.

H. Under water service valves shall be Mueller H-15200 curb stop with cast iron curb box with lid, plug and footpiece for sizes 1 1/2" and smaller, and Mueller A-2380-5, 200 psi, AWWA, iron body, non-rising stem gate valve with H-10360 cast iron valve box for sizes 2" and larger. Four 12" x 12" x 6" thick concrete pads around each box. Furnish key for each valve size.

2.4 BACKFLOW PREVENTERS

A. Connections not permitted between potable water and a non-potable water or waste sources.

B. Air gaps or approved backflow preventers shall always be used when required by code or as necessary to prevent backflow.

C. Backflow preventers shall be installed with any supply fixture when the outlet end may at times be submerged, such as hoses, sprays, direct flushing valves, aspirators and under-rim connections to a fixture in which the surface of water in the fixture is exposed at all times

to atmospheric pressure.

PART 3 - EXECUTION

3.1 INSULATION

A. All cold and hot water supply and return piping except exposed connections to plumbing fixtures, flanges and unions shall be insulated with 3/4" wall thickness Gustin-Bacon "snap-on," Owens-Corning "PF," or standard thick 85% magnesia.

B. All exposed piping shall have a fire retardant jacket applied.

C. Fittings and valves shall be insulated with insulating cement. In exposed areas a fire retardant jacket shall be applied.

D. Cold water piping shall have a vapor barrier jacket applied.

E. Hot water piping under floors, 1" foamglas covered with glass cloth and mastic.

F. Pipe insulation shall have a protective shield of 14 gauge galvanized steel placed centrally between the insert section at all hangers. Shield shall cover one-half of the insulation.

3.2 ROOF FLASHING

A. A waterproof flashing shall be provided for each pipe or vent passing through the roof.

B. Flashing shall be one piece 26 gauge FHA flashing assembly with the joint between flashing and pipe sealed with waterproof compound.

C. Approved equal 3 pound lead, copper or Semco assembly may be used in lieu of FHA flashing.

3.3 STERILIZING WATER SUPPLY PIPES

A. After the hot and cold water systems are complete, they shall be flushed out completely and filled with water and a solution of sodium hypochlorite added to the system. The solution shall consist of 1 gallon of 5% sodium

hypochlorite, Purex or other bleach to 200 gallons of water. Check residual chlorine by orthotolidin test. Allow solution to remain in the system for 24 hours, after which the entire system shall be flushed.

B. The Engineer shall be notified 24 hours prior to testing so his representative can witness test.

3.4 WATER HAMMER ARRESTERS

A. Water hammer arresters shall be provided on all supply piping, both hot and cold, where indicated on the Drawings.

3.5 LAYING SUPPLY LINES

A. Exterior water supply lines shall be laid with a minimum cover of 36". Installation shall be in accordance with Arkansas Department of Health Regulations and local codes and ordinances.

3.6 T & P VALVE

A. The T & P valve on the water heater shall be run to outside of building.

END OF SECTION

SECTION 23 08 00

HEATING, VENTILATION & AIR CONDITIONING

PART 1 - GENERAL

1.1 CONDITIONS

A. Furnish all labor, materials, equipment and services to complete the work as shown on the Drawings or as specified. Refer to the General Conditions, Supplemental General Conditions, Electrical, and other Sections as they apply.

1.2 RELATED SECTIONS

A. Section 220000 - Mechanical General

1.3 SCOPE

A. Furnish all HVAC systems complete in every respect and ready to operate. Furnish all miscellaneous items and accessories required for such installation, whether or not each such item or accessory is shown on the Drawings or mentioned in these Specifications.

B. The work shall consist of but is not limited to the following items:

1. Exhaust fans
2. Sheet metal duct work
3. Diffusers and grilles
4. Roof top units
5. Vent hoods

1.3 SUBMITTALS

A. Submit shop drawings for:

1. Exhaust fans
2. Diffusers and grilles
3. Roof top units
4. Vent hoods
5. Condensing unit

PART 2 - PRODUCTS

2.1 ROOF TOP UNIT

A. Roof top units shall be equal to units shown in the Mechanical Equipment Schedule.

2.2 EXHAUST FANS

A. Exhaust fans shall bear AMCA or PFMA certified seal and be of minimum sizes and capacities as shown on the drawings. Include disconnects, integral mounted. Furnish with variable pitch drives unless otherwise directed. Fans shall be spun type with automatic backdraft dampers.

B. Furnish with factory curbs.

C. Approved equals shall include Greenhack, Penn, Cook or Exit-Air.

2.3 PRE-FABRICATED ROOF CURBS

A. All roof top equipment shall be furnished with pre-fabricated roof curbs.

PART 3 - EXECUTION

3.1 DUCTWORK

A. Ductwork shall be galvanized fabricated and installed in accordance with the latest publication of SMACNA standards, for low pressure ductwork.

B. Duct sizes shown on the drawings are actual sizes re-quried and do not include allowance for internal in-sulation. Rectangular duct for units must be increased in size from that shown on the drawings to allow for insulation.

C. Air foil turning vanes shall be installed in all abrupt elbows. Connection to diffusers, grille and register faces shall be made absolutely air tight.

D. Furnish flexible connections between all duct work and fans or fan coil units. Connections shall be flame proof and waterproof 16 ounce canvas of not less than 4" in length and secured in an airtight manner.

3.2 DIFFUSERS

A. Diffusers, grilles and registers are scheduled on the drawings. Center all diffusers to coordinate with reflected ceilings, lighting, speakers, etc. All wall mounted outlets shall be prime coated. All ceiling mounted outlets and returns shall be natural aluminum satin finished; air testing in accordance with SMACNA standards.

B. Furnish opposed blade volume controls to provide control of the air flow for all supply and return diffusers and registers. Operation shall be from face of the grille with a removable key.

C. Door grilles shall be slight tight core and vision proof from any angle. Grilles shall be prime coated unless otherwise shown on the drawings. Center the door fixed fanel.

D. Diffusers, grilles and registers as manufactured by Titus, Barber Coleman, Kruger, Carnes or Grillmaster.

E. Contractor to balance the airflow as indicated on the drawings in accordance with ASHRAE Standards.

3.3 INSULATION

A. Rectangular duct work, both supply and return, shall be insulated with 1" thick 2 pound density duct liner with vinyl sprayed surface to the air side. The liner shall be installed in accordance with duct liner standards of SMACNA. Return duct insulated only if indicated on the plans.

B. Round duct work shall be insulated with 2" thick fiberglass insulation with fire resistive vapor barrier jacket.

C. Insulate kitchen exhaust duct with 2" thick fiberglass with fire resistive vapor barrier jacket.

3.4 FLUES

A. All gas flues shall be double wall type B with 6" clearance between roofing material and flue. Flues shall terminate above roof with rain cap, roof jack and counter flashing, in compliance with the gas code.

SECTION 26 00 00

ELECTRICAL

PART 1 - GENERAL

1.1 CONDITIONS

A. Furnish all labor, materials, equipment and services to complete the electrical work as shown on the drawings or as specified. Refer to the General Conditions, Supplemental General Conditions and other sections below, as they apply.

1.2 RELATED SECTIONS

A. Section 220000 - Mechanical General

1.3 SCOPE

A. Furnish and install all electrical systems complete in every respect and ready to operate. Furnish all miscellaneous items and accessories required for such installation, whether or not each such item or accessory is shown on the drawings or mentioned in these specifications.

B. The work shall consist of, but is not limited to the following general items:

1. Lighting Fixtures and Lamps
2. Raceways
3. Wiring Devices and Plates
4. Branch Circuits
5. Control Wiring
6. Panelboards

1.4 SUBMITTALS

A. Submit under provisions of Section 013300

B. Submit shop drawings for:

1. Lighting Fixtures and Lamps
2. Wiring Devices and Plates
3. Safety Disconnect Switches
4. Control Wiring for all Mechanical Systems
5. Panelboards

PART 2 - PRODUCTS

2.1 MATERIALS

A. Submit material lists for all raceways and connectors, conductors and their connectors, boxes and grounding facilities.

PART 3 - EXECUTION

3.1 RACEWAYS

A. GENERAL: Provide raceways for all wiring systems, minimum 3/4 inch. Raceways shall include rigid galvanized steel, conduit, rigid aluminum conduit, (EMT) electrical metallic tubing, flexible metallic conduit, surface metal raceways, wire ways and troughs. Raceways shall be mechanically and electrically continuous from service entrance to final outlet. Raceways shall be run perpendicular and parallel to building construction. Except in Mechanical Rooms or as otherwise noted, all raceways shall be concealed. All breaks and turns with exposed raceways shall be made with malleable iron cadmium or hot dipped galvanized conduit fittings and covers. Raceways shall be rigidly supported with malleable iron conduit clamps or trapeze supports and clamps at intervals not exceeding 7 feet with 12 inches of all outlet boxes, elbows, and changes or direction. Concealed raceways shall be supported from structural members and not furring. All raceway systems shall be completely installed and secured and swabbed out, and all work in the area shall have progressed sufficiently to prevent injury to cables, before any conductors are installed. Provide caps and plugs on ends of raceways and openings in boxes to prevent foreign material from entering during construction. Provide double locknuts where 1 1/2 inch and larger conduits terminate, where No. 4 and larger conductors are installed, and where required by NEC. Do not use running threads. Leave No. 12 pull wire (identified at both ends) in all empty raceways. Provide plastic insulating busing on all conduit connections and fiber inserts on all tubing connections. Surface metal raceways, surface wiremold and surface metal troughs shall be installed only where shown on the drawings.

B. RIGID CONDUIT: Provide rigid galvanized steel conduits for service entrance, panel feeders and all motor

feeders. Threadless fittings, all thread and running threads shall not be used. Rigid conduits shall be provided for all raceway systems run underground or embedded in concrete or solid masonry. Rigid conduit shall be as manufactured by Youngstown, Allied, Triangle, or equal. Conduits located underground shall be PVC or shall be rigid galvanized steel and have an additional coat or polyvinylchloride and shall be manufactured by Robroy, or equal.

C. ELECTRICAL METALLIC TUBING (EMT): Electrical metallic tubing (EMT) may be used for conduits concealed in furred ceilings or walls, run exposed in the building, or embedded in hollow masonry construction above grade. EMT shall be as manufactured by Triangle, Allied, Republic, or equal. EMT fittings shall be ferrous metal galvanized or plated to resist corrosion and shall be of the compression-ring type, rain-tight and concrete-tight. Set screw, indenter or friction type fittings will not be allowed. All fittings shall be wrench tight and shall have insulated throats. Fittings shall be as manufactured by Steel City, Raco, Appleton, or equal.

D. FLEXIBLE CONDUIT: Provide flexible conduit for all connections to motors and other equipment subject to vibration or motion with a maximum length of 18 inches. Flexible conduit may be used for final connection to lighting fixtures in lay-in ceilings. Conduit shall be rigidly supported where connection to flexible conduit is made. Conduit and fittings shall be self-grounding and, in addition, copper bonding jumpers shall be used. Flexible conduit shall be as manufactured by Republic, Anaconda, Pittsburg, or equal. Connectors shall be ferrous metal, galvanized or plated to resist corrosion, of the two (2) screw clamp type, or the squeeze type, as manufactured by Raco, Appleton, Steel City, or equal. Flexible conduit and fittings used outdoors or in other areas subject to moisture shall be of the liquid-tight type with connectors having an O-ring assembly. Liquid tight connectors shall be Raco type 3500, Appleton STB, or equal.

E. CONDUIT HANGERS AND SUPPORTS: All conduits shall be rigidly supported and securely fastened to structural members. Perforated iron straps or wire shall not be used for support. Maximum support spacing shall be five (5) foot for one (1) inch and smaller conduits, and seven (7) foot for conduits larger than one (1) inch. All conduit shall be installed to permit expansion and contraction, and type hanger, method of support, location of support,

etc. shall be governed in part by this consideration.

