CONTRACT DOCUMENTS, SPECIFICATIONS, AND DRAWINGS
for
HVAC Upgrades for
Dorothea B Hoover Historical Museum
JOPLIN, MISSOURI

August 2024

Prepared by

ALLGEIER, MARTIN and ASSOCIATES, INC.

Consulting Engineers ● Surveyors

Joplin, MO • Rolla, MO • Springfield, MO • Kansas City, MO • Tulsa OK • Bentonville, AR

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SECTION 00 11 16 – INVITATION TO BID

SEALED BIDS for construction of HVAC Upgrades for Dorothea B Hoover Historical Museum for the City of Joplin, Missouri will be received by the City of Joplin, Missouri at the Joplin Athletic Complex 3301 W 1st St, Joplin, MO 64801 until 10:00 A.M. on 09/26/2024. Bids will then be publicly opened and read aloud at this same address.

The work to be performed consists of the HVAC renovations and associated work.

An onsite pre-bid meeting will be held at the Museum on 09/10/2024 at 9:00 A.M. This meeting is not mandatory but will provide an opportunity to review the scope of work. The Museum is located at 504 S Schifferdecker Ave, Joplin, MO 64801.

Copies of the plans and specifications are on file and may be examined at the office of Allgeier, Martin and Associates, Inc., Consulting Engineers, 7231 East 24th Street, Joplin, Missouri.

To obtain DIGITAL Plans and Specifications, please log on to www.amce.com, website for Allgeier, Martin and Associates, Inc., click on the tab marked "Plan Room", then "Collaborate Here", and click on the project. Digital download cost is $30.00 which may be paid online via a credit card. Paper copy Plans and Specifications may be secured for a non-refundable fee in the amount of $60.00 per set from the Issuing Office of Allgeier, Martin and Associates, Inc., located at 7231 East 24th Street, Joplin, MO 64804 or by telephone at 417-680-7194. If paying for hard copies by credit card, contact Cindy Olds at 417-680-7193. An additional processing fee of $10.00 shall apply to all credit card transactions.

PLEASE NOTE: It is the sole responsibility of all planholders, whether they have received digital downloads or paper copies of the plans and specifications, to return to the Allgeier Martin website Plan Room (www.amce.com) periodically to check for Addenda which may have been posted. Neither the Owner nor Engineer have any responsibility for the accuracy, completeness or sufficiency of bid information obtained from sources other than as indicated in these documents. Obtaining these documents from any other source(s) may result in incomplete and inaccurate information and may also result in failure to receive any addenda, corrections, or other revisions to these documents that may be issued.

The Owner reserves the right to waive any informalities or minor defects or to reject any or all bids and to re-advertise and to rebid

Each Bidder must deposit with his bid, security in the amount of five percent (5%) of his base bid, which is subject to conditions provided in the Instructions to Bidders.

No Bidder may withdraw his bid within sixty (60) calendar days after the actual date of the opening thereof.

Attention of the Bidder is particularly called to the requirements as to conditions of employment to be observed, and that the Bidder must comply with the payment of hourly wage rates, including all fringe benefits, as established by Sections 290.210-340, RsMO, as amended in 1993, pertaining to the prevailing hourly rate of wages and including fringe benefits, as established by the Department of Labor and Industrial Relations of the State of Missouri. A copy of the determination is provided within the Supplemental General Conditions.

Bidders on this work will be required to comply with the City of Joplin's Affirmative Action Program set forth in City Council Resolution No. 81-57, Sections VI and VII.

Bidders with questions concerning this Invitation may contact Jared Nichols, P.E., Allgeier, Martin and Associates, Inc., 7231 East 24th Street, Joplin, Missouri 64804, 417-680-7200

City of Joplin, Missouri

Daniel Johnson, P.E., Director of Public Works

END OF SECTION 00 11 16

SECTION 00 21 13 – INSTRUCTIONS TO BIDDERS

BIDS will be received by the City Of Joplin, Missouri (herein called the "OWNER") at Joplin Athletic Complex 3301 W 1st St, Joplin, MO 64801 until 10:00 A.M. on 09/26/2024 and then at said office be publicly opened and read aloud.

Each BID must be submitted in a sealed envelope, addressed to Joplin Athletic Complex 3301 W 1st St, Joplin, MO 64801. Opening of Bids will occur at this same address. Each sealed envelope containing a BID must be plainly marked on the outside as BID HVAC Upgrades for Dorothea B Hoover Historical Museum, and the envelope should bear on the outside the name of the BIDDER, his address, and his license number, if applicable. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to: Joplin Athletic Complex 3301 W 1st St, Joplin, MO 64801.

An onsite pre-bid meeting will be held at the Museum on 09/10/2024 at 9:00 A.M. This meeting is not mandatory but will provide an opportunity to review the scope of work. The Museum is located at 504 S Schifferdecker Ave, Joplin, MO 64801.

All BIDS must be made on the required BID form, Section 00 41 43 of these specifications. BIDDER shall submit a TOTAL BID AMOUNT on the appropriate page. TOTAL BID AMOUNT shall be written in ink or typewritten. Bid form shall be executed when submitted. Only one copy of the BID form is required. TOTAL BID AMOUNT will serve as the basis for comparison of bids.

Local Preference:
Section D., "Acceptable Preferences" of the City's Procurement Policy, effective March 20, 2023, contains the following paragraphs pertaining to preference to Local Vendors:

Preference will be given to vendors or contractors who produce, manufacture, or market goods and/or services within the defined radius as described below, if the quality and price are comparable with all other goods and/or services offered to the City and all other factors to be considered in the bid award process are equal. When a formal written bid or proposal is not required, local vendors may be given an opportunity to match prices offered by non-local vendors, as long as the products are equal as to specifications and quality requirements.

A vendor or contractor is considered to be local if their principal place of business is located within a radius of twenty-five (25) miles from Joplin City Hall, with the majority of its primary business operations, including but not limited to, production, operation, purchasing, billing, marketing, management, administration and ownership, occurring within said radius. "Local" shall not include the following:

a. Those businesses with only a local post office box; or
b. Those businesses with a sales presence in the said radius, but no physical business location within the said radius; or
c. Home based businesses that merely take orders for products shipped from out-of-town to their customers.

When bids or proposals are received from both local and non-local vendors or contractors, the local bidder may be given preference in the awarding of the bid provided that its bid meets all other specification, quality, and service requirements in the following instances:

a. If a local bidder is within three (3%) percent of the lowest bid from a non-local bidder on a bid or proposal from $3,000.00 up to $1,000,000.00, and within two (2%) percent on such bid or proposal from $1,000,000.00 up to $3,000,000.00, and within one (1%) percent on such bid or proposal from $3,000,000.00 to $5,000,000.00.
b. The local purchasing preference policy shall not apply in the following instances:
    (1) When purchases and or contracts are funded in whole or in part by federal funds.
    (2) When such preference is in conflict with any applicable state or federal laws, rules or regulations.
    (3) When construction projects are financed with public assistance, including but not limited to, tax increment financing, Chapter 100 bonds, Chapter 353 redevelopment projects and enterprise zone redevelopment.
c. In the event that a general/prime contractor wishes a bid to be considered local, such contractor must either be local as defined above and at least 51% of the value of the total work to be performed as set forth in the bid price must be accomplished by the general/prime contractor or subcontractors considered local pursuant to this policy as defined above; or, utilize subcontractors considered local who will perform at least sixty percent (60%) of the value of the total work to be performed as set forth in the bid. The general/prime

contractor will be required to document this information and provide it with the bid in order for the bid to be considered under the local vendor preference policy and provide an Affidavit(s) signed by the local subcontractor(s) specifying and verifying the total work they will perform in the total bid price.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within sixty (60) calendar days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities by examination of the site and review of the drawings and specifications, including any ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID BOND payable to the OWNER for five percent (5%) of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return upon request the BONDS of all except the three lowest responsible BIDDERS. When the Agreement is executed, the bonds of the two remaining unsuccessful BIDDERS will be returned upon request. The BID BOND of the successful BIDDER will be retained until the PAYMENT BOND and PERFORMANCE BOND have been executed and approved, after which it will be returned if requested. A certified check may be used in lieu of a BID BOND.