3.2 OUTLET, JUNCTION AND PULL BOXES

A. Provide outlet and junction boxes where shown on the drawings or as required by Code. Boxes shall be independently rigidly supported and accessible. All outlet boxes shall be minimum of two (2) inches deep. Provide a four (4) inch square box with plaster ring and cover at each switch and receptacle location. Wiring device boxes located in brick, block or concrete walls shall be approved for the type of installation being at mortar joints. Multi-gang boxes shall be installed for more than two (2) adjacent devices; sectional boxes will not be allowed. All exposed cover plates as manufactured by Crouse Hinds, or equal. Outlets exposed to the weather shall be type FD with weatherproof gaskets and covers. Pull boxes shall be constructed of code gauge galvanized steel and shall be sized not less than 1 1/2 times all dimensions as recommended by the NEC. All conductors in pull boxes shall be identified with tags.

3.3 CONDUCTORS

A. All conductors shall be rated 600 volts, and shall be copper with type THHN insulation. Minimum size shall be No. 12 and No. 8, and larger shall be stranded. All conductors shall be color coded, with sizes through No. 10 being of the solid compound coating. Stripes, bands or hash marks with respective color coding may be used for conductors No. 8 and larger. Color coding shall be phase A - black, phase B - red, phase C - blue, neutral - white, and ground - green. All conductors shall be by the same manufacturer and shall be Triangle, Simplex, Anaconda, General, Okonite, or equal.

B. Mains and feeders shall be run continuous without joints or splices. Branch circuit splices shall be made with 3M "Scotchloks," or equal. In panelboards and boxes, conductors shall be neatly placed in phase groups and supported away from all enclosure sides. Lacing shall be done at intervals not greater than six (6) inches and shall be done with linen cord or T & B self-locking "Ty-Raps," or equal.

3.4 LIGHTING FIXTURES

A. Provide all lighting fixtures as noted on the drawings. Fixtures shall be suspended from structural members or

from ceiling structural members, by standard bar hangers, or other approved means. Structural steel necessary to support fixtures shall be furnished and installed under this Section. Provide plaster frames as required. All fixtures shall be grounded. Fixtures shall be completely wired and lamped and shall be in perfect condition and operating at the time of completion. New building fixtures shall not be used for construction lighting.

B. Fixture locations shall be coordinated with ceiling patterns or other details or notes as shown on the drawings.

C. If a lighting fixture for a specific location is not clearly noted, the Contractor shall bring it to the attention of the Engineer prior to bidding, or the Contractor shall furnish and install a fixture similar and comparable in cost to that specified for other like location.

3.5 LAMPS

A. Provide and install lamps in lighting fixtures.

3.6 WIRING DEVICES AND PLATES

A. Furnish and install all wiring devices and plates where shown on the drawings and herein specified. All devices shall be NEMA rated specification grade, with all parts except terminals totally enclosed, and with each device separately packaged upon arrival at job site. Height of wiring device shall work with brick joints and concrete block joints, but in general, lighting switches shall be mounted 4'-0" above floor, and receptacles and telephone outlets shall be mounted 12" above floor. Adjacent wiring devices shall be mounted as close to each other as possible. All wiring devices shall be side wired.

B. In general, wiring devices and plated located in finished unpaneled areas shall be ivory. Wiring devices and plates located in finished paneled areas shall be brown. In unfinished areas, plates shall be 302 stainless steel.

3.7 SAFETY DISCONNECT SWITCHES

A. Furnish and install safety disconnect switches where shown on the Drawings or as required by NEC. Switches shall be NEMA heavy duty, horsepower rated, with padlocking provisions and with a nameplate identifying equipment served. In wet or exterior locations, switches

shall be in NEMA 3R enclosures. Switches shall be as manufactured by Square "D", General Electric, Westinghouse, ITE, or equal.

3.8 GROUNDING

A. The entire electrical system and the building structure shall be grounded, or as indicated on the drawings. The electric service, equipment and enclosures, conduits and raceways, switches, breakers and panels, motors, controllers, lighting fixtures and receptacles shall be gounded. Each branch or power circuit shall have an independent grounding conductor whether shown or not, with the exception of lighting switches.

B. Bonding jumpers shall be installed to maintain continuity at water meters, connections shall be made with approved clamps as manufactured by Burndy.

3.9 GROUND FAULT CIRCUIT INTERRUPTERS

A. Conformance with UL Std. 943, Class A.

B. Temperature tolerance level of -31° to 158°F.

C. Equal to Leviton Suregard V, NEMA 5-15R, Model 6598-W with indicator light, 15A, 125 volt.

END OF SECTION

SECTION 31 10 00

EARTHWORK

PART 1 - GENERAL

1.1 CONDITIONS

A. Requirements of the Conditions of the Contract apply to all work under this Section. This includes all labor, materials, equipment and services necessary to complete all work indicated on the drawings and herein specified, or both.

B. Carefully read the General Conditions of the Specifications, which shall be considered as and made a part of this section.

1.2 SCOPE

A. The work required under this section consists of all excavating, filling, grading, dewatering, and related items necessary to complete the work indicated on the Drawings and described in these Specifications, including but not necessarily limited to the following:

1. Excavating and disposal of existing concrete, building and site rubble, removal of top 12" of on-site soils (stripping) and stockpile for landscaping purposes.

2. Rough grading and subgrade preparation. Filling to top of subgrade with ordinary fill (locally available soil) approved by the Engineer.

3. Providing and installing geofabric under all areas of fill except slabs.

4. Providing and installing controlled fill materials, footings and slabs.

1.3 EXAMINATION OF SITE AND DOCUMENTS

A. It is hereby understood that the Contractor has carefully examined the site and all conditions affecting work under this section. No claim for additional costs will be allowed because of lack of full knowledge of

existing conditions as indicated in the Contract Documents, or obvious from observation at the site.

B. Plans, surveys, measurements, and dimensions under which the work is to be performed are believed to be correct, but the Contractor shall have examined them for himself during the bidding period as no allowance will be made for any errors or inaccuracies that may be found herein.

1.4 SUBSURFACE CONDITIONS

A. Subsurface conditions are to be assumed substantially as shown on the Drawings.

1.5 REQUIREMENTS OF REGULATORY AGENCIES

A. All work shall conform to the Drawings and Specifications and shall comply with applicable codes and regulations.

B. Comply with rules, regulations, laws and ordinances of all authorities having jurisdiction.

C. The Contractor shall procure and pay for all permits and licenses required for the complete work specified herein and shown on the Drawings.

D. The Contractor shall not close or obstruct any street, sidewalk, alley or passageway without permission from authorities having jurisdiction. The Contractor shall so conduct his operations as to interfere as little as possible with the use ordinarily made of roads, driveways, alleys, sidewalks, or other facilities near enough to the work to be affected thereby.

PART 2 - MATERIALS AND EQUIPMENT

2.1 FILL MATERIALS

A. Gravel Fill. Well graded natural sand and gravel free from ice, organic or other deleterious materials, conforming to the following gradations:

U.S. Sieve No.	Percent Passing by Weight	
	Maximum	Minimum
4 Inch	---	100
1 Inch	100	60
No. 4	85	25
No. 40	35	5
No. 200	5	0

B. Ordinary Fill. Well-graded, natural, inorganic soil shall consist of sand or gravel clays approved by the Architect/Engineer and meeting the following requirements:

1. It shall be free of organic and other weak or compressive materials, of frozen materials, and of stones larger than 6 inches maximum dimension.

2. It shall be of such nature and character that it can be compacted to the specified density of 100% Standard Proctor in a reasonable length of time.

3. It shall be free of highly plastic clays, of all materials subject to decay, decomposition, or dissolution, and of cinders or other materials which will corrode piping or other materials.

4. It shall have a plasticity index (PI) of less than 15.

5. Ordinary fill shall be used to fill to the top of subgrade.

C. Controlled Fill/Base Material Under Footings Slabs, Paved (both Rigid and Flexible) Driveways and Parking Areas.

1. The controlled fill under the floor slabs and footings shall consist of clayey sand or clayey gravel with a plasticity index less than 15. Samples of materials proposed shall be submitted for approval.

D. Granular Material Under Concrete Slabs.

1. The granular material under floor slabs shall consist of porous sands or crushed fine limestone with no more than 5% passing a No. 200 sieve (absence of fines), as approved by the Engineer.

E. Topsoil. Fertile, friable, natural topsoil of loamy character, without admixture of subsoil material, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, brick and other foreign materials, with acidity range of between pH 6.0 and 6.8. Disturbed areas to be seeded shall receive a 3" minimum of approved topsoil. Areas that shall receive beds and sod shall receive a 3" minimum layer of approved topsoil

1. Identify source location of topsoil proposed for use on the project.

2. Provide topsoil free of substances harmful to the plants, which will be grown in the soil.

2.2 SOURCE QUALITY CONTROL

A. All fill materials shall be subject to quality control testing. A qualified laboratory will be selected and paid by the Contractor to perform tests on materials. Test results and laboratory recommendations will be available to the Owner.

2.3 COMPACTION EQUIPMENT

A. Provide sufficient equipment units of suitable types to spread, level and compact fills promptly upon delivery of materials.

B. Contractor may use any compaction equipment or device which he finds convenient and economical, but the Architect/ Engineer retains the right to disapprove equipment which, in his opinion, is of inadequate capacity or unsuited to the character of materials being compacted.

PART 3 - EXECUTION

3.1 GENERAL

A. Site Preparation

1. To prepare for construction, all topsoil, vegetation, roots, and any soft soils in the building or pavement areas shall be stripped from the ground surface and either wasted or stockpiled

for later use in landscaping. Some old foundation slabs may be encountered.

2. Site grading should include removal of the surficial organic soil zone in the building and pavement areas. Depth of stripping is estimated to be on the order of 12 inches, although potentially greater in localized soft and/or moist areas during wetter seasons.

3. Following stripping, and prior to placing fill, the site should be proof-rolled with a minimum 20,000 pound pneumatic tired roller, loaded tandem-wheeled dump truck, or similar equipment. Soft or loose zones should be undercut and be processed and re-compacted or undercut and replaced with approved select fill. Additional undercutting in excess of the 12 inches will be considered a part of "site work" in the lump sum bid schedule and no additional compensation will be made.

4. Subgrade shall be compacted to 98% Standard Proctor. A subgrade support fabric such as Mirafi 500x (or equal) shall be placed between the compacted fill and the natural ground to improve site stability of soils.

5. Undercutting to depths of 3 to 4 feet are possible under extremely wet conditions, or if excessive disturbance occurs due to heavy construction equipment. To reduce undercut potential, the use of light dozers is recommended for stripping. In addition, operation of heavy rubber-tired equipment should be limited. See Soils Report, Appendix A.

6. Fill required for backfill or to raise existing grade should consist of select clayey sand (SC), sandy clay (CL), or clayey gravel (GC) having a liquid limit less than 40, or an approved alternate. Since the footings will be supported in fill, a compaction criteria of at least 100 percent of Standard Proctor dry density (ASTM D-1557) with a moisture content range of -2 to +3 percent of optimum is recommended. In pavement areas, a compaction criteria of at least 100 percent of maximum Standard Proctor dry density (ASTM D-698) for base course, at a moisture content near optimum is recommended. Fill should be placed in maximum 8 inch lifts. Each lift or fill should be properly

compacted, tested, and approved prior to placing subsequent lifts.

B. Layout and Grades

1. All lines and grade work not presently established at the site shall be laid out by the Contractor in accordance with the Contract Drawings and Specifications. The Contractor shall establish permanent bench marks determined by a Registered Land Surveyor Professional Civil Engineer. Maintain all established bounds and bench marks and replace as directed any which are destroyed or disturbed.

2. The words "finished grades" as used herein shall mean the required final grade elevations indicated on the Drawings. Spot elevations shall govern over proposed contours. Where not otherwise indicated, project site areas outside of the buildings shall be given uniform slopes between points for which finished grades are indicated or between such points and existing established grades.

3. The word "subgrade" as used herein means the required surface of subsoil, ordinary fill or compacted fill. The surface is immediately beneath the site improvements, specially dimensioned fill, paving, loaming, or other surfacing materials.

C. Disposition of Existing Utilities

1. Active utilities existing on the site shall be carefully protected from damage and relocated or removed as required by the work. When an active utility line is exposed during construction, its location and elevation shall be plotted on the record drawings and both the Architect/Engineer and the utility owner notified in writing.

2. Inactive or abandoned utilities encountered during construction operations shall be removed, plugged or capped. The location of such utilities shall be noted on the record drawings and reported in writing to the Architect/Engineer.

D. Frost Protection

1. Make no excavations to the full depth indicated when freezing temperatures may be expected, unless the

footings or slabs can be placed immediately after the excavation has been completed. Protect the bottom so excavated from frost if placing of concrete is delayed. Should protection fail, remove frozen materials and replace with gravel fill as directed, at no cost to the Owner.

2. The underside of in-place beams and slabs shall be protected from freezing temperatures.

E. Disposal

1. All excavated materials which are not used for fill or backfill, and all surplus excavated materials shall be removed from the site and disposed of at no cost to the Owner.

3.2 EXCAVATION

A. Excavate all materials as required to allow construction of the foundations for the structure as shown on the Drawings. Attention is called to "General Notes" on Structural Drawings and to the requirements contained therein which may affect the work under this section.

B. If rock is encountered, trenches shall be excavated to 6 inches below bottom of pipe. Trenches for storm and sanitary sewers shall have a continuous slope in the direction of flow.

C. When the depth of backfill over the pipes exceeds ten (10) feet, keep the trench below the level of the top of the pipe as narrow as practicable.

3.3 DEWATERING

A. Provide, maintain and operate pumps and related equipment, including standby equipment, of sufficient capacity to keep excavation free of all water at all times and under any and all contingencies that may arise until the structures attain their full strength.

3.4 PLACING FILLS

A. General

1. Areas to be filled or backfilled shall be free of construction debris, refuse, compressible or decayable materials and standing water. Do not place when

fill materials or layers below it are frozen.

2. Notify the Architect/Engineer when excavations are ready for inspection. Filling and backfilling shall not be started until conditions have been approved by the Architect/Engineer.

3. Furnish approved materials. Place fill in layers not exceeding 6 inches compacted thickness and compact as specified below for various fill conditions.

4. Before backfilling against walls, the permanent structures (including basement floor slabs) shall be cast and sufficiently aged to attain strength required to resist backfill pressures without damage. Temporary bracing will not be permitted except by written permission from the Architect/Engineer. When filling on both sides of a wall or pier, place fill simultaneously on each side. Correct any damage to the structure caused by backfilling operations at no cost to Owner. Place no stones closer than eighteen (18) inches to wall surfaces.

5. Backfill trenches only after pipe has been inspected, tested, and location of pipes and appurtenances have been recorded.

6. Pipe bed shall be shaped by means of hand shovels to give full and continuous support to lower third of pipe. Backfill by hand around pipe and for a depth of twelve (12) inches above the pipe; use sand and tamp firmly in layers not exceeding six (6) inches in thickness, taking care not to disturb the pipe. Compact the remainder of the backfill thoroughly with a rammer of suitable weight or with an approved mechanical tamper to achieve the compaction specified below for various fill conditions.

7. Where soft materials of poor bearing qualities are found in trenching, a concrete foundation may be required to insure a firm foundation for the pipe. Such concrete foundation shall be bedded with six (6) inches of sand tamped in place so as to provide a uniform bearing for the pipe between joints.

8. All exposed subgrade shall be proof-rolled prior to fill placement to aid in identifying areas of loose or soft subgrade soils. Random compaction tests

shall be performed to verify a subgrade soil compaction of 98% Standard Proctor of the top 6" of subgrade soil prior to ordinary fill or base course fill placement.

B. Placing Ordinary Fill

1. Ordinary fill as specified in Paragraph 2.1.B. hereinabove shall be provided behind all walls and for all backfill and fill where gravel fill has not been specified hereinabove or on Drawings.

2. Place ordinary fill in lifts not exceeding eight (8) inches, uncompacted thickness, and compact to 100% standard proctor density (ASTM D-698).

C. Placing Controlled Fill

1. The controlled fill should be scarified and then processed to a moisture content between three percentage points below and two percentage points above the Standard Proctor optimum. The subgrade soils should be recompacted to a dry density of at least 98% of the standard Proctor maximum dry density for depths of at least 6 inches below the surface.

2. After subgrade preparation and inspection have been completed, fill placement may begin. Fill materials should be free of organic or other deleterious materials, have a maximum particle size of 3 inches, and have a plasticity index of less than 15. If a fine-grained (silt or clay) soil is used for fill, very close moisture content control will be required to achieve the recommended degree of compaction.

3. Fine-grained and granular structural fill should be compacted to at least 100% of the maximum Standard Proctor dry density as determined by ASTM Designation D-698. The fills under the concrete pavements shall have some plasticity. Select clayey sand or clayey gravel with a plasticity index between 4 and 15 shall be used.

4. Fill should be placed in maximum lifts of eight inches of loose material and should be compacted within the range of two percentage points above to three percentage points below the optimum moisture content as determined by the standard Proctor test. If water must be added, it should be uniformly

applied and mixed into the soil by disking or scarifying.

5. Each lift of compacted soil should be tested and approved by the soils Architect/ Engineer or his representative prior to placement of subsequent lifts. As a guideline, it is recommended that field density tests be taken at a frequency of not less than one test per 2500 square feet of surface area per lift of fill in the building areas. This testing frequency may be reduced to one test per 5000 square feet of surface area per lift of fill in the pavement areas.

D. Field Quality Control

1. See overlapping procedures in Source of Quality Control.

2. Cooperate with laboratory in obtaining field samples of in-place materials after compaction. Furnish identical field labor in connection with these tests.

E. Construction Procedures

1. It is anticipated that the surficial silty clay soils encountered over portions of the site may be subject to significant loss in shear strength upon exposure and saturation. Therefore, adequate drainage of surface runoff should be established during the early phases of site grading and continued throughout construction to prevent ponding and subsequent saturation of subgrade soils.

2. It is anticipated that if construction is initiated during wetter seasons limited perched ground water may be encountered above excavation depths. Further, if the silty clay surficial soils within the building area are near saturation, pumping of these soils may occur during fill placement, requiring additional undercutting or the use of a "bridge" lift procedure. The potential for these problems to occur is considered to be significantly reduced if the site is dry.

3. Foundation excavations should be free of all loose or soft soils and water prior to placing concrete. Concrete should be placed as soon as possible after

excavation, cleaning and inspection are complete to minimize possible changes in soil conditions due to the effects of wetting and drying. The Contractor shall notify the Architect/Engineer so he can be present during foundation excavation to monitor soil conditions at foundation depths.

4. Care should be taken to adequately slope or brace the sides of foundation excavations to prevent sloughing or caving. All applicable safety requirements (OSHA) regarding trench excavations should be adhered to.

3.5 CLEAN UP

A. Remove all excess earth, debris, topsoil or other materials associated with this work from the job site.

B. Keep driveways and city streets free from mud or trash deposited by equipment used in performing work under this section.

END OF SECTION

SECTION 32 11 23
AGGREGATE BASE COURSE

PART 1 - GENERAL PROVISIONS

1.1 DESCRIPTION

A. This work shall include the installation of aggregate base course.

PART 2 - MATERIALS

2.1 BASE COURSE

A. Crushed Stone Base. This material shall consist of crushed run stone or a mixture of crushed stone and natural fines uniformly mixed and so proportioned as to meet all the requirements hereinafter specified, with the further provision that a mixture of crushed stone and natural fines shall contain not less than 90 percent crusher produced material. The stone shall be hard and durable with a percent of wear of 45 by Los Angeles Test (AASHTO T 96). For the purpose of this specification, shale and slate are not considered to be stone. The material furnished shall not contain more than 5 percent by weight of shale, slate and other deleterious matter.

The class or classes of crushed stone base course material that may be used on any particular job will be those called for on the proposed schedule.

GRADING REQUIREMENTS

Size of Sieve	Percent by Weight	
Total Retained	Class SB-2	Class SB-3
1 1/2"	0	---
1"	---	0
3/4"	10-50	0-35

No. 4	50-75	50-75
Total Passing		
No. 40	10-30	10-30
No. 200	3-10	3-10

The fraction passing the No. 200 sieve shall not be greater than two-thirds the fraction passing the No. 40 sieve. The fraction passing the No. 40 sieve shall have a liquid limit not greater than 25 and a plasticity index of not greater than 6.

When it is necessary to blend two or more materials, each material shall be proportioned separately through mechanical feeders to insure uniform production. Premixing or blending in the pit to avoid separate feeding will not be permitted. Blending materials on the roadway in order to obtain a mixture that will comply with the above requirements will not be permitted.

PART 3 - APPLICATION

3.1 APPLICATION

A. Crushed Stone Base Construction. The base course material shall be placed on a completed and approved subgrade or existing base that has been bladed to conform to the grade and cross section shown on the plans.

The subgrade shall be prepared as specified and shall be free from an excess or deficiency of moisture at the time of placing the base course. The subgrade shall also comply, where applicable, with the requirements of other items that may be contained in the contract that provide for construction, reconstruction or shaping of the subgrade or the reconstruction of the existing base course.

Base course material shall not be placed on a frozen subgrade or subbase.

The crushed stone gravel shall be placed on the subgrade or other base course material and spread uniformly to such depth and lines that when compacted it will have the thickness, width and cross-section shown on the plans.

If required, the compacted depth of the base course exceeds six inches (6"), the base shall be constructed in two or more layers of approximate equal thickness. The maximum compacted thickness of any one layer shall not exceed six (6) inches. When vibrating or other approved type of special compacting equipment is used, the compacted depth of a single layer of the base course may be increased to 8 inches upon approval.

The spreading shall be done the same day that the material is hauled and it shall be performed in such manner that no segregation of coarse particles or nests or hard areas caused by dumping the gravel on the subgrade will exist. To insure proper mixing, the gravel shall be bladed entirely across the roadbed before being spread. Care must be taken to prevent mixing of subgrade or shoulder material with base course material in the blading and spreading operation.

Each course shall be compacted by any satisfactory method that will produce the density hereinafter specified. The gravel shall be substantially maintained at optimum moisture during the mixing, spreading, and compacting operations. The density of the compacted material in each course, as determined by AASHTO T-191, shall not be less than 95 percent of the density obtained in the laboratory by AASHTO T-180. The crushed stone shall be compacted across the entire width of application.

The laboratory density shall be obtained as follows. The sample is prepared by removing the aggregate retained at the 3/4 inch sieve and adding aggregate passing the 3/4 inch sieve and retained on the No. 4 sieve in an amount equal to that removed. The sample so prepared is compacted at various water contents in five equal layers in a mold 6 inches in diameter and 7 inches in height. Each layer is compacted by 55 blows of a 10 pound hammer 2 inches in diameter dropped from a height of 18 inches. The density used is the dry weight obtained at the optimum water

content.

The compacted base course shall be tested for depth and any deficiencies corrected by scarifying, placing additional material, mixing, reshaping, and recompacting to specified density, as directed.

The Contractor shall maintain the base course in a satisfactory condition until accepted.

END SECTION

SECTION 32 12 13

ASPHALTIC CONCRETE PAVEMENT

PART 1.00 - GENERAL

1.1 GENERAL PROVISIONS

A. Description. This work shall consist of the replacement of asphalt surface damaged during construction. The asphalt surface course for a 2" overlay shall be Type II asphalt and shall be placed and compacted in accordance with these specifications.

B. Intent of Contract. The intent of the contract is to provide for the construction and completion in every detail of the work described. The bidder is expected to examine carefully the site of the work and all documents pertaining to its construction in order to verify the work conditions and requirements established by the Engineer. The Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications and terms of the Contract.

C. Authority of the Engineer. The Engineer shall decide all questions that may rise as to quality and acceptability of materials furnished, manner of performance and rate of progress of the work, interpretation of specifications or plans relating to the work, and acceptable fulfillment of the contract by the Contractor. Suspension of the work may be ordered by the Engineer if deemed to be in the public interest.