A PERFORMANCE BOND and a PAYMENT BOND, each in the amount of 100% of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Bonds shall be executed with sureties licensed to operate in the State of Missouri and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in Circular 570 by the Audit Staff Bureau of Accounts, U.S. Treasury Department. Attorneys-in-fact who sign BID BONDS or PAYMENT BONDS and PERFORMANCE BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and to obtain the Performance Bond, the Payment Bond, and certificates of insurance within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and bond forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may, at his option, consider the BIDDER in default, in which case, the BID BOND accompanying the proposal shall be forfeited and shall become the property of the OWNER.

The OWNER, within ten (10) days of the receipt of acceptable Performance Bond, Payment Bond, certificates of insurance, and Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may, by WRITTEN NOTICE, withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the Notice by the OWNER.

A NOTICE TO PROCEED shall be issued within ten (10) calendar days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as he deems necessary to determine the ability of the BIDDER to perform the work, and the BIDDER shall furnish to the OWNER all such information and 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 Agreement and to complete the work contemplated therein.

A conditional or qualified BID will not be accepted.

Award of the contract will be made to the responsive, responsible BIDDER submitting the lowest TOTAL BID AMOUNT. Following the reading of the BIDS, the BIDDER submitting the lowest TOTAL BID AMOUNT and having supplied the necessary BID BOND and Anti-Collusion Statement shall be designated the Apparent Low Bidder. Within ten (10) calendar days from the date of the Bid opening, the Apparent Low Bidder shall provide to the Owner the Contractor's Statement of Qualifications, and a detailed price breakdown of all components of the project with the sum of the extended total of all such component prices equaling the TOTAL BID AMOUNT.

All applicable laws, ordinances and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

BIDDER hereby agrees to commence work under this contract on or before a date to be specified in the NOTICE TO PROCEED, and to fully complete the PROJECT within 180 consecutive calendar days thereafter.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

The low BIDDER shall supply the names and addresses of the major material SUPPLIERS AND SUBCONTRACTORS when requested to do so by the OWNER.

Contact Chris Duncan, P.E. 417-881-1586 with questions regarding this project.

END OF SECTION 00 21 13

SECTION 00 41 43 – BID FORM

Proposal of _____ (hereinafter called "BIDDER"),

organized and existing under the laws of the State of _____ doing

business as * _____ to the City of Joplin, Missouri (hereinafter called "OWNER").

In compliance with your Invitation to Bid, the BIDDER hereby proposes to perform all WORK for the construction of HVAC Upgrades for Dorothea B Hoover Historical Museum in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein and at the prices stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to his own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other Bidder or with any competitor.

BIDDER hereby agrees that if this Bid is accepted, BIDDER will, within ten (10) calendar days after the date of Notice of Award, enter into an Agreement of form attached herein, and will at that time deliver to the Owner the prescribed Performance Bond, Payment Bond, and all other documents as required in these documents.

As bid security, BIDDER provides herewith a Bid Bond (Cashier's check, Certified check), in the amount of five percent (5%) of the total bid amount, to become the property of the Owner as liquidated damages without condition, at the Owner's option in the event the BIDDER fails to enter into an Agreement, and/or deliver the Bonds and other contract documents within the period of time herein previously established.

BIDDER agrees to provide to the Owner, the certificates of insurance specified in these Documents, and to maintain the scope of insurance throughout the term of the Agreement.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within 180 consecutive calendar days thereafter. BIDDER agrees to pay as liquidated damages to the OWNER, the sum of $500.00 each consecutive calendar day thereafter as provided in Section 15 of the General Conditions. BIDDER further agrees to reimburse suppliers, manufacturers and other contractors and subcontractors for damages suffered by reason of delays attributable to failure by the BIDDER to fully complete the PROJECT within the established time, as provided in Section 15 of the General Conditions.

*Insert “a corporation”, “a partnership”, or "an individual" as applicable.

BIDDER acknowledges receipt of the following ADDENDA:

NO.	DATE
_____	_____
_____	_____
_____	_____

BID SCOPE
HVAC Upgrades for Dorothea B Hoover Historical Museum

The Scope of Work includes:

1. Remove chiller/boiler, associated pumps, controls, air control, fan coils/duckwork.air devices, and hydronic piping located outdoors and in the mechanical. The remaining hydronic piping to be drained, capped, and abandoned in place. Replace with new gas/electric split systems.
2. Remove 20-ton air handler and roof mounted condensing unit and replace with a 15-ton gas/electric packaged unit and a gas/electric split system.
3. Replace four remaining rooftop units with new units.
4. Add new gas piping, condensate piping, and ductwork as indicated.
5. Electrical revisions required to support new split system units and packaged rooftop units.

TOTAL BID AMOUNT (including Demolition Work and New Construction):

DOLLARS _____

BIDDER understands and acknowledges that the preceding TOTAL BID AMOUNT will serve as the basis for comparison of bids. Award for the contract shall be based upon the lowest responsible, responsive bid for the TOTAL BID AMOUNT. The bid price for each item shall include the cost of all adjacent or related items that are shown on the plans, are called for in the specifications, or are otherwise necessary to complete the project.

The BIDDER agrees that this bid shall be good and may not be withdrawn for a period of sixty (60) consecutive calendar days after the scheduled closing time for receiving bids.

Respectfully submitted,

ATTEST:

_____
Name of Contractor

By_____ By_____

_____ _____
Title Title

(SEAL)
(If Bid is a Corporation)

_____
Address (Including Zip Code)

END OF SECTION 00 41 43

SECTION 00 43 13 – BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____

as Surety, are hereby held and firmly bound unto the CITY OF JOPLIN, MISSOURI, as OWNER, in the penal sum of _____

_____DOLLARS ($_____)

for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this _____ day of_____, 20___.

The Condition of the above obligation is such that whereas the principal has submitted to the CITY OF JOPLIN, MISSOURI a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the: HVAC Upgrades for Dorothea B Hoover Historical Museum.

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish BONDS 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, diminished, or affected by any extension of the time within which the OWNER may reject or accept the Principal's BID, and Surety does hereby waive notice of any extension.

IN WITNESS WHEREOF, the Principal and 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.

_____ (L.S.)
Principal

_____
Surety

By_____

IMPORTANT – Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the state where the project is located.

END OF SECTION 00 43 13

SECTION 00 45 13 - CONTRACTOR STATEMENT OF QUALIFICATIONS

Firm Name:

_____

(Company Name)

_____

(Address) (City, State, Zip Code)

_____

(Phone Number) (Fax Number) (E-mail)

Date: _____

Construction Capabilities:

- ❑ General Contracting
- ❑ Electrical
- ❑ Plumbing
- ❑ HVAC
- ❑ Demolition
- ❑ Earthmoving
- ❑ Asbestos Abatement
- ❑ Other: _____

For Corporations Only:

Federal ID Number:

Name of State(s) in which incorporated:

Date(s) of incorporation:

If not incorporated in Missouri:

1. Attach Certificate of Authority to do Business in Missouri
2. Certificate Number: _____ Date:

_____ _____

(President's Name) (Vice-President's Name)

_____ _____

(Secretary's Name) (Treasurer's Name)

For Partnerships Only: Date of Organization: _____

Type of Partnership: ❑ General ❑ Limited ❑ Association

Names and Addresses of all partners: (use additional sheet if necessary)

1. _____
(Name) (Address) (City, State, Zip Code)

2. _____
(Name) (Address) (City, State, Zip Code)

General Information:

Federal ID Number: _____

Percent of work done by Contractor: _____ Number of years in business: _____

or SSN: _____ Number of Permanent Employees: _____

Geographical limits of operation:

_____

If you have done business under a different name, please give name and location: _____

_____

Has firm ever failed to complete a project or defaulted on a contract? If so, state where and why:

_____

Date: Dated this _____ day of _____ , 20____ .

Signatures:

❑ Individual ❑ Partnership ❑ Joint Venture ❑ Corporation

Business Name: _____

Address: _____

_____

Telephone: _____ Fax Number: _____

Federal ID Number: _____ Social Security Number: _____

Duns Number: _____

Incorporated under the laws of the State of: _____

(If a corporation organized in a state other than Missouri, attach certificate of Authority to do business in the State of Missouri.)

_____ _____

(Bidder's Signature) (Corporate Secretary's Signature and Seal)

_____

(Typed or Printed Name of Signor) (Seal)

_____

(Partner/Joint Venture Signature)

_____

(Typed or Printed Name of Signor)

END OF SECTION 00 45 13

SECTION 00 45 19 – ANTI-COLLUSION STATEMENT

STATE OF MISSOURI

CITY/COUNTY OF _____

_____

being first duly sworn, deposes and says that he/she is

_____

Title of Person Signing

of_____

_____

Name of Bidder

that all statements made and facts set out in the proposal for the HVAC Upgrades for Dorothea B Hoover Historical Museum project are true and correct; and the bidder (The person, firm, association, or corporation making said bid) has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with said bid or any contract which may result from its acceptance.

Affiant further certifies that bidder is not financially interested in, or financially affiliated with, any other bidder for the above project.

BY_____

BY_____

BY_____

SWORN to before me this _____ day of _____ 20 ___.

_____

Notary Public

My Commission Expires _____

END OF SECTION 00 45 19

SECTION 00 51 00 – NOTICE OF AWARD

TO: _____

_____

_____

_____

PROJECT Description: HVAC Upgrades for Dorothea B Hoover Historical Museum

The OWNER has considered the BID submitted by you on _____, 20__ for the above-described WORK in response to its Invitation to Bid, and Information for Bidders.

You are hereby notified that your BID has been accepted in the amount of _____ _____DOLLARS ($_____).

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S PERFORMANCE BOND, PAYMENT BOND, and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bonds within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

OWNER:

THE CITY OF JOPLIN, MISSOURI

By: _____

Title: _____

Date: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

By: _____

Title: _____

Date: _____

END OF SECTION 00 51 00

AGREEMENT
BETWEEN
CITY OF JOPLIN AND

CITY		CONTRACTOR	
CITY OF JOPLIN 602 S. MAIN STREET JOPLIN, MO 64801		Name: Address:	
Attention:		Attention:	
Department:		Phone:	Fax:
Phone:	Fax:		

THIS AGREEMENT made and entered into this ____ day of _____, 20____, by the parties identified above.

WITNESSETH: That whereas, the Contractor has become the lowest responsible bidder for furnishing the supervision, labor, tools, equipment, materials and supplies and for constructing the following City improvements:

HVAC Upgrades for Dorothea B Hoover Historical Museum

The City and Contractor agree to the following:

1. Manner and Time for Completion. The Contractor will furnish all supervision, labor, tools, equipment, materials and supplies necessary to perform, and to perform said work at Contractor's own expense in accordance with the contract documents and any applicable City ordinances and state and federal laws within 180 calendar days from the date Contractor is ordered to proceed, which order shall be issued by the Director of Public Works within 30 days after the date of this contract.

2. Prevailing Wages. All labor utilized in the construction of the aforementioned improvements shall be paid a wage of no less than the "prevailing hourly rate of wages" for work of a similar character in this locality, as established and amended at any time by the Department of Labor and Industrial Relations of the State of Missouri. At any time, the contractor is found to not have paid prevailing wages, the contractor shall forfeit as a penalty to the city one hundred dollars for each underpaid worker employed, for each calendar day, or portion thereof such worker is paid less than the said stipulated rates for any work done under this contract.

3. Insurance Requirements. Without limiting any of the other obligations or liabilities of the Contractor, the Contractor shall secure and maintain at its own cost and expense, throughout the duration of this Contract and until the work is completed and accepted by the City of Joplin, insurance of such types and in such amounts as may be necessary to protect it and the interests of the

City of Joplin against all hazards or risks of loss as hereunder specified or which may arise out of the performance of the Contract Documents. The form and limits of such insurance, together with the underwriter thereof in each case, are subject to approval by the City of Joplin. Regardless of such approval, it shall be the responsibility of the contractor to always maintain adequate insurance coverage during the term of the Contract. Failure of the Contractor to maintain coverage shall not relieve it of any contractual responsibility or obligation or liability in general or under the Contract Documents.

The certificates of insurance, including evidence of the required endorsements hereunder or the policies, shall be filed with the City within ten (10) days after the date of the receipt of Notice of Award of the Contract to the Contractor and prior to the start of work. All insurance policies shall require that the insurance company in question provide thirty (30) days written notice prior to modification or cancellation of such insurance. Such notices shall be mailed, certified mail, return receipt requested, to:

City of Joplin - Public Works, 602 S. Main Street, Joplin, MO 64801

Such policies shall name the City as an additional insured, with limits of liability not less than the sovereign immunity limits for Missouri public entities calculated by the Missouri Department of Insurance as of January 1 each calendar year and published annually in the Missouri Register pursuant to Section 537.610, RSMo. (See, http://insurance.mo.gov/industry/sovimmunity.php)

As of January 1, 2024, the minimum coverage for the insurance referred to herein shall be as set out below:

a. Workers' Compensation…. Statutory coverage per RSMo 287.010 et seq

Employer's Liability……. $1,000,000.00

b. Commercial General Liability Insurance, including coverage for Premises, Operations, Products and Completed Operations, Contractual Liability, Broad Form Property Damage, Independent Contractors, Explosion, Collapse, and Underground Property Damage and endorsed for blasting if blasting required. Such coverage shall apply to bodily injury and property damage on an "Occurrence Form Basis" with limits of at least Three Million Three Hundred Seventy Thousand One Hundred Thirty Seven and no/100 Dollars ($3,370,137.00) for all claims arising out of a single accident or occurrence and at least Five Hundred Five Thousand Five Hundred Twenty and no/100 Dollars ($505,520.00) with respect to injuries and/or death of any one person in a single occurrence and an amount not less than at least $1,000,000 for all claims to property arising out of a single occurrence and at least $100,000 to any one owner with respect to damages to property. Contractor agrees that the proceeds of such insurance policy shall first be used to pay any award, damages, costs, and/or attorneys' fees incurred by or assessed against City, its employees, officers and agents, before payment of any award, damages, costs or attorneys' fees of Contractor, its employees, officers or agents. Contractor agrees to cause its insurer to name City as an additional insured on such insurance policy, including the City as an additional insured for coverage under its products-completed operations hazard, and said policy shall be primary and noncontributory.

c. Automobile Liability Insurance covering bodily injury and property damage for owned, non-owned and hired vehicles, with limits of at least Three Million Three Hundred Seventy Thousand One Hundred Thirty Seven and no/100 Dollars ($3,370,137.00) for all claims arising out of a single accident or occurrence and at least Five Hundred Five Thousand Five Hundred Twenty and no/100 Dollars ($505,520.00) with respect to injuries and/or death of any one person in a single accident or occurrence.

d. Owner's and Contractor's Protective Liability Insurance to protect the City, its agents, servants and employees from claims which may arise from the performance of this Contract, with limits of at least Three Million Three Hundred Seventy Thousand One Hundred Thirty Seven and no/100 Dollars ($3,370,137.00) for all claims arising out of a single accident or occurrence and at Five Hundred Five Thousand Five Hundred Twenty and no/100 Dollars ($505,520.00) with respect to injuries and/or death of any one person in a single accident or occurrence.

The Owner's and Contractor's Protective Liability Insurance must:

(1) Be a separate policy with the named insured being: The City of Joplin, and

(2) Contain an endorsement that disclaims coverage for any claim barred by the doctrines of sovereign immunity or official immunity, except attorney's fees and other litigation costs incurred in defending a claim. Nothing contained in this policy (or this endorsement thereto) shall constitute any waiver of whatever kind of these defenses or sovereign immunity or official immunity for any monetary amount whatsoever.

e. Builders Risk Insurance for contracts involving unoccupied structures. The Contractor shall secure All Risk Builder's Risk Insurance. Unless specifically authorized by the City, the amount of such insurance shall not be less than the total contract price.

f. Subcontracts. In case any or all of this work is sublet, the Contractor shall require the subcontractor to procure and maintain all insurance required in subparagraphs (a), (b) and (c) hereof and in like amounts. Contractor shall require any and all subcontractors with whom it enters into a contract to perform work on this project to protect the City of Joplin through insurance against applicable hazards or risks and shall, upon request of the City, provide evidence of such insurance.

g. Notice. The Contractor and/or subcontractor shall furnish the City prior to beginning the work, the policy as specified in subparagraph (d), and satisfactory proof of carriage of all the insurance required by this contract, with the provision that policies shall not be canceled, modified or non-renewed without thirty (30) days written notice to the City of Joplin.

h. Legislative or Judicial Changes. In the event the scope or extent of the City's tort liability as a governmental entity as described in Section 537.600 through 537.650 RSMo is broadened or increased during the term of this agreement by legislative or judicial action, the City may require Contractor, upon 10 days written notice, to execute a contract addendum whereby the Contractor agrees to provide, at a price not exceeding Contractor's actual increased premium cost, additional liability insurance coverage as the City may require to protect the City from increased tort liability exposure as the result of such legislative or judicial action. Any such additional insurance coverage shall be evidenced by an appropriate certificate of insurance and shall take effect within the time set forth in the addendum.