D. Barricades and Warning Signs. The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices. He shall take all necessary precautions to protect the work and to safeguard the public. Streets closed to traffic shall be protected by effective barricades, and obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic properly.

E. Protection and Restoration of Property and Landscape. The Contractor shall be responsible for preserving all public and private property. He shall protect from disturbance or damage all land monuments and property. He shall protect from disturbance or damage all land monuments and property marks until the Engineer has witnessed or otherwise referenced their location.

During the prosecution of the work, the Contractor shall be responsible for all damage or injury to any property that results from any act, omission, neglect or misconduct in his execution of the work. He shall be responsible for all damage or injury due to defective work or materials. Repair or replacement of damaged or injured property shall be at the Contractor's expense and shall be similar or equal to that existing before such damage or injury occurred.

F. Equipment. Design, capacity and mechanical condition of equipment and tools necessary for handling materials and performing all parts of the work shall be approved by the Engineer. Equipment shall be at the job site sufficiently ahead of the start of construction operations to be examined thoroughly and approved.

G. Special Provisions. Any work not covered in these specifications shall be detailed by special provisions or shall be accomplished in accordance with the current standards and specifications of the State Highway Department.

PART 2.00 - BITUMINOUS SURFACE COURSE

2.1 MATERIALS

A. Tack Coat. All materials shall conform with the requirements provided in Section 403, "Materials and Equipment for Bituminous Surface Courses" in the Standard Specifications for Highway Construction of the Arkansas State Highway Commission. In general, a rapid curing cut back or emulsified asphalt will be used for tack coat. Dependent upon the texture of the base and the season of the year that work is being performed, the Engineer will select the particular grade of the type of bituminous material designated that will be used.

B. Surface Course. Shall be Asphaltic Concrete Hot Mix Surface Course, Type 2, as provided in the Standard Specifications for Highway Construction of the Arkansas State Highway Commission.

2.2 APPLICATION OF BITUMINOUS SURFACE COURSE

A. Tack Coat. The tack coat is applied to provide bond between existing surface and the construction to be superimposed. Immediately preceding the tack coat application, the surface to be treated shall be swept free of dust, dirt and loose or foreign material, cleaning but not loosening or dislodging the top embedded aggregate. Layers or pockets of dirt or other materials which do not form an integral part of the surface to be treated shall be removed. Such sweeping operations shall be performed by mechanical methods. If deemed necessary by the Engineer, the surface shall be sprinkled with water and given an additional sweeping with hand brooms, it being the intent of these specifications that the surface to be treated be free as practicable of dirt, or pockets of other loose material. The sweeping and cleaning operations shall be carried only far enough to advance of the application of the bituminous material to insure the surface being properly prepared at the time of application. When the existing surface is an old concrete pavement, all joints and crack filler shall be removed from the surface.

The tack coat shall be applied by means of a pressure distributor in the same manner as outlined above for the application of prime coat. When emulsified asphalt is used, it shall be diluted with water in order to insure complete coverage and adhesion to the pavement surface. The rate of application shall be from 0.03 gallons per square yard to 0.10 gallons per square yard as designated by the Engineer. The tack coat shall be applied sufficiently in advance of the wearing surface to allow the proper curing of the bituminous material but shall not be applied so far in advance as to lose its adhesiveness as a result of being covered with dust or foreign material. If the tack coat becomes damaged or covered with foreign material prior to placing the wearing surface, such areas shall be cleaned as necessary and re-treated at the expense of the Contractor.

B. Asphaltic Concrete Hot-Mix Surface Course. This item shall consist of an asphaltic concrete wearing surface composed of a compacted mixture of mineral aggregate and asphalt cement constructed on the completed road bed in accordance with these specifications and in conformity with the lines, grades, completed thickness and typical cross sections shown on the plans.

(1) Prior to the arrival of the mixture at the work, the prepared surface, primed or tack coated as specified, shall be cleaned of all loose and foreign material. The mixture shall not be placed on the surface which shows evidence of moisture.

(2) Transporting. The mixture shall be transported from the paving plant to work in tight vehicles previously cleaned of foreign materials. Each load shall be covered with canvas or other suitable material of sufficient size to retard loss of heat and to protect it from the weather condition. The cover shall extend at least 12 inches over the sides and ends of the truck bed and shall be securely fastened. When the mixture is being hauled more than fifteen miles or when the pavement is being placed after November first or prior to April first, the sides of the vehicles shall be suitably insulated to retard loss of heat. The insulating material shall be at least 3/4 inch thick and shall cover ends, sides and bottom of the truck bed. No loads shall be sent out so late in the day as to interfere with spreading and compacting the mixture during daylight hours unless artificial light, satisfactory to the Engineer, is provided.

The mixture shall be delivered at a temperature of 275 degrees F. to 325 degrees F. It shall be placed only upon a base which shows no evidence of free moisture, and only when weather conditions are suitable. The Engineer may, however, permit work of this character to continue when overtaken by sudden rains to utilize materials which may be in transit from plant at the time, provided the finished pavement otherwise meets specification requirements.

(3) Spreading and Finishing. The mixture shall be laid upon the prepared surface, spread and struck off to the grade and elevation established. Bituminous pavers shall be used to distribute the mixture either over the entire width or over such partial

width as may be practicable.

Hand spreading will be permitted only on small turn-outs or other small areas inaccessible to the spreader. On normal two-lane roads the mixture shall be spread and finished in one-half widths. Unless two machines are employed, the spreader shall alternate between the two half widths with such frequency that the second half width shall be laid the next day after the first half width is laid.

The finishing machine shall be kept in good mechanical condition and adjustment. All worn or defective parts shall be replaced immediately when indicated by improper finish of the surface. Bituminous pavers shall be self-contained, power propelled units, provided with an activated screen or strike-off assembly, heated if necessary, and capable of spreading and finishing courses of bituminous plant mix material in land widths applicable to the specified typical section and thicknesses shown on the plans. Pavers used for shoulders and similar construction shall be capable of spreading and finishing courses of bituminous plant mix material widths shown on the plans.

The paver shall be equipped with a receiving hopper having sufficient capacity for a uniform spreading operation. The hopper shall be equipped with a distribution system to place the mixture uniformly in front of the screed.

The screed or strike-off assembly shall effectively produce a finished surface of the required evenness and texture without tearing, shoving or gouging the mixture.

When laying mixtures, the paver shall be capable of being operated at forward speeds consistent with satisfactory laying of the mixture.

(4) Rolling and Density Requirements. The mixture shall be compacted as soon after being spread as it will bear the weight of the rollers without undue displacement.

Rolling shall start longitudinally at the sides and proceed toward the center of the roadway, overlap-

ping on successive trips by at least one-half the width of the roller. When paving an echelon or abutting a previously placed lane, the longitudinal joint shall be rolled first followed by the regular rolling procedure. The mixture shall be continuously rolled until all roller marks are eliminated and no further compaction is possible. The motion of the roller shall be slow enough to avoid displacement of the mixture. Displacement as a result of reversing the direction of the roller, or from any other cause, shall at once be corrected by the use of rakes and additional material where required. To prevent adhesion of the mixture to the roller, the wheels shall be kept properly moistened with water and/or oil.

For surface course, breakdown rolling shall be accomplished with the three-wheel or tandem steel wheeled roller as directed. The pneumatic tired roller shall follow as soon as possible and shall be operated to the end that final rolling with the tandem steel wheeled roller shall be performed before excessive loss of heat occurs in the mix.

Pneumatic tired rollers, when used for breakdown rolling, shall exert an average ground contact pressure of 35 to 55 pounds per square inch. When used for intermediate rolling it shall exert an average contact pressure of 80 to 100 pounds per square inch. The Contractor shall furnish to the Engineer charts or tabulations showing the contact area pressure and tire pressure for each pneumatic roller furnished.

The contact pressure shall be considered excessive, even within the specified range, when lateral displacement of the mix occurs and shall be lowered in accordance with the stability of the mix as directed.

All jobs requiring compaction of bituminous mixtures shall have a minimum of one tandem steel wheeled roller and one pneumatic roller. All rollers shall meet State Highway Standards. All final rolling shall be done with a tandem steel wheeled roller.

Final approval of roller and rolling sequences will be based upon satisfactory performance and the

ability to compact the asphaltic mixtures to a specified density and surface requirements.

The finished bituminous courses shall be compacted to the following densities:

(a)	Asphaltic Concrete Hot-Mix Surface Course	Not less than 92% of theoretical density.
(b)	Asphaltic Concrete Hot-Mix Binder Course	Not less than 90% of theoretical density.
(c)	Dense Graded Hot-Mix Surface Course	Not less than 90% of theoretical density.
(d)	Dense Graded Hot-Mix Binder Course	Not less than 90% of theoretical density.
(e)	Sand-Asphalt Hot-Mix Surface Course	Not less than 90% of theoretical density.
(f)	Sand-Asphalt Hot-Mix Base Course	Not less than 95% of the density obtained in the laboratory.
(g)	Hot-Mix Asphalt Stabilized Base Course	Not less than 97% of the density obtained in the laboratory.

(5) Joints. Placing of the bituminous paving shall be as continuous as possible. Roller shall not pass over the unprotected end of a freshly laid mixture unless authorized by the Engineer. Transverse joints shall be formed by cutting back on the previous run to expose the full depth of the course. When directed by the Engineer, a brush coat of bituminous material shall be used on contact surfaces on transverse joints just before additional mixture is placed against the previously rolled material.

(6) Surface Tests. Before the completion of the rolling, the surface shall be tested for thickness and contour and corrected as necessary while still hot by adding or removing material, restoring and rerolling until the finished surface complies with the test requirements.

The finished surface, when checked with a ten foot

straight edge placed parallel to the centerline, shall show no variation more than 1/8 inch for surface courses.

Such portions of the completed surface as are found defective shall be removed and replaced with suitable material by the Contractor at no expense to the Owner.

(7) Temperature Limitations. Hot-mix bituminous material shall not be mixed or placed when the air temperature in the shade is below 40 degrees F., or when there is frost in the base or subgrade, or at any other time when weather conditions are unsuitable for the type of material being placed. When approved by the Engineer, bituminous material may be placed when the lifts are in excess of 20 inches compacted thickness and the air temperature in the shade is 35 degrees F., or higher.

END OF SECTION

SECTION 32 13 14

CONCRETE CURB & GUTTER

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section shall consist of the construction of Concrete Curb and Gutter at the locations shown on the Plans or as directed by the Engineer.

1.2 STANDARD SPECIFICATIONS

A. Materials and work for Concrete Curb and Gutter shall be in accordance with SECTION 634 - CURBING of the AHTD Standard Specifications.

PART 2 - PRODUCTS

2.1 FORMS

A. Article 634.03(b) of AHTD Standard Specifications shall be augmented as follows:

1. The work shall be performed with a mechanical slip-form paver.

PART 3 - EXECUTION

3.1 PLACING AND FINISHING

A. That part of Article 634.03(c)(1) of AHTD Standard Specifications which relates to placing and finishing shall be replaced by the following requirements:

1. Concrete shall be dry enough to permit use of slip-form paver; it shall not be so dry but what adequate tamping and spading will ensure adequate compaction and surfaces free from honeycomb. The subgrade shall be wetted before placing the concrete.

2. The surface shall be shaped to the required section, finished with a steel trowel, and lightly brushed to produce a uniform surface of slightly roughened

texture. The exposed edge of the gutter at the front form, and the exposed edge of the curb at the back form, shall be edged with an edging tool having a radius of approximately 1/8 inch.

3. If templates are used to control shape, they shall be of metal.

3.2 JOINTS

A. Article 634.03(d), Joints, AHTD Standard Specifications, for Concrete Curb and Concrete Curb and Gutter shall be deleted in its entirety, and substituted therefore shall be the following:

1. Premolded expansion joint material shall be placed between the curb and gutter and any concrete construction that otherwise would abut against it. Joint material shall be 1/2 inch thick. Premolded joint material shall be of the nonextruding type, and shall conform to AASHTO designation M 213.

2. Expansion joints shall be constructed at the ends of curb and gutter, at the points of curvature of returns to streets and driveways. Intermediate expansion joints shall be constructed so that the maximum distance between joints is forty (40) feet. The joint material shall extend entirely through the curb and gutter section and, before the joint can be considered completed, must be trimmed to curb and gutter section.
3. Contraction joints shall be 1/8" to 3/8" x 1-1/2" and shall be placed at ten (10) foot intervals between expansion joints. Contraction joints shall be formed by sawing, unless otherwise specified, and sealed.

4. Joints shall be normal to the grade for gutter and the centerline of the roadway. Where curb and gutter is constructed adjacent to rigid pavement, the location and width of joints shall coincide with those in the pavement, where practicable. All joints shall be sealed with material meeting the requirements of SECTION 501 - PORTLAND CEMENT CONCRETE PAVEMENT, Article 501.03(h) of the AHTD Standard Specifications.

3.3 PLACEMENT

A. Concrete Curb and Concrete Curb and Gutter shall be one-course, monolithic, between expansion joints.

END OF SECTION

SECTION 32 17 23

PAVEMENT MARKINGS

PART 1.00 - GENERAL

1.1 CONDITIONS

A. Requirements of the conditions of the Contract apply to all work under this Section.

1.2 SCOPE

A. Related work specified elsewhere includes the following:

1. Pavement Marking

1.3 QUALIFICATIONS

A. Applicator shall have a minimum of five years experience at airfield markings and layout. Applicator must be equipped with an airless sprayer.

PART 2.00 - PRODUCTS

2.1 MATERIALS

A. Paint shall meet federal specification 1952-B for traffic marking paint.

B. Glass beads shall be spherical in shape and meet gradation "A".

2.2 TOOLS

A. Paint shall be applied with an airless sprayer capable of meeting the application rate.

PART 3.00 - EXECUTION

3.1 PREPARATION

A. Pavement shall be cleans of any dust, mud, laitance, oils or grease.

B. Pavement shall be dry.

3.2 APPLICATION

A. Paint shall be applied at the rate of 115 square foot per gallon. Glass beads shall be dispensed in the wet paint at a rate of 7 pounds/gallon.

B. Line to be straight and true to within ½" in 50 feet. Edges should be true without any drift.

C. Manufacturer's limitation for temperature shall be followed.

END OF SECTION

SECTION 32 92 19

SEEDING & MULCHING

PART 1.00 - GENERAL

1.1 This item shall consist of furnishing and applying lime, fertilizer, seed, mulch cover, asphalt and water in accordance with these specifications at locations shown on the plans or as needed. The work under this item shall be accomplished as soon as practicable after the grading in an area has been completed in order to deter erosion.

PART 2.00 - MATERIALS

2.1 Materials:

A. Lime shall be agricultural grade ground limestone or equivalent,

B. Fertilizer shall be a commercial grade, uniform in composition, free flowing, and suitable for application with mechanical equipment. It shall be delivered to the site in labeled containers conforming to current Arkansas fertilizer laws and bearing the name, trademark, and warranty of the producer.

C. Except as modified herein, the seed shall comply with the current rules and regulations of the Arkansas State Plant Board and the germination test shall be valid on the date the seed is used. It shall have a minimum of 98% pure seed and 85% germination by weight, and shall contain no more than 1% weed seeds. A combined total of 50 noxious weed seeds shall be the maximum amount allowed per pound of seed with the following exceptions: Johnson grass seed, wild onion seed, wild garlic seed, field bindweed seed, or nut grass seed will not be allowed in any amount. Seed shall be furnished in sealed, standard containers. Seed which has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable.

Legumes shall be inoculated with an approved culture as recommended by the manufacturer, just prior to seeding. Fescue seed shall be certified endophyte free.

Seed shall be composed of the varieties and amounts by weight as shown below.

Seed planted between June 16 and August 31 may require more

water than that specified in subsection 620.03 (f) in order to survive. Therefore, watering will continue after germination until growth is established.

D. Mulch cover shall consist of straw from threshed rice, oats, wheat, barley, or rye; of wood excelsior; or of hay obtained from various legumes or grasses, such as lespedeza, clover, vetch, soybeans, bermuda, carpet sedge, bahia, fescue, or other legumes or grasses; or a combination thereof. Mulch shall be dry and reasonably free Johnson grass or other noxious weeds, and shall not be excessively brittle or in an advanced state of decomposition. All material will ne inspected and approved prior to use.

Seed Variety:	Lbs./Acre
March 15 - June 15	
Bermuda Grass (common) unhulled	10
Bermuda Grass (common) hulled	5
Lespedeza (Korean)	30
June 16 - August 31	
Bermuda Grass (common) unhulled	10
Bermuda Grass (common) hulled	5
Weeping Love Grass (Eragrostis Curvula)	10
September 1 - October 31	
Rye Grass (Annual)	50
Crimson Clover (Dixie)	20
Bermuda Grass (common) unhulled	15

E. Asphalt in mulch cover shall be such quality that the mulch cover will be bound together to form a cover mat that will stay intact under normal climatic conditions. The quality and performance of the asphalt will be determined and certified by the Engineer.

Other materials that will function equivalent to asphalt as a tackifier for mulch cover will be permitted as a substitute for asphalt subject to the approval of the Engineer.

F. Water shall be of irrigation quality and free of impurities that would be detrimental to plant growth.

PART 3.00 - CONSTRUCTION REQUIREMENTS

3.1 Construction Requirements:

A. Seedbed Preparation. Areas to be seeded shall be dressed to

the shape and section shown on the plans. If the plans call for replacing topsoil, this shall be done prior to any preparations for seeding. Before beginning the seedbed preparation, soil samples shall be obtained from each major soil area for lime and fertilizer requirements analysis.

Lime, at the rate determined by the lime requirements test, shall be uniformly spread on areas to be seeded prior to their being roughened or scarified. The seedbed shall be thoroughly pulverized by means of disk harrows or other approved methods, thoroughly mixing lime and soil to a depth of not less than 4" (2" for slopes 4:1 or steeper) below finish slope elevation. Regardless of pulverizing method used, the soil shall be broken with the contour of the slope. Objectionable foreign matter shall be removed and the soil left in a suitable horticultural condition to receive the fertilizer and seed. Water may be applied before, during, and after seedbed preparation, as directed by the Engineer, in order to maintain the desired moisture content in the soil.

When no lime is required, seedbed preparation shall be accomplished as specified above regardless of the method used in the distribution of fertilizer, seed, and mulch cover.

B. Fertilization. If soil test show fertilizer is needed, fertilizer shall be applied at the rate of 800 pounds per acre of 10-20-10, or the equivalent amount of plant food. Fertilizer shall be uniformly incorporated into the soil alone or in conjunction with the required lime. If the contractor so elects, the fertilizer may be drilled into the soil or combined with the seed in the hydro-seeding operation.

C. Seeding.

1. Broadcasting. Broadcast sowing may be accomplished by hand seeders or by approved power equipment. Either method shall result in uniform distribution and no work shall be performed during high winds. The area seeded shall be lightly firmed with a cultipacker immediately after broadcasting.

2. Drilled in Rows. When seed is drilled in rows, the rows shall be horizontal (parallel to contour lines). Fertilizer and seed shall not be drilled together and shall not be mixed.

3. Hydro-seeding. If a hydro-seeder is used for seeding, fertilizer and seed may be incorporated into one operation but a maximum of 800 pounds of fertilizer shall be permitted for each 1500 gallons of water. If the owner

so elects, the fertilizer may be applied during preparations of the seedbed. The area shall be lightly firmed with a cultipacker immediately prior to hydro-seeding.

D. Mulch Cover. Mulch cover shall be applied at the rate of 4000 pounds per acre immediately after seeding and shall be spread uniformly over the entire area. If this method is used, no change in application rates will be allowed. In its final position, the asphalt tacked mulch shall loose enough to allow air to circulate, but compact enough to partially shade the ground and reduce the impact of rainfall on the surface of the soil. Care shall be taken to prevent asphalt materials from discoloring or marking structures, pavements, utilities, or other plant growth.

E. Asphalt. Immediately following or during the application of the mulch cover on seeded areas, asphalt shall be applied at the rate of approximately 0.05 gallon per square yard. Application shall be made from a pressure distributor, so equipped to insure constant and uniform distribution. The use of asphalt may be reduced or eliminated at selected locations when directed by the Engineer.

F. Water. After application of the mulch cover, water shall be applied in sufficient quality, to thoroughly moisten the soil to the depth of pulverization and then as necessary to germinate the seed.

The owner shall apply water in an amount such that, in conjunction with any rainfall, the seeded and mulched areas will receive an amount equivalent to a minimum of 1" of water each week beginning the week after seeding and continuing for a minimum of three (3) weeks. One inch of water is equivalent to 26,136 gallons per acre.

END OF SECTION

SECTION 32 93 00

LANDSCAPING

PART 1 - GENERAL

1.1 GENERAL

A. Work includes excavating, filling and fine grading.

B. The Contractor shall submit samples of top soil to be used around building areas.

C. Seeding shall be done in accordance with SECTION 32 92 19.

PART 2 - SHRUBS

2.1 GENERAL

A. This item shall consist of furnishing and installing trees, fertilizer and water in accordance with these specifications at locations shown on the plans or as directed. The Contractor shall provide and install 11 shrubs equally spaced on each side of the main entrance. The shrubs shall be of the variety selected by the owner. The area shall be covered with fabric to prevent voluntary plants from developing. The fabric shall be covered with 3" of mulch treated against termites. Provide a metal border between shrubs and lawn/sidwalk. Contractor shall provide low growing Juniper plants on each island in parking area. These areas to be covered in mulch and fabric.

2.2 METHODS

A. The work under this item shall be accomplished as soon as practicable after. All plants and shrubs shall be installed in accordance with the manufactures instructions.

B. Water shall be provided to the plants and shrubs in sufficient quantities and as frequently as necessary to insure survival of the plants and shrubs.

C. Plants and shrubs shall be set prior to October 1st or after April 1st.

D. Remaining lawn to be seeded and mulched with five (5) pounds per acre of common bermuda seed and Scott's Turf Builder Rapid Grass at 130 pounds per acre. Top dress with 200#/acre 19-19-19 fertilizer and 200#/acre pelleted lime.

END OF SECTION

SECTION 33 41 00

STORM DRAINAGE

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Scope of Work. This work shall consist of a subsurface site drainage system constructed in accordance with these specifications and in reasonably close conformity with the lines, grades, and details shown on the plans or established by the Engineer.

B. Intent of Contract. The intent of the contract is to provide for the construction and completion in every detail of the work described. The bidder is expected to examine carefully the site of the work and all documents pertaining to its construction in order to verify the work conditions and requirements established by the Engineer. The Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications and terms of the Contract.

C. Authority of the Engineer. The Engineer shall decide all questions that may rise as to quality and acceptability of materials furnished, manner of performance and rate of progress of the work, interpretation of specifications or plans relating to the work, and acceptable fulfillment of the contract by the Contractor. Suspension of the work may be ordered by the Engineer if deemed to be in the public interest.

D. Barricades and Warning Signs. The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices. He shall take all necessary precautions to protect the work and to safeguard the public. Streets closed to traffic shall be protected by effective barricades, and obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic properly.

E. Protection and Restoration of Property and Landscape. The Contractor shall be responsible for preserving all public

and private property. He shall protect from disturbance or damage all land monuments and property. He shall protect from disturbance or damage all land monuments and property marks until the Engineer has witnessed or otherwise referenced their location.

During the prosecution of the work, the Contractor shall be responsible for all damage or injury to any property that results from any act, omission, neglect or misconduct in his execution of the work. He shall be responsible for all damage or injury due to defective work or materials. Repair or replacement of damaged or injured property shall be at the Contractor's expense and shall be similar or equal to that existing before such damage or injury occurred.