4. Performance, Labor, and Materials Payment Bond: The Contractor shall furnish a Performance Bond and a Labor and Materials Payment Bond with surety approved by the City and on the forms approved by the City, each bond shall be in the amount of $_____ (full amount of contract) conditioned upon the full and faithful performance of all major terms and conditions of this contract and payment of all labor and material suppliers. It is further mutually agreed between the parties hereto that if at any time after the execution of this agreement and the surety bond(s) hereto attached for its faithful performance and payment of labor and material suppliers, the City shall deem the surety or sureties upon such bond(s) to be unsatisfactory, or if, for any reason, such bond(s) ceases to be adequate to cover the performance of the work, the Contractor shall, at its expense, within five (5) days after the receipt of notice from the City to do so, furnish an additional bond or bonds, in such form and amount, and with such surety or sureties as shall be satisfactory to the City. In such event no further payment to the Contractor shall be deemed to be due under this contract until such new or additional security for the faithful performance of the work and the payment of labor and material suppliers shall be furnished in a manner and form satisfactory to the City. The corporate surety on any performance or payment bond must be licensed by the State of Missouri and if the required bond exceeds $25,000.00 must be listed in United States Treasury Circular 570.

5. Certification Regarding Disbarment, Eligibility, Indictments, Convictions or Civil Judgements for all Federal Aid Projects: By signing and submitting the bid, the president or authorized official of the bidder, under penalty of perjury under the laws of the USA, shall certify that, except as noted in the exceptions, the company or any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor or any position involving the administration of federal funds:
(Reference can be made to "The System for Award Management" website as a helpful resource).

a. Is not currently under suspension, debarment, voluntary exclusion or determination of ineligibility by any federal agency.

b. Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past three years.

c. Does not have a proposed debarment or suspension pending.

d. Has not been indicted, convicted or had a civil judgment rendered against any of the listed parties by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

5.1 If there are any exceptions, the bidder shall submit the exceptions on company letterhead, signed by the bidder and inserted inside the bid submitted. Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted, the bidder shall indicate to whom it applies, the

initiating agency, and dates of action. Providing false information may result in criminal prosecution or administrative sanctions.

5.2 By signing the contract, the contractor shall further certify that all related subcontracts of $25,000 shall comply with this requirement. This includes all subcontractors, material suppliers and vendors.

6. Contractor's responsibility for subcontractors. The Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for the acts and omissions of persons it directly employs. Contractor shall cause appropriate provisions to be inserted in all subcontracts relating to this work, to bind all subcontractors to Contractor by all the terms herein set forth, and insofar as applicable to the work of subcontractors and to give Contractor the same power regarding termination of any subcontract as the City may exercise over Contractor under any provisions of this contract. Nothing contained in this contract shall create any contractual relation between the subcontractor and the City or between any subcontractors.

7. General Independent Contractor Clause. This agreement does not create an employee/employer relationship between the parties. It is the parties' intention that the Contractor will be an independent contractor and not the City's employee for all purposes, including, but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, Missouri Revenue and Taxation laws, Missouri Workers' Compensation and Unemployment Insurance laws. The Contractor will retain sole and absolute discretion in the judgment of the manner and means of carrying out the Contractor's activities and responsibilities hereunder. The Contractor agrees that it is a separate and independent enterprise from the public employer, that it has a full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This agreement shall not be construed as creating any joint employment relationship between the Contractor and the City, and the City will not be liable for any obligation incurred by the Contractor, including but not limited to unpaid minimum wages and/or overtime premiums.

8. Liquidated Damages. Time of completion of work by the Contractor is of the essence. Should Contractor, or in the case of default, the surety, fail to complete the work within the time specified in the contract, or within such extra time as may be allowed in accordance with City of Joplin Standard Specifications, Division 0000, General Requirements and Provisions, Section 0400.19, (http://mo-joplin.civicplus.com/DocumentCenter/View/3460) Contractor (or surety) shall be liable to the City in the amount of $1000.00 per day for each and every calendar day that the contract remains uncompleted after the time allowed for completion, as liquidated damages, and not as a penalty, it being stipulated that actual damages to the City and the public arising from Contractor's failure to timely complete the work would be difficult, if not impossible, to ascertain. The amount assessed as liquidated damages may be withheld from any moneys otherwise due to Contractor from the City.

9. Termination. The City reserves the right to terminate this contract by giving at least five (5) days prior written notice to the Contractor, without prejudice to any other rights or remedies of the City should the Contractor be adjudged a bankrupt, or if Contractor should make a general assignment for the benefit of its creditors, or if a receiver should be appointed for Contractor or for any of its property, or if Contractor should persistently or repeatedly refuse or fail to supply enough properly skilled workmen or proper material, or if Contractor should refuse or fail to make prompt payment to any person supplying labor or materials for the work under the contract, or persistently disregard instructions of the City or fail to observe or perform any provisions of the contract.

10. City's Right to Proceed. In the event this contract is terminated pursuant to Paragraph 8, then the City may take over the work and prosecute the same to completion, by contract or otherwise, and Contractor and its sureties shall be liable to the City for any costs over the amount of this contract thereby occasioned by the City. In any such case, the City may take possession of, and utilize in completing the work, such materials, appliances and structures as may be on the work site and are necessary for completion of the work. The foregoing provisions are in addition to, and not in limitation of, the rights of the City under any other provisions of the contract, city ordinances, and state and federal laws.

11. Termination for Convenience of City. The City shall have the right at any time by written notice to Contractor to terminate and cancel this contract, without cause, for the convenience of the City, and Contractor shall immediately stop work. In such event City shall not be liable to Contractor except for payment for actual work performed prior to such notice in an amount proportionate to the completed contract price and for the actual costs of preparations made by Contractor for the performance of the cancelled portions of the contract, including a reasonable allowance of profit applicable to the actual work performed and such preparations. Anticipatory profits and consequential damages shall not be recoverable by Contractor.

12. Guards and Lights. The Contractor agrees that during the performance of said work, adequate barricades, guards and warning signs, lights or devices consistent with the requirements contained in the Manual on Uniform Traffic Control Devices shall be provided by Contractor during construction.

13. Liability and Indemnity.

a. In no event shall the City be liable to the Contractor for special, indirect, or consequential damages, except those caused by the City's gross negligence or willful or wanton misconduct arising out of or in any way connected with a breach of this contract. The maximum liability of the City shall be limited to the amount of money to be paid or received by the City under this contract.

b. The Contractor shall defend, indemnify and save harmless the City, its elected or appointed officials, agents and employees from and against any and all liability, suits, damages, costs (including attorney fees), losses, outlays and expenses from claims in any manner caused by, or allegedly caused by, or arising out of, or connected with, this contract, or the work or any subcontract thereunder (the Contractor hereby assuming full responsibility for relations with subcontractors), including, but not limited to, claims for personal injuries, death, property damage, or for damages from the award of this contract to Contractor, notwithstanding any possible negligence, whether sole or concurrent, on the part of the City, its officials, agents and employees.

c. The Contractor shall indemnify and hold the City harmless from all wages or overtime compensation due any employees in rendering services pursuant to this agreement or any subcontract, including payment of reasonable attorneys' fees and costs in the defense of any claim made under the Fair Labor Standards Act, the Missouri Prevailing Wage Law or any other federal or state law.

d. The indemnification obligations of Contractor hereunder shall not be limited by any limitations as to the amount or type of damages, compensation or benefits payable by or for the Contractor, under any federal or state law, to any person asserting the claim against City, its elected or appointed officials, agents and employees, for which indemnification is sought.

e. The indemnification obligations herein shall not negate, abridge or reduce in any way any additional indemnification rights of the City, its elected or appointed officials, agents and employees, which are otherwise available under statute, or in law or equity.

f. Contractor affirms that it has had the opportunity to recover the costs of the liability insurance required in this agreement in its contract price. Contractor's obligation under this agreement to defend, indemnify, and hold harmless any person from that person's own negligence or wrongdoing is limited to the coverage and limits of the applicable insurance required of the Contractor under this agreement.

g. The Contractor shall indemnify and hold the City harmless for any penalties, fines, fees or costs, including costs of defense, which are charged or assessed by any Federal, state or local agency including, but not limited to, Environmental Protection Agency or Department of Natural Resources.