F. Construction Stakes, Lines and Grades. The Engineer shall set reference marks establishing lines and grades for the work and he shall furnish such reference and bench marks as may be necessary to lay out the work correctly. The Contractor shall maintain these reference and bench marks and use them to lay out the work he is to perform under this contract. The finished work must conform to the reference and bench marks furnished by the Engineer.

The Contractor shall notify the Engineer in writing not less than five (5) days before reference and bench marks are required. No claims shall be made because of delays if the Contractor fails to give such notice.

The Contractor shall carefully preserve reference and bench marks. If such stakes and bench marks become damaged, lost, displaced or removed by the Contractor, they shall be reset at his expense.

G. Equipment. Design, capacity and mechanical condition of equipment and tools necessary for handling materials and performing all parts of the work shall be approved by the Engineer. Equipment shall be at the job site sufficiently ahead of the start of construction operations to be examined thoroughly and approved.

H. Special Provisions. Any work not covered in these specifications shall be detailed by special provisions or shall be accomplished in accordance with the current standards and specifications of the State Highway Department.

PART 2 - SITE DRAINAGE STRUCTURES & APPURTENANCES

2.1 PIPE CULVERT

A. Description. Under this item, culvert pipe conforming to these specifications and of the type, size and dimensions shown on the plans, shall be furnished and placed as directed. Materials and design requirements for each type shall be prescribed for the several types hereafter designated.

B. Reinforced Concrete Pipe.

1. The pipe shall consist of Portland Cement Concrete in which steel has been imbedded in such manner that the concrete and steel act together.

2. Design.

(a) Pipe shall be circular in shape.

(b) The shell thickness and amount of reinforcing shall be not less than that prescribed in the current ASTM Standards C-76 for round and C-507 for elliptical. The class of pipe to be furnished will be shown on the plans.

(c) The ends of the pipe shall be of such design that the pipe, when laid, shall form a continuous conduit with a smooth and uniform interior surface.

3. Workmanship and Finish.

(a) Pipe shall be substantially free from fractures, large or deep cracks and surface roughness. The planes of the ends of the pipe shall be perpendicular to the longitudinal axis.

(b) Variation of the internal diameter shall not exceed one prcent for pipe of thirty-six inch diameter or less nor exceed three-quarters of one percent for larger pipe. The shell thickness shall not be less than that intended in the design by more than five percent at any point.

(c) The underrun in length of pipe from that spec-

ified shall be not more than one-eighth inch per foot with a maximum of one-half inch in any length of pipe.

4. Marking.

(a) The date of manufacture and the name or trademark of the manufacturer shall be clearly stenciled on the inside of each section of pipe.

(b) Circular pipe with elliptical reinforcing shall have the word "Top" or "Bottom" clearly stenciled on the inside of the pipe at the correct place to indicate the proper position when laid.

5. Strength Tests.

(a) The pipe shall meet the requirements hereinafter specified when tested for crushing strength by the three-edge bearing method.

(b) The minimum strength in pounds per foot of laying length shall be that given in the current ASTM Standards C-76 for the class specified.

(c) The manufacturer shall furnish at the plant all facilities necessary to make crushing strength tests.

6. Absorption Test. The maximum average absorption shall not exceed eight percent by weight.

7. Inspection. In addition to the above tests, the pipe shall be inspected for defects resulting from poor manufacture or handling, and may be rejected on account of any of the following:

(a) Injurious cracks or fractures passing through the shell.

(b) Defects that indicate imperfect mixing and molding.

(c) Surface defects indicating honeycombed or open texture.

8. Flared End Sections for Pipe Culverts. The manufacture and furnishing of flared end sections for pipe culverts shall comply with Subsection 2.1 B above for concrete pipe. The flared end sections shall be of the same material as the culvert pipe for a given installation.

   (a) Reinforced concrete flared end sections for circular, arch, or elliptical pipe shall comply with the applicable requirements for Class III or higher classes of pipe. The area of reinforcing for circular pipe flared end sections shall be according to the requirements for elliptical reinforcing for Class III pipe for the appropriate wall thickness.

   (b) Concrete for curtain walls shall have a compressive strength of 3000 psi.

   (c) Reinforcing steel for curtain walls shall be grade 60.

   (d) In lieu of constructing concrete curtain walls in place, the Contractor may elect to precast the units. Precast units shall comply with all applicable requirements of Subsection 606.02(b) for concrete pipe.

C. Plastic Pipe (HDPE)

1. Plastic Pipe (HPE) shall be in compliance with Sure-Lok F477 pipe and shall have a smooth interior and annular exterior corrugations.

*4-to10-inch (100 to 250 mm) shall meet AASHTO M252, Type S.
*12 to 48 inch (300 to 1200 mm) shall meet AASHTO M294-Type S.
*54 and 60 inch (1350 and 1500 mm) shall meet AASHTO MP7-97.
*Manning's 'n' value for use in design shall not be less than 0.010.

   (a) Joint Performance. Pipe shall be joined with the Sure-Lok (bell and spigot) joint meeting AASHTO M252, AASHTO M294, or MP7-97. The joint shall be silt tight and non-rated watertight. Gaskets shall be made of polyisoprene meeting the requirements of ASTM F477 with the addition that the gaskets shall not have any

visible cracking when testing according to ASTM D1149 after 72 hour exposure in 50 PPHM ozone at 104° F. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant supplied by the manufacturer shall be used on the gasket and bell during assembly.

(b) Fittings. Fittings shall conform to AASHTO M252, AASHTO M294 or AASHTO MP7-97. Fabricated fittings, where accessible, shall be welded on the interior and exterior at all junctions.

(c) Material Properties. Pipe and fitting materials shall be high-density polyethylene meeting ASTM D3350 minimum cell classification 324420C for 4 through 10 inch (100 to 250 mm) diameters or 335420C for 12 through 60 inch (1350 and 1500 mm) diameters.

(d) Installation. Installation shall be in accordance with ASTM D2321 with the exception that minimum cover in trafficked areas for 4 to 48 inch (100 to 1200 mm) diameters shall be one (0.3m) and for 54 and 60 inch (1350 and 1500 mm) diameters shall be 1.5 ft. (0.5m). Provide Class II bedding in accordance with ASTM D2321.

D. Construction Methods.

1. Depth of Excavation.

(a) All excavation shall be carried to a depth where foundation materials are satisfactory to the Engineer regardless of the elevations shown on the plans and all foundations shall be inspected and approved by the Engineer prior to placing any part of the structure.

(b) Pipe culverts under the roadbed shall be so placed that the minimum depth of cover at the shoulder for pipe of any diameter or type shall be not less than one foot.

2. Forming Bed for Pipe.

(a) Where the pipe is to be laid below the ground

line, a trench shall be excavated to the required depth and to the minimum width practicable for working conditions. The bottom of the trench shall be shaped as shown on the plans to conform to the bottom of the pipe to afford a uniformly firm bed throughout its entire length. Recesses shall be excavated to receive the bells where bell and spigot pipe is used. Any soft or yielding material shall be removed and replaced with gravel or other suitable material, which shall be compacted thoroughly into place with mechanical tampers. Where rock is encountered, the trench shall be excavated to a minimum depth as shown on the plans and backfilled with suitable material, which shall be tamped thoroughly with mechanical tampers.

(b) Where pipe is not laid in a trench, a uniformly firm bed shall be made as specified above for the bottom of the pipe.

3. Laying Pipe.

(a) Concrete pipe shall be laid with hubs or bells upgrade, spigot ends fully entered into the adjacent hub or bell, and true to lines and grades given.

(b) Any pipe which is not in true alignment or which shows any settlement after laying shall be taken up and relaid by the Contractor without extra compensation. All reinforced concrete pipe shall be laid with flexible plastic gasket joints. The joint material shall be equal to "Ram-Nek" as manufactured by K.T. Snyder Co., Inc., Houston, Texas.

4. Backfilling.

(a) The backfilling around the pipe shall be done with selected material which is free from large lumps or clods and the material shall be placed alongside the pipe in layers not to exceed four inches in depth and thoroughly compacted by hand tamping with mechanical tampers for the full depth of the pipe. Special care shall be taken to compact the fill under the haunches of the pipe.

(b) The fill shall be brought up evenly on each side for the full length of the pipe to avoid displacement. The berm of thoroughly compacted material on each side of the pipe shall be as wide as the outside diameter of the pipe.

2.2 GRATE INLETS, CURB INLETS, AND JUNCTION BOXES (POURED IN PLACE OR BLOCK CONSTRUCTION)

1. Description: This item shall consist of the construction of drop inlets, curb inlets or junction boxes in accordance with these specifications and in conformity with the locations, lines and grades shown on the plans or as directed by the Engineer.

2. Materials.

(a) The concrete shall have a minimum compressive strength of 3000 psi. The reinforcing steel shall conform to the specifications listed in Table I immediately following this Section.

(b) Rings and covers, grates and frames, and other appurtenances shall be made from cast iron of good quality and of such character as shall make the metal of the castings strong, tough and of even grain. The castings shall be smooth, free from scale, and from cracks or other defects that might make them unfit for the use of which they were intended.

3. Construction Methods:

(a) Concrete shall be proportioned, mixed, placed, finished and cured in accordance with the requirements "Class S Concrete" as provided in Section 802 of the Arkansas State Highway Commission.

(b) Floors of drop inlets, curb inlets of junction boxes shall be poured at least 24 hours before beginning construction of the walls. The Engineer may require a longer period between the pouring of the floors and the construction of the walls if, in his judgment, weather conditions make a longer period necessary. Floors shall be constructed to full outside dimension.

(c) Walls shall be constructed upon the floor and shall form a tight joint with the floor and around the inlet and outlet. Inlet and outlet pipes shall be cut flush with the inside surface of the walls. If it is necessary to carry sanitary sewers or other utility lines through the masonry, they shall be formed about that they will not be damaged in any way. Faces of curb inlets shall be poured as part of the curb, as shown on the plans, in order to preserve the proper alignment.

(d) All castings shall be set accurately to the finished elevations so that no subsequent adjustment will be necessary. They shall be set in full mortar bed with firm bearing on the walls or securely fastened to the forms so no movement will occur when concrete is poured around them.

(e) All concrete and cement finish shall be placed and maintained after disposition at a temperature above 70 degrees for seventy-two hours or above 50 degrees for one hundred twenty hours. If two (2) pounds of calcium chloride is added for each sack of cement, the time for maintaining these temperatures may be reduced 50%.

(f) No concrete shall be poured until the Engineer has inspected the forms, the placing of reinforcing steel and castings and has given his permission to proceed with the pouring.

(g) Backfill shall be thoroughly compacted by tamping in not more than four inch layers by means of mechanical hand tamps.

TABLE I

TYPE	SPECIFICATION
Billet-Steel Bars for Concrete Reinforcement	AASHO M31, ASTM A15, or CSA G30.1
Rail-Steel Bars for Concrete Reinforcement	AASHO M42, ASTM A16, or CSA G30.2
Axle-Steel Bars for Concrete Reinforcement	AASHO M53 or ASTM A160
Fabricated Steel Bar or Rod Mats for Concrete Reinforcement	AASHO M54, ASTM A184, or CSA G30.4
Welded-Steel Wire Fabric for Concrete Reinforcement	AASHO M55, ASTM A185 or CSA G30.5

Dowell and deformed bars shall conform to the requirements of AASHO M31 or M42, ASTM A15 or A16, or CSA G30.1 or G30.2, except that rail steel shall not be used for tiebars that are to be bent and restraightened during construction.