14. Payment for Labor and Materials. The Contractor agrees and binds itself to pay for all labor done, and for all the materials used in the construction of the work to be completed pursuant to this contract.

15. Payment. The City will pay the Contractor in accordance with the rate set forth in the contract documents on file in the Public Works Department and by this reference made a part hereof, which shall constitute full and complete compensation for the Contractor's work provided hereunder. Such compensation will be paid in progress payments (less five (5) percent retainage), as established by the City, subject to receipt of a requisition for payment and a statement of work provided by the Contractor and agreement by both the City and the Contractor that the Contractor has fully performed the work to be paid for in such progress payments in conformance with the contract. If the City or the architect or engineer determines that a higher rate of retainage is required to ensure performance of the contract, the City may withhold up to ten (10) percent retainage until the work is fully completed and accepted by the City.

16. Contract Documents. The contract documents shall consist of the following:

a. This Contract
b. All Change Orders
c. Bid Plans and Specifications
d. City of Joplin Standard Specifications (Latest Revised Edition)
e. Special Conditions & Provisions

f. Bid Form
g. Statement of Bidder's Qualifications
h. Acknowledgment
i. Performance Bond
h. Payment and Material Bond
k. Instructions to Bidders
l. Non-collusion Affidavit
m. Notice to Proceed

Notice to Contractors: This contract, together with the other documents enumerated in this paragraph, forms the contract between the parties. These documents are as fully a part of the contract as if attached hereto or repeated herein. The Contractor agrees to perform all of the work described in the contract documents and to comply with the terms and conditions defined therein for a total sum of ORIGINAL CONTRACT AMOUNT WRITTEN OUT ($_____) dollars, said amount being subject to any approved addenda or change order.

17. Subsurface Conditions. Contractor agrees that information contained in the published reports and public actions of the Missouri Division of Geology and Land Survey shall be conclusive and binding upon the Contractor as to what subsurface conditions at the job site are reasonably anticipated or reasonably foreseeable. Contractor acknowledges and agrees that it shall not be entitled to any adjustment in the Contract Sum or Contract Times for any concealed condition of any nature, including but not limited to unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, in addition to the information contained in the published reports and public actions of the Missouri Division of Geology and Land Survey. Contractor recognizes that it has assumed the risks of concealed conditions and is being compensated for assuming these risks.

18. Conflict of Interest. In accepting this contract, Contractor certifies that no member or officer of its firm or corporation is an officer or employee of the City of Joplin, Missouri, or any of its boards or agencies, and further that no officer or employee of the City has any financial interest, direct or indirect, in this contract. All applicable federal regulations and provisions of R.S.Mo. Section 105.450 et seq. shall not be violated.

19. Assignment. The Contractor shall not assign any interest in this contract, and shall not transfer any interest in the same (whether by assignment or novation), without prior written consent of the City thereto, provided, however, that claims for money due or to become due to the Contractor from the City under this Contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of such assignment or transfer shall be furnished in writing promptly to the City and the bond surety. Any such assignment is expressly subject to all rights and remedies of the City under this agreement, including the right to change or delete activities from the Contract or to terminate the same as provided herein, and no such assignment shall require the City to give any notice to any such assignee of any actions which the City may take under this agreement.

20. Nondiscrimination. The Contractor agrees in the performance of this contract not to discriminate on the ground or because of race, creed, color, national origin or ancestry, sex, religion, handicap, age, status as a protected veteran or status as a qualified individual with a disability, or political opinion or affiliation, against any employee of Contractor or applicant for employment and shall include a similar provision in all subcontracts let or awarded hereunder. The parties hereby incorporate the requirements of 41 C.F.R. §§ 60-1.4(a)(7), 29 C.F.R. Part 471, Appendix A to Subpart A, 41 C.F.R. § 60-300.5(a)ii and 41 C.F.R. § 60-741.5(a), if applicable.

a. This contractor and subcontractor shall abide by the requirements of 41 C.F.R. § 60-300.5(a). This regulation prohibits discriminations against qualified protected veterans and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans.

b. This contractor and subcontractor shall abide by the requirements of 41 C.F.R. § 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.

21. Nonresident/Foreign Contractors. The Contractor shall procure and maintain during the life of this contract:

a. If the Contractor is a foreign corporation, a certificate of authority to transact business in the State of Missouri from the Secretary of State, unless exempt pursuant to the provisions of Section 351.570 R.S.Mo.

b. A certificate from the Missouri Director of Revenue evidencing compliance with the transient employer financial assurance law, unless exempt pursuant to the provisions of Section 285.230 RSMo.

22. Notices. All notices required or permitted hereinunder and required to be in writing may be given by FAX or by first class mail addressed to City and Contractor at the addresses shown above. The date of delivery of any notice given by mail shall be the date falling on the second full day after the day of its mailing. The date of delivery of notice by FAX transmission shall be deemed to be the date transmission occurs, except where the transmission is not completed by 5:00 p.m. on a regular business day at the terminal of the receiving party, in which case the date of delivery shall be deemed to fall on the next regular business day for the receiving party.

23. Records and Audits. 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 City to assure proper accounting for all project funds. These records will be made available for audit purposes to the City or any authorized representative and will be retained for three years after the expiration of this Contract.

24. Authorized Employees. Contractor acknowledges that Section285.530, RSMo, prohibits any business entity or employer from knowingly employing, hiring for employment, or continuing to employ an unauthorized alien to perform work within the State of Missouri. Contractor therefore covenants that is not knowingly in violation of subsection 1 or Section 285.530, RSMo, and that it will not knowingly employ, hire for employment, or continue to employ any unauthorized aliens to perform work on the Project, and that its employees are lawfully to work in the United States.

25. Interest of Contractor and Employees. The Contractor covenants that he/she presently has no interest and shall not acquire interest, direct or indirect, in the study area or any parcels therein or any other interest which would conflict in any manner or degree with the performance of his services hereunder. The Contractor further covenants that in the performance of this Contract, no person having any such interest shall be employed.

26. Interest of Members of a City. No member of the governing body of the City and no other officer, employee, or agent of the City who exercises any functions or responsibilities in connection with the planning and carrying out of the program, shall have any personal financial interest, direct or indirect, in this Contract, and the Contractor shall take appropriate steps to assure compliance.

27. Interest of Other Local Public Officials. No member of the governing body of the locality and no other public official of such locality, who exercises any functions or responsibilities in connection with the planning and carrying out of the program, shall have any personal financial interest, direct or indirect, in this Contract, and the Contractor shall take appropriate steps to assure compliance.

28. Affidavit for Contracts Over $5,000.00. That pursuant to Missouri Revised Statute Sections 285.525 through 285.550, if this contract exceeds the amount of $5,000.00 and Contractor is associated with a business entity, Contractor shall provide an acceptable notarized affidavit stating that the associated business entity is enrolled in and participates in a federal work authorization program with respect to the employees working in connection with the contracted services, and that said business entity does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. Additionally, Contractor must provide documentation for said business entity evidencing current enrollment in a federal work authorization program.

29. City Benefits. The Contractor shall not be entitled to any of the benefits established for the employees of the City nor be covered by the Worker's Compensation Program of the City.

30. Occupational License: The Contractor shall obtain and maintain an occupational license with the City of Joplin, Missouri, if required by city code and any required state or federal license. The cost for this occupational license shall be borne by the Contractor. No contract will be executed by the City until this occupational license has been obtained and that the Contractor is current on any City taxes is verified.

31. Safety Training. Pursuant to Missouri Revised Statute Section 292.675, Contractors and subcontractors who sign a contract to work on public works projects must provide a 10-hour OSHA construction safety program, or similar program approved by the Department of Labor and Industrial Relations, to be completed by their on-site employees within sixty (60) days of beginning work on the construction project. Contractors and subcontractors in violation of this provision will forfeit to the public body $2,500 plus $100 a day for each employee who is employed without training. Public bodies and contractors may withhold/assess these penalties from the payment due to those contractors and subcontractors if found to be in non-compliance.

32. Compliance with Laws. Contractor agrees to comply with all applicable federal, state and local laws or rules and regulations applicable to the provision of services and products hereunder. Contractor affirmatively states that payment of all local, state, and federal taxes and assessments owed by Contractor is current.

33. Entire Agreement. This agreement contains the entire agreement of the parties. No modification, amendment, or waiver of any of the provisions of this agreement shall be effective unless in writing specifically referring hereto, and signed by both parties.

34. Remedies. Except as may be otherwise found in the contract documents, all claims, disputes, counter-claims, and other matters in question between the Owner and Contractor arising out of or related to this agreement or the breech thereof, will be decided by arbitration if the parties hereto mutually agree, or in a court of competent jurisdiction within the state in which the Owner is located.

35. Jurisdiction. This agreement and every question arising hereunder shall be construed or determined according to the laws of the State of Missouri. Should any part of this agreement be adjudicated, venue shall be proper only in the Circuit Court of Jasper County, Missouri.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year herein stated.

CERTIFICATE OF DIRECTOR OF FINANCE

I certify that the expenditure contemplated by this document is within the purpose of the appropriation to which it is to be charged and that there is an unencumbered balance of appropriated and available funds to pay therefor.

_____

Leslie Haase, Director of Finance

APPROVED AS TO FORM

_____

Peter Edwards, City Attorney

CONTRACTOR:

By: _____

Printed Name: _____

Title: _____

CITY OF JOPLIN, MISSOURI

By: _____

Daniel Johnson, P.E.
Public Works Director

SECTION 00 55 00 – NOTICE TO PROCEED

TO _____ Date _____

_____ Project CITY OF JOPLIN

_____ HVAC Upgrades for Dorothea B Hoover Historical Museum

_____ _____

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 20___ on or before _____, 20___ and you are to complete the WORK within 180 consecutive calendar days thereafter. The date of completion of all WORK is therefore _____ 20_____.

CITY OF JOPLIN, MISSOURI

By _____

_____
Title

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED

is hereby acknowledged by _____

_____

this the _____ day of _____, 20____

By _____

Title _____

END OF SECTION 00 55 00

SECTION 00 61 13.13 – PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____

(Name of Contractor)

_____

(Address of Contractor)

a _____, (Corporation, Partnership, or Individual) hereinafter called Principal, and

_____

(Name of Surety)

_____

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

City of Joplin, Missouri

(Name of Owner)

City Hall, 602 S. Main Street, Joplin, MO 64801

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____

_____Dollars ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 20___, a copy of which is hereto attached and made a part hereof for the construction of:

HVAC Upgrades for Dorothea B Hoover Historical Museum

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in four (4) counterparts, each one of which shall be deemed an original,

this the _____ day of _____,20_____

ATTEST:

_____
Principal

_____

By_____

(SEAL)
(Witness as to Principal)

_____
(Address)

_____
(Address)

_____

_____
(Surety)

ATTEST:

_____

_____
(Surety) Secretary

Attorney-in-Fact

(SEAL)
(Witness as to Surety)

_____

_____

_____
(Address)

_____
(Address)

_____

_____

NOTE: Date of BOND must not be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

END OF SECTION 00 61 13.13

SECTION 00 61 13.16 – PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

a _____ (Corporation, Partnership, or Individual) hereinafter called

Principal, and _____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto City of Joplin, Missouri
(Name of Owner)

602 S. Main Street, Joplin, MO 64801
(Address of Owner)

hereinafter called OWNER, in the penal sum of _____

_____ DOLLARS ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER,

dated the _____ day of _____ 20__, a copy of which is hereto attached and made a part hereof for:

HVAC Upgrades for Dorothea B Hoover Historical Museum

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed on such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligations on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in four (4) counterparts, each of which shall be deemed an original, this the

_____ day of _____ 20___.

ATTEST:

_____
(Principal) Secretary)

(SEAL)

_____
Witness to Principal

_____
(Address)

_____

_____
(Principal)

By_____

_____
(Address)

_____

_____
(Surety)

ATTEST:

By_____
(Attorney-in-Fact)

_____
Witness to Surety

_____
(Address)

_____
(Address)

_____

_____

NOTE: Date of BOND must not be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

END OF SECTION 00 61 13.16

SECTION 00 62 76.13 – SALES TAX EXEMPTION

Missouri State Statutes 144.062, effective August 28, 1994, and as clarified by subsequent amendment(s), allows for issuance of a sales tax exemption to contractors constructing, repairing, or remodeling facilities or purchasing personal property and materials to be incorporated into and consumed in the construction of projects for a tax-exempt entity. The tax-exempt entity shall furnish to the Contractor a signed Missouri Project Exemption Certificate authorizing such purchases for the construction, repair, or remodeling project. The Contractor shall furnish the certificate to all subcontractors.

For further information, the Contractor shall contact the Missouri Department of Natural Resources, P.O. Box 176, Jefferson City, Missouri 65102, telephone (573) 751-1300; or the Missouri Department of Revenue, P.O. Box 840, Jefferson City, Missouri 65105, telephone (573) 751-2836.

Included with this section is a copy of the Missouri Project Exemption Certificate, which has been approved by the Missouri Department of Revenue.

Reset Form | Print Form

MISSOURI DEPARTMENT OF REVENUE

Form 5060

Project Exemption Certificate

This form is to be completed and given to your contractor.

Exempt Entity and Project Information

Name of Exempt Entity Issuing the Certificate			Missouri Tax Exemption Number
Address	City	State	ZIP Code
E-mail Address			
Project Number	Project Begin Date (MM/DD/YYYY)		Estimated Project End Date (MM/DD/YYYY)
	__ __ / __ __ / __ __ __ __		__ __ / __ __ / __ __ __ __
Description of Project			
Project Location			Certificate Expiration Date (MM/DD/YYYY)
			__ __ / __ __ / __ __ __ __

Provide a signed copy of this certificate, along with a copy of the exempt entity's Missouri Sales and Use Tax Exemption Letter to each contractor or subcontractor who will be purchasing tangible personal property for use in this project. It is the responsibility of the exempt entity to ensure the validity of the information on the certificate. The exempt entity must issue a new certificate if any of the information changes.

Signature of Authorized Exempt Entity	Printed Name of Authorized Exempt Entity	Date (MM/DD/YYYY)
		__ __ / __ __ / __ __ __ __

Contractor

The Missouri exempt entity named above hereby authorizes the purchase, without sales tax, of tangible personal property to be incorporated or consumed in the construction project identified herein and no other, pursuant to **Section 144.062, RSMo.** Under penalties of perjury, I declare that the above information and any attached supplement is true, complete, and correct.

Name of Purchasing Contractor	Signature of Contractor	Date (MM/DD/YYYY)
		__ __ / __ __ / __ __ __ __

Address	City	State	ZIP Code

Subcontractor

Contractors - Present this to your supplier in order to purchase the necessary materials tax exempt. Complete the Subcontractor portion if extending the certificate to your subcontractor. The contractor must sign the form in the space provided below.

Name of Purchasing Subcontractor			
Address	City	State	ZIP Code

Signature of Contractor	Contractor's Printed Name	Date (MM/DD/YYYY)
		__ __ / __ __ / __ __ __ __

Form 5060 (Revised 11-2019)

END OF SECTION 00 62 76.13

SECTION 00 65 13 – CERTIFICATE OF COMPLIANCE

COMPLIANCE WITH THE PREVAILING WAGE LAW

Before me, the undersigned Notary Public, in and for the County of _____, State of Missouri, personally came and appeared

_____

(Name) (Position)

of the _____

(Name of the Company)

(A corporation) (a partnership) (a proprietorship) and after being duly sworn, did depose and say that all provisions and requirements set out in Chapter 290, Sections 290.210 through and including 290.340, Missouri Revised Statutes, pertaining to the payment of wages to workmen employed on public works projects have been fully satisfied and there has been no exception to the full and complete compliance with said provisions and requirements with Wage Determination No.(s). _____issued by the Division of Labor Standards on the _____ day of_____, 20___in carrying out the contract and work in connection with the construction of HVAC Upgrades for Dorothea B Hoover Historical Museum, in Jasper County, Missouri, and completed on the _____ day of_____, 20____.