END OF SECTION

APPENDIX A -

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Stormwater Pollution Prevention Plan (SWPPP) for Construction Activity for Small Construction Sites

National Pollutant Discharge Elimination System (NPDES) General Permit # ARR150000

Prepared for:

Independence County
For
Senior Citizens Center

Date:
11/29/2022

Prepared by:

Miller-Newell Engineers, Inc.
P.O. Box 705
Newport, AR 72112

Revised date: 10/20/2016

Project Name and Location: Independence County Senior Citizens Center, Batesville, AR

Property Parcel Number (*Optional*):

Operator Name and Address: Independence County, Arkansas

A. Site Description

a. Project description, intended use after NOI is filed: Land to be developed for senior citizens center.

b. Sequence of major activities which disturb soils: Strip site and fill to building subgrade.

c. Total Area: 4 Ac Disturbed Area: 4 Ac

B. Responsible Parties

Be sure to assign all SWPPP related activities to an individual or position; even if the specific individual is not yet known (i.e. contractor has not been chosen).

Individual/Company	Phone Number	Service Provided for SWPPP (i.e., Inspector, SWPPP revisions, Stabilization Activities, BMP Maintenance, etc.)
Ronnie Byers, County Road Foreman	870-834-7327	Stabilization Activities
		BMP Maintenance

C. Receiving Waters

a. The following waterbody (or waterbodies) receives stormwater from this construction site: Polk Bayou

b. Is the project located within the jurisdiction of an MS4? ☐ Yes ☐ No

i. If yes, Name of MS4:

c. Ultimate Receiving Water:

☐ Red River
☐ Ouachita River
☐ Arkansas River
☐ White River
☐ St. Francis River
☐ Mississippi River

D. Site Map Requirements (Attach Site Map):

a. Pre-construction topographic view;

b. Direction of stormwater flow (i.e., use arrows to show which direction stormwater will flow) and approximate slopes anticipated after grading activities;
c. Delineate on the site map areas of soil disturbance and areas that will not be disturbed under the coverage of this permit;
d. Location of major structural and nonstructural controls identified in the plan;
e. Location of main construction entrance and exit;
f. Location where stabilization practices are expected to occur;
g. Locations of off-site materials, waste, borrow area, or equipment storage area;
h. Location of areas used for concrete wash-out;
i. Location of all surface water bodies (including wetlands) with associated natural buffer boundary lines. Identify floodplain and floodway boundaries, if available;
j. Locations where stormwater is discharged to a surface water and/or municipal separate storm sewer system if applicable,
k. Locations where stormwater is discharged off-site (should be continuously updated);
l. Areas where final stabilization has been accomplished and no further construction phase permit requirements apply;
m. A legend that identifies any erosion and sediment control measure symbols/labels used in the site map and/or detail sheet; and
n. Locations of any storm drain inlets on the site and in the immediate vicinity of the site.

E. Stormwater Controls

a. Initial Site Stabilization, Erosion and Sediment Controls, and Best Management Practices:

i. Initial Site Stabilization: 12/5/2022

ii. Erosion and Sediment Controls: 12/5/2022

iii. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the operator will replace or modify the control for site situations: ☐ Yes ☐ No

If No, explain: _____

iv. Off-site accumulations of sediment will be removed at a frequency sufficient to minimize off-site impacts: ☐ Yes ☐ No

If No, explain: _____

v. Sediment will be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%: ☐ Yes ☐ No

If No, explain: N/A

vi. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges: ☐ Yes ☐ No

If No, explain: _____

vii. Off-site material storage areas used solely by the permitted project are being covered by this SWPPP: ☐ Yes ☐ No

If Yes, explain additional BMPs implemented at off-site material storage area: N/A

b. Stabilization Practices

i. Description and Schedule: Once fill in place steep slopes to be covered with B-stone – seeding and mulching of flatter slopes.

ii. Are buffer areas required? ☐ Yes ☐ No

If Yes, are buffer areas being used? ☐ Yes ☐ No

If No, explain why not: All fill and stabilization to be on site.

If Yes, describe natural buffer areas: _____

iii. A record of the dates when grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included with the plan. ☐ Yes ☐ No

If No, explain: _____

iv. Deadlines for stabilization:

1. Stabilization procedures will be initiated 14 days after construction activity temporarily ceases on a portion of the site.
2. Stabilization procedures will be initiated immediately in portions of the site where construction activities have permanently ceased.

c. Structural Practices

i. Describe any structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site: Storm drain system to be constructed to collect and discharge to two locations. Riprap to be placed to dissipate flow.

ii. Describe Velocity Dissipation Devices: Riprap

iii. Sediment Basins:

Are 10 or more acres draining to a common point? ☐ Yes ☐ No

Is a sediment basin included in the project? ☐ Yes ☐ No

If Yes, what is the designed capacity for the storage?

☐ 3600 cubic feet per acre = : _____

or

☐ 10 year, 24 hour storm = : _____

☐ Other criteria were used to design basin: _____

If No, explain why no sedimentation basin was included and describe required natural buffer areas and other controls implemented instead: Small acreage (4) . Run off collected and discharged at two protected locations.

F. Other Controls

a. Solid materials, including building materials, shall be prevented from being discharged to Waters of the State: ☐ Yes ☐ No

b. Off-site vehicle tracking of sediments and the generation of dust shall be minimized through the use of:

☐ A stabilized construction entrance and exit

☐ Vehicle tire washing

☐ Other controls, describe: _____

c. Temporary Sanitary Facilities: _____

Santicon to be provided.

d. Concrete Waste Area Provided:

☐ Yes

☐ No. Concrete is used on the site, but no concrete washout is provided.
Explain why: Small site. Wash out off site.

☐ N/A, no concrete will be used with this project

e. Fuel Storage Areas, Hazardous Waste Storage, and Truck Wash Areas:
Fuel brought for service in portable tanks.

G. Non-Stormwater Discharges

a. The following allowable non-stormwater discharges comingled with stormwater are present or anticipated at the site:

☐ Fire-fighting activities;
☐ Fire hydrant flushings;
☐ Water used to wash vehicles (where detergents or other chemicals are not used) or control dust in accordance with Part II.A.4.H.2;
☐ Potable water sources including uncontaminated waterline flushings;
☐ Landscape Irrigation;
☐ Routine external building wash down which does not use detergents or other chemicals;
☐ Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents or other chemicals are not used;
☐ Uncontaminated air conditioning, compressor condensate (See Part I.B.12.C of the permit);,
☐ Uncontaminated springs, excavation dewatering and groundwater (See Part I.B.13.C of the permit);
☐ Foundation or footing drains where flows are not contaminated with process materials such as solvents (See Part I.B.13.C of the permit);

b. Describe any controls associated with non-stormwater discharges present at the site: N/A

H. Applicable State or Local Programs: The SWPPP will be updated as necessary to reflect any revisions to applicable federal, state, or local requirements that affect the stormwater controls implemented at the site. ☐ Yes ☐ No

I. Inspections

a. Inspection frequency:

☐ Every 7 calendar days

or

☐ At least once every 14 calendar days and within 24 hours of the end of a storm even 0.25 inches or greater (a rain gauge must be maintained on-site)

b. Inspections:

Completed inspection forms will be kept with the SWPPP.

☐ ADEQ's inspection form will be used (See Appendix B)

or

☐ A form other than ADEQ's inspection form will be used and is attached (See inspection form requirements Part II.A.4.L.2)

c. Inspection records will be retained as part of the SWPPP for at least 3 years from the date of termination.

d. It is understood that the following sections describe waivers of site inspection requirements. All applicable documentation requirements will be followed in accordance with the referenced sections.

i. Winter Conditions (Part II.A.4.L.4)

ii. Adverse Weather Conditions (Part II.A.4.L.5)

J. Maintenance:

The following procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good, effective operating condition will be followed: Site will be continuously monitored and noted issues corrected.

Any necessary repairs will be completed, when practicable, before the next storm event, but not to exceed a period of 3 business days of discovery, or as otherwise directed by state or local officials.

K. Employee Training:

The following is a description of the training plan for personnel (including contractors and subcontractors) on this project:

Employees to be provided information on what to watch for to prevent siltation from leaving site, i.e., maintenance of silt fence, forming of channelized flow, etc. Instruction on corrections and why.

**Note, Formal training classes given by Universities or other third-party organizations are not required, but recommended for qualified trainers; the permittee is responsible for the content of the training being adequate for personnel to implement the requirements of the permit.

Certification

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: _____

Title: Project Manager Date: _____

ARR150000 Inspection Form

Appendix A

Inspector Name: _____ Date of Inspection: _____

Inspector Title: _____

Date of Rainfall: _____ Duration of Rainfall: _____

Days Since Last Rain Event: _____days Rainfall Since Last Rain Event: _____inches

Description of any Discharges During Inspection: _____

Location of Discharges of Sediment/Other Pollutant (specify pollutant & location): _____

_____

Locations in Need of Additional BMPs: _____

Information on Location of Construction Activities

Location	Activity Begin Date	Activity Occuring Now (y/n)?	Activity Ceased Date	Stabilization Initiated Date	Stabilization Complete Date

Information on BMPs in Need of Maintenance

Location	In Working Order?	Maintenance Scheduled Date	Maintenance Completed Date	Maintenance to be Performed By

Changes required to the SWPPP: _____ Reasons for changes: _____

_____ _____

_____ _____

SWPPP changes completed (date): _____

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: _____ Date: _____

Title: _____

BMP Consideration Checklist

Appendix B

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP should be checked as "Not Used" with a brief statement describing why it is not being used.

Note: Appendix B and C do not have to be submitted with the SWPPP. These attachments are for use during the development of the SWPPP.

EROSION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
EC-1 Scheduling	☐	☐	☐	
EC-2 Preservation of Existing Vegetation	☐	☐	☐	
EC-3 Hydraulic Mulch	☐	☐	☐	
EC-4 Hydroseeding	☐	☐	☐	
EC-5 Soil Binders	☐	☐	☐	
EC-6 Straw Mulch	☐	☐	☐	
EC-7 Geotextiles & Mats	☐	☐	☐	
EC-8 Wood Mulching	☐	☐	☐	
EC-9 Earth Dikes & Drainage Swales	☐	☐	☐	
EC-10 Velocity Dissipation Devices	☐	☐	☐	
EC-11 Slope Drains	☐	☐	☐	
EC-12 Stream bank Stabilization	☐	☐	☐	
SEDIMENT CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
SE-1 Silt Fence	☐	☐	☐	
SE-2 Sediment Basin	☐	☐	☐	
SE-3 Sediment Trap	☐	☐	☐	
SE-4 Check Dam	☐	☐	☐	
SE-5 Fiber Rolls	☐	☐	☐	
SE-6 Gravel Bag Berm	☐	☐	☐	
SE-7 Street Sweeping and Vacuuming	☐	☐	☐	
SE-8 Sand Bag Barrier	☐	☐	☐	
SE-9 Straw Bale Barrier	☐	☐	☐	
SE-10 Storm Drain Inlet Protection	☐	☐	☐	
SE-11 Chemical Treatment	☐	☐	☐	
WIND EROSION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
WE-1 Wind Erosion Control	☐	☐	☐	

BMP Consideration Checklist

Appendix B

TRACKING CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
TR-1 Stabilized Construction Entrance/Exit	☐	☐	☐	
TR-2 Stabilized Construction Roadway	☐	☐	☐	
TR-3 Entrance/Outlet Tire Wash	☐	☐	☐	
NON-STORM WATER MANAGEMENT BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
NS-1 Water Conservation Practices	☐	☐	☐	
NS-2 Dewatering Operations	☐	☐	☐	
NS-3 Paving and Grinding Operations	☐	☐	☐	
NS-4 Temporary Stream Crossing	☐	☐	☐	
NS-5 Clear Water Diversion	☐	☐	☐	
NS-6 Illicit Connection/ Discharge	☐	☐	☐	
NS-7 Potable Water/Irrigation	☐	☐	☐	
NS-8 Vehicle and Equipment Cleaning	☐	☐	☐	
NS-9 Vehicle and Equipment Fueling	☐	☐	☐	
NS-10 Vehicle and Equipment Maintenance	☐	☐	☐	
NS-11 Pile Driving Operations	☐	☐	☐	
NS-12 Concrete Curing	☐	☐	☐	
NS-13 Concrete Finishing	☐	☐	☐	
NS-14 Material and Equipment Use Over Water	☐	☐	☐	
NS-15 Demolition Adjacent to Water	☐	☐	☐	
NS-16 Temporary Batch Plants	☐	☐	☐	
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
WM-1 Material Delivery and Storage	☐	☐	☐	
WM-2 Material Use	☐	☐	☐	
WM-3 Stockpile Management	☐	☐	☐	
WM-4 Spill Prevention and Control	☐	☐	☐	
WM-5 Solid Waste Management	☐	☐	☐	
WM-6 Hazardous Waste Management	☐	☐	☐	
WM-7 Contaminated Soil Management	☐	☐	☐	
WM-8 Concrete Waste Management	☐	☐	☐	
WM-9 Sanitary/Septic Waste Management	☐	☐	☐	
WM-10 Liquid Waste Management	☐	☐	☐	