_____

(Signature)

Subscribed and sworn to me this _____ day of_____, 20__.

My Commission expires:_____

_____

Notary Public

END OF SECTION 00 65 13

SECTION 00 65 19.13 – AFFADAVIT OF PAYMENT OF DEBTS

_____ certifies that they are the _____
(Name) (Title)

of _____ of _____
(Name of Contractor) (Address)

the Contractor, in a Contract dated _____, 20_____

entered into between the Contractor and CITY OF JOPLIN, MISSOURI of 602 S. Main Street, Joplin, Missouri 64801, the Owner, for the construction of HVAC Upgrades for Dorothea B Hoover Historical Museum, the Project; and that he is legally authorized to and does make this certificate on behalf of said Contractor.

The undersigned, further certifies; (1) that all persons who have provided labor for the above-named Project, have been paid in full, and (2) that the names of suppliers, materialmen, subcontractors and others providing materials and/or services for the Project, and the kind or kinds of materials and/or services so provided are listed and attached hereto; and that a Waiver and Release of Lien executed by each and all suppliers, materialmen, subcontractors and others providing materials and/or services has been obtained and delivered to the Owner.

By _____

Date _____

For _____

END OF SECTION 00 65 19.13

SECTION 00 65 19.16 – AFFADAVIT OF RELEASE OF LIENS

STATE OF MISSOURI
COUNTY OF _____

TO WHOM IT MAY CONCERN

WHEREAS the undersigned has been employed by (1) _____
to furnish (2) _____
for the premises known as (3) _____
of which (4) _____is the owner.

The undersigned, for and in consideration of (5) $_____ dollars, and other good and valuable consideration, the receipt whereof is hereby acknowledged does hereby waive and release any and all lien or claim of, or right to, lien under the statutes of the State of Missouri relating to mechanic liens with respect to and on said above described premises and the improvements thereon and on the material fixtures apparatus or machinery furnished and on the money, funds or other consideration now due or to become due from the owner on account of labor, services, material, fixtures, apparatus or machinery heretofore furnished or which may be furnished at any time hereafter, by the undersigned for the above described premises.

Given under _____ hand and seal this _____ of _____ 20___.
Signature and Seal: (7) _____

NOTE: All waivers must be for the full amount paid. If waiver is for a corporation, corporate name should be used, corporate seal affixed and title of officer signing waiver should be set forth. If waivers for a partnership, the partnership name should be used, partner should sign and designate himself as partner.

CONTRACTORS AFFIDAVIT

STATE OF MISSOURI
COUNTY OF _____

TO WHOM IT MAY CONCERN:
THE undersigned, being duly sworn deposes and says that he is (8) _____ of the (10) _____ who is the contractor for the (11) _____ work on (12) HVAC Upgrades for Dorothea B Hoover Historical Museum owned by (13) the City of Joplin, Missouri; That the total amount of the contract including extras is (14) $_____ on which he has received payment of (15) $_____ prior to this payment. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or suitable to defeat the validity of said waivers. That the following are the names of all parties who have furnished material or labor, or both for said work and all parties having contracts or sub contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to become due to each and that the items mentioned include all labor and material required to complete said work according to plans and specifications:

NAMES (16)	WHAT FOR	CONTRACT PRICE	AMOUNT PAID	THIS PAYMENT	BALANCE DUE

That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

Signed this _____ day of _____, 20____.
Signature: (17) _____

Subscribed and sworn to before me this ____ day of _____, 20____.

Signature: (18) _____

INSTRUCTIONS FOR WAIVER OF LIEN

1. The sub should name the party who hired him, either the general or the owner.

2. Name the trade (electric, plumbing, etc.)

3. Address of property

4. Owner's name

5. The amount the sub is waiving out in both words and figures.

6. The date signed.

7. The sub-contractor's signature and company name.

8, 9 & 10. The name of the subcontractor signing the waiver, his corporate title, and the name of his company.

11. Name the trade

12. Address of property

13. Owner's name

14. Total contract (including extras)

15. Amount paid prior to this draw

16. If material delivered to site by a material supplier[1] list sub's name, the material (concrete), contract price, amount paid, this payment, and balance owed. These amounts can change; i.e., the contract amount can go up or down as can the balance owed. If a contractor has supplied you with a partial waiver on a previous draw and then does not use that supplier anymore, you will have to obtain a final waiver from that supplier, if only for a token dollar amount.

17. This affidavit must be notarized, and the notary's date must match the waiver date.

Special note: If a contractor is supplying only labor or only material then the affidavit side of the waiver is not required.

Managers do not have authority (normally) to sign waivers. If you see a manager's signature on a waiver, we must have a letter on file from that corporation that their corporate resolutions have been amended to allow that manager to sign for their corporation.

END OF SECTION 00 65 19.16

SECTION 00 72 00 – GENERAL CONDITIONS OF CONTRACT

1. Definitions
2. Additional Instructions & Detail Drawings
3. Schedules, Reports & Records
4. Drawings & Specifications
5. Shop Drawings
6. Materials, Services & Facilities
7. Inspection & Testing
8. Substitutions
9. Patents
10. Surveys, Permits, Regulations
11. Protection of Work, Property, Persons
12. Supervision by Contractor
13. Changes in the Work
14. Changes in Contract Price
15. Time for Completion & Liquidated Damages
16. Correction of Work
17. Subsurface Conditions
18. Suspension of Work, Termination & Delay
19. Payments to Contractor
20. Acceptance of Final Payment as Release
21. Insurance
22. Contract Security
23. Assignments
24. Indemnification
25. Separate Contracts
26. Subcontracting
27. Engineer's Authority
28. Land & Rights-of-Way
29. Guaranty
30. Taxes

1. DEFINITIONS

1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1.2 ADDENDA: Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications or corrections.

1.3 BID: The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.4 BIDDER: Any person, firm, or corporation submitting a BID for the WORK.

1.5 BONDS: Performance, and Payments Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.

1.6 CHANGE ORDER: A written order by the OWNER to the CONTRACTOR authorizing an addition, deletion, or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.

1.7 CONTRACT DOCUMENTS: The Contract, including Advertisement For Bids, Information For Bidders, BID, Agreement, Payment Bond, Performance Bond, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS and ADDENDA.

1.8 CONTRACT PRICE: The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

1.9 CONTRACT TIME: The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.

1.10 CONTRACTOR: The person, firm, or corporation with whom the OWNER has executed the Agreement.

1.11 DRAWINGS: The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the Engineer.

1.12 ENGINEER: The person, firm, or corporation named as such in the CONTRACT DOCUMENTS.

1.13 FIELD ORDER: A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

1.14 NOTICE OF AWARD: The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.

1.15 NOTICE TO PROCEED: Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.

1.16 OWNER: A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the WORK is to be performed.

1.17 PROJECT: The undertaking to be performed as provided in the CONTRACT DOCUMENTS.

1.18 RESIDENT PROJECT REPRESENTATIVE: The authorized representative of the ENGINEER who is assigned to the PROJECT site or any part thereof.

1.19 SHOP DRAWINGS: All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER, or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

1.20 SPECIFICATIONS: A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction system standards and workmanship.

1.21 SUBCONTRACTOR: An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.

1.22 SUBSTANTIAL COMPLETION: That date as certified by the ENGINEER when the construction of the PROJECT is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the PROJECT can be utilized for the purposes for which it is intended. At the date of substantial completion, all waivers and Releases of Lien and Contractor's Certificates have been delivered to the OWNER as required by the Supplementary Conditions, and all facilities shall have been placed in the start-up phase for the purpose of testing equipment to assure compliance with the DRAWINGS and SPECIFICATIONS.

1.23 SUPPLEMENTAL GENERAL CONDITIONS: Modifications to General Conditions required a Federal agency for participation in the PROJECT and approved by the agency in writing prior to inclusion in the CONTRACT DOCUMENTS or such requirements that may be imposed by applicable state laws.