SWPPP Completion Checklist

Appendix C

Yes = Complete
No = Incomplete/Deficient
N/A = Not applicable to project

Yes	No	N/A	A. A site description, including:	Permit Section
			1. Project description, intended use after NOT	Part II.A.4.A.1
			2. Sequence of major activities	Part II.A.4.A.2
			3. Total & disturbed acreage	Part II.A.4.A.3
			B. Responsible Parties: All parties dealing with the SWPPP and the areas they are responsible for on-site.	Part II.A.4.B
			C. Receiving Water.	Part II.A.4.C
			-MS4 Name	Part II.A.4.C
			-Ultimate Receiving Water	Part II.A.4.C
			D.Site Map --- See End of Evaluation Form	Part II.A.4.F
			E. Description of Controls:	
			1. Erosion and sediment controls, including:	
			a. Initial site stabilization	Part II.A.4.G.1.a
			b. Erosion and sediment controls	Part II.A.4.G.1.b
			c. Replacement of inadequate controls	Part II.A.4.G.1.c
			d. Removal of off-site accumulations	Part II.A.4.G.1.d
			e. Maintenance of sediment traps/basins @ 50% capacity	Part II.A.4.G.1.e
			f. Litter, construction debris and chemicals properly handled	Part II.A.4.G.1.f
			g. Off-site storage areas and controls	Part II.A.4.G.1.g
			2. Stabilization practices:	
			a. Description and schedule for stabilization	Part II.A.4.G.2.a
			b. Description of buffer areas	Part II.A.4.G.2.b
			c. Records of stabilization	Part II.A.4.G.2.c
			d. Deadlines for stabilization	Part II.A.4.G.2.d
			3. Structural Practices:	
			-Describe structural practices to divert flows, store flows, or otherwise limit runoff	Part II.A.4.G.3
			a. Sediment basins	Part II.A.4.G.3.a.1
			-Are more than 10 acres draining to a common point? If so, are sediment basins included?	Part II.A.4.G.3.a.1
			-Sediment basin dimensions and capacity description and calculations	Part II.A.4.G.3.a.1
			-If a basin wasn't practicable, are other controls sufficient?	Part II.A.4.G.3.a.1
			b. Velocity dissipation devices concentrated flow from 2 or more acres	Part II.A.4.G.3.b
			F. Other controls including:	
			1. Solid waste control measures	Part II.A.4.H.1
			2. Vehicle off-site tracking controls	Part II.A.4.H.2
			3. Compliance with sanitary waste disposal	Part II.A.4.H.4
			4. Does the site have a concrete washout area controls?	Part II.A.4.H.5
			5. Does the site have fuel storage areas, hazardous waste storage and/or truck wash areas controls?	Part II.A.4.H.6
			G. Identification of allowable non-storm water discharges	Part II.A.4.I
			-Appropriate controls for dewatering, if present	Part I.B.12.C
			H. State or local requirements incorporated into the plan.	Part II.A.4.K

SWPPP Completion Checklist

Appendix C

Yes = Complete
No = Incomplete/Deficient
N/A = Not applicable to project

Yes	No	N/A	I. Inspections	Permit Section
			1. Inspection frequency listed?	Part II.A.4.L.1
			2. Inspection form	Part II.A.4.L.2
			Ours.	
			If not ours, does it contain the following items:	
			a. Inspector name and title	Part II.A.4.L.2.a
			b. Date of inspection.	Part II.A.4.L.2.b
			c. Amount of rainfall and days since last rain event (14 day only)	Part II.A.4.L.2.c
			d. Approx beginning and duration of storm event	Part II.A.4.L.2.d
			e. Description of any discharges during inspection	Part II.A.4.L.2.e
			f. Locations of discharges of sediment/other pollutants	Part II.A.4.L.2.f
			g. BMPs in need of maintenance	Part II.A.4.L.2.g
			h. BMPs in working order, if maintenance needed (scheduled and completed)	Part II.A.4.L.2.h
			i. Locations that are in need of additional controls	Part II.A.4.L.2.i
			j. Location and dates when major construction activities begin, occur or cease	Part II.A.4.L.2.j
			k. Signature of responsible/cognizant official	Part II.A.4.L.2.k
			3. Inspection Records	Part II.A.4.L.3
			4. Winter Conditions	Part II.A.4.L.4
			5. Adverse Weather Conditions	Part II.A.4.L.5
			J. Maintenance Procedures	Part II.A.4.M
			K. Employee Training	Part II.A.4.N
			Signed Plan Certification	Part II.A.7. and Part II.B.10
			D. Site Map showing:	
			1. Pre-construction topographic view	Part II.A.4.F.1
			2. Drainage flow	Part II.A.4.F.2
			3. Approximate slopes after grading activities	Part II.A.4.F.2
			4. Areas of soil disturbance and areas not disturbed	Part II.A.4.F.3
			5. Location of major structural and non-structural controls.	Part II.A.4.F.4
			6. Location of main construction entrance and exit.	Part II.A.4.F.5
			7. Areas where stabilization practices are expected to occur.	Part II.A.4.F.6
			8. Locations of off-site materials, waste, borrow area or storage area.	Part II.A.4.F.7
			9. Locations of areas used for concrete wash-out.	Part II.A.4.F.8
			10. Locations of surface waters on site.	Part II.A.4.F.9
			11. Locations where water is discharged to a surface water or MS4.	Part II.A.4.F.10
			12. Storm water discharge locations.	Part II.A.4.F.11
			13. Areas where final stabilization has been accomplished.	Part II.A.4.F.12

APPENDIX B -

HEALTH DEPARTMENT APPROVAL LETTERS

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Governor Sarah Huckabee Sanders
Renee Mallory, RN, BSN, Interim Secretary of Health
Jennifer Dillaha, MD, Director

February 7, 2023

Wayne Menley
Miller Newell Engineers, Inc.
PO Box 705
Newport, AR 72112
(870) 523-6531
wmenleyengr@aol.com

RE: Project # 126456 PD# 23-0177
Independence County Senior Center
922 Elm Street
Batesville, AR

The plans and specifications for the above referenced project have been reviewed and approved by the Plumbing and Natural Gas Section of the Arkansas Department of Health. No deviations from the accepted plans, specifications, and/or addenda will be permitted during construction except by prior written acceptance. This approval is valid for one (1) year from the date on this letter or this acceptance must be re-validated by contacting this office referring to the above referenced file numbers. **Note:** Plans & specifications will be discarded after completion of the review and in no case be retained for more than a six (6) month period.

This approval letter is for the **plumbing portion of this project only**. The architect, engineer, designer, or agent of the owner shall provide all contractors a copy of this letter. Swimming pools, public water/sewer extensions, fire protection systems, sewage disposal systems, and water wells are regulated by other sections of the Arkansas Department of Health, and are subject to plan review approval before construction begins; and furthermore, this letter shall serve as a provisional approval for food service until an official review is completed, if applicable. For more information for food service requirements, please contact Environmental Health Protection at (501) 661-2171.

All plumbing and gas work shall meet minimum state plumbing code standards and be performed by a duly licensed master plumber. While every effort is made to ensure these plans and specifications meet the plumbing & gas codes, the final approval for this project rests with the onsite inspection of the plumbing & gas systems by the certified plumbing inspector. Please refer to any attached comments with this letter regarding required changes or the need for additional plumbing.

For more information regarding this approval, please contact us at (501) 661-2642.

Sincerely,

Josh Hazlewood

Josh Hazlewood, Plan Review Examiner
Plumbing & Natural Gas Section
Protective Health Codes

CC: Matt Myers, State Plumbing Inspector
Municipal Plumbing Inspector
Environmental Health Specialist, Independence County

Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Governor Sarah Huckabee Sanders
Renee Mallory, RN, BSN, Interim Secretary of Health
Jennifer Dillaha, MD, Director

Tuesday, February 14, 2023

Wayne Menley
PO Box 705
Newport, AR 72112-

RE: Project: 126456
INDEPENDENCE COUNTY SENIOR CITIZENS PROGRAM
922 ELM STREET
BATESVILLE, AR

Dear Sir or Madam:

The plans for the above referenced project have been reviewed by the **Environmental Health Branch-Food Service Section of the Arkansas Department of Health** and were found to be in compliance with the R**ules & Regulations pertaining to Retail Food Establishments.**

- Standard operating procedures that ensure compliance with the requirements of Rules and Regulations are developed or are being developed as specified in 8-201.12 (E).
- Every facility should have procedures for responding to vomiting/diarrheal events that addresses the specific actions employees must take to minimize the spread of contamination and the exposure of employees, consumers, food, and surfaces to vomitus or fecal matter. (2-501.11)
- Each facility must have a verifiable method of informing employees of their duty to report to the symptoms and confirmed diagnoses of foodborne or gastrointestinal illness to the Person-In-Charge (PIC)
- Submit retail food permit app and $35 fee prior to requesting inspection.

A scanned copy of the original plans has been attached to the food establishment account electronically and an email notification has been sent to the Environmental Health Specialist in Independence County.
A pre-operational inspection must be made prior to beginning operations. Please contact the local County Health Unit to arrange for inspection.

This approval is based on the plans submitted to this office and any deviation must be approved in advance.

This approval is void one year from the date of this letter. To revalidate the approval, contact the County Environmental Health Specialist or this office at (501) 661-2171. While every effort is made to ensure these plans and specifications meet the current Retail Food Regulations, the final approval for this project rests on the local Environmental Health Specialist during the pre-opening inspection.

This plan review does not constitute review or approval by any other section or office of the Arkansas Department of Health.

Sincerely,

Khariana Hobbs
Retail Food Program
Environmental Health Specialist
Arkansas Department of Health
4815 W. Markham St. Slot 46
Little Rock, AR 72205
Office: 501-537-9735 | Fax: 501-661-2572
Khariana.Hobbs@arkansas.gov

cc: Independence County Environmental Health Specialist

APPENDIX C -

AEDC APPROVAL LETTER

Hugh McDonald
SECRETARY OF COMMERCE
Clint O'Neal
EXECUTIVE DIRECTOR,
ARKANSAS ECONOMIC
DEVELOPMENT COMMISSION

March 31, 2023

The Honorable Kevin Jeffery
Independence County Judge
192 East Main Street
Batesville, Arkansas 72501

RE: Plans and Specs Approval, ACEDP #795-00055-20
Senior Center Project

Dear Judge Jeffery:

In reviewing the final set of plans and specifications for the above referenced project, it appears everything is in order and the plans and specifications are approved.

The city and their engineer/architect are responsible for seeing that the specifications do not extend or alter the project scope as described in the grant agreement. Please do not sign any construction agreements until clearances/permits have been received.

AEDC must be contacted ten days prior to bid opening to recheck the Davis-Bacon Wage Rates. Please notify this office when the pre-construction conference has been scheduled so I can plan to attend.

I you have questions regarding this project, contact me at (501) 682-7324 or by email at browell@arkansasedc.com.

Sincerely,

Brenda Rowell

Brenda Rowell
Sr. Grants Manger
AEDC Grants Division

Hugh McDonald
SECRETARY OF COMMERCE
Clint O'Neal
EXECUTIVE DIRECTOR,
ARKANSAS ECONOMIC
DEVELOPMENT COMMISSION

ARKANSAS
USA

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