1.24 SUPPLIER: Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.25 WORK: All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.26 WRITTEN NOTICE: Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS:

2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.2 The additional drawings and instructions thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3. SCHEDULES, REPORTS, AND RECORDS:

3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records, and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.

3.2 Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which he proposes to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part, and, as applicable:

3.2.1 The dates at which special detail drawings will be required; and

3.2.2 Respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies, and equipment.

3.3 The CONTRACTOR shall also submit a schedule of payment that he anticipates he will earn during the course of the WORK. The monthly schedule of estimated payments shall be submitted within 30 days after initiation of construction, shall apply equally to subcontractors, and shall be updated any time there is a variation of more than 10 percent.

3.4 Expressed or implied approval of the schedules required by Paragraphs 3.1 through 3.3 does not relieve the Contractor from the responsibility for errors and omissions in the schedule, nor from responsibility for complying with the requirements of this contract.

4. DRAWINGS AND SPECIFICATIONS

4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.

4.3 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his discovery of such discrepancies, inconsistencies, or ambiguities shall be done at the CONTRACTOR's risk.

4.4 Any item provided on any DRAWING is required to be installed at the appropriate place by the CONTRACTOR. An omission on one or more DRAWINGS of a particular detail or item shall not be interpreted as a deletion of that item. For reasons of clarity, not all items are shown on all DRAWINGS. (i.e., structural drawings may not show electrical or mechanical details, etc.). The CONTRACTOR shall assume overall responsibility for reviewing and being thoroughly familiar with all items shown on any and all DRAWINGS, and coordinating the efforts of various personnel and subcontractors (including dissemination of all required drawings to appropriate subcontractors, etc.) to insure proper placement of all items.

5. SHOP DRAWINGS

5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER's approval of any SHOP DRAWINGS shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.2 When submitted for the ENGINEER/ARCHITECT's review, SHOP DRAWINGS shall bear the CONTRACTOR's certification that he has reviewed, checked, and approved the SHOP DRAWINGS, and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

5.4 All required submittals of SHOP DRAWINGS and manufacturer's literature and manufacturer's certifications shall commence

to be delivered to the ENGINEER upon receipt by the CONTRACTOR of the Notice to Proceed and all submittals shall have been delivered to the ENGINEER within thirty (30) calendar days from the date of the Notice to Proceed. Within ten (10) calendar days of receipt by the ENGINEER, ENGINEER shall review and return to the CONTRACTOR corrected or approved submittal. Three (3) copies of the submittal shall be retained by the ENGINEER.

5.5 All submittals which are not approved or corrected by the ENGINEER shall be resubmitted by the CONTRACTOR within sixty (60) days from receipt by the CONTRACTOR of the corrected or rejected submittal.

5.6 Within thirty (30) days from receipt by the CONTRACTOR of approved submittal, six (6) copies of the manufacturer's literature and six (6) copies of a complete and detailed operation and maintenance manual, as written by the manufacturer, and covering all equipment components, shall be delivered to the ENGINEER.

5.7 Non-compliance by the CONTRACTOR of submittal requirements and/or time periods stated in paragraphs 5.4, 5.5, and 5.6 may result in immediate suspension of payments to the CONTRACTOR until such requirements are complied with.

5.8 The ENGINEER, RESIDENT PROJECT REPRESENTATIVE, or the OWNER shall assume no responsibility for checking schedules or layout drawings for exact size, exact number, or quantity, positioning of items, or compatibility of adjacent and comparison items. Sole responsibility shall rest with the CONTRACTOR.

6. MATERIALS, SERVICES, AND FACILITIES:

6.1 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer.

6.4 Materials, supplies, and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.

6.5 Materials, supplies, or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sales contract or other agreement by which an interest is retained by the Seller.

6.6 The CONTRACTOR warrants to the OWNER and the ENGINEER that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all WORK, including materials and equipment will be of good quality, free from faults and defects and in conformance with the CONTRACT DOCUMENTS. All WORK not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective.

7. INSPECTION AND TESTING:

7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.

7.3 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the

CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing, or approval.

7.5 Inspections, tests, or approvals by the ENGINEER or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.6 The ENGINEER and his representatives will, at all times, have access to the WORK. In addition, authorized representatives of the Owner shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection or testing thereof.

7.7 If any WORK is covered contrary to the written instructions of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for his observation and replaced at the CONTRACTOR's expense.

7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER's request, will uncover, expose, or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction and an appropriate CHANGE ORDER shall be issued.

8. SUBSTITUTIONS:

8.1 Whenever a material, article, or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality, and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

9. PATENTS

9.1 The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, however, if the CONTRACTOR has reason to believe that the design, process, or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

10. SURVEYS, PERMITS, REGULATIONS

10.1 The OWNER shall furnish all boundary surveys, and a series of bench marks. The CONTRACTOR shall establish all base lines for locating the components and elements of the WORK. Upon establishing all base lines, but prior to proceeding with construction utilizing the baselines, the CONTRACTOR shall give notice of same to the RESIDENT PROJECT REPRESENTATIVE. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations, and other working points, lines, elevations, and cut sheets.

10.2 The CONTRACTOR shall carefully preserve bench marks, reference points, and stakes, and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their

unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL CONDITIONS. Permits, licenses, and easements for permanent structures, or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

11. PROTECTION OF WORK, PROPERTY, AND PERSONS:

11.1 The CONTRACTOR will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury, or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He will notify Owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury, or loss to any property caused, directly, or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER/ ARCHITECT or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury, or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be requested to cover the changes and deviations involved.

11.4 Visits to the construction site and observations made by the ENGINEER or RESIDENT PROJECT REPRESENTATIVE shall not relieve the CONTRACTOR of his obligation to conduct comprehensive inspections of the work sufficient to insure conformance with the intent of the CONTRACT DOCUMENTS and shall not relieve the construction CONTRACTOR of his full responsibility for all construction means, methods, techniques, sequences, and procedures necessary for coordinating and completing all portions of the work under the construction contract and for all safety precautions incidental thereto.

12. SUPERVISION BY CONTRACTOR:

12.1 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR's representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

13. CHANGES IN THE WORK:

13.1 The OWNER may, at any time as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.
13.2 The ENGINEER also may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the

CONTRACTOR believes that such FIELD ORDER entitles him to a change in CONTRACT PRICE or TIME, or both, in which event he shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter, the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. Unless there exists a previously approved method of pricing the CHANGE ORDER (i.e., unit prices, etc.), said documentation shall include a complete and detailed breakdown of all direct and indirect costs including estimates of manhours and labor costs, materials, supplies, and equipment costs, as evidenced by written statements from suppliers and subcontractors, and other services necessary to complete the work. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

13.3 Acceptance of a CHANGE ORDER by the CONTRACTOR shall preclude any claims by the CONTRACTOR at a later date for additional compensation for "unforeseen" costs related to the CHANGE ORDER. A CONTRACT PRICE change set forth in an approved CHANGE ORDER shall represent all present and future costs directly and/or indirectly related to the performance of the change. The following language shall be included in all CHANGE ORDERS.

13.3.1 "This change order constitutes full and mutual accord and satisfaction for all time and all costs related to this change. By acceptance of this CHANGE ORDER, the CONTRACTOR agrees that the CHANGE ORDER represents an equitable adjustment to the contract, and further agrees to waive all rights to file a claim arising out of or as a result of this change."

14. CHANGES IN CONTRACT PRICE:

14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

(a) Unit prices previously approved by the Owner
(b) An agreed lump sum.
(c) The actual direct cost of labor, materials, supplies, equipment, and other services necessary to complete with WORK. In addition, there shall be added an amount to be agreed upon but not to exceed fifteen percent (15%) of the actual direct cost of the WORK to cover the cost of all field office and home office overhead and profit.

15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES:

15.1 See Section 00 52 00 – Agreement 2022; and City of Joplin Standard Specifications, Division 0000 General Requirements and Provisions, Section 0400.19 for associated requirements.

16. CORRECTION OF WORK:

16.1 The CONTRACTOR shall promptly remove from the premises all work rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR's expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) consecutive calendar days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

16.3 The CONTRACTOR shall be held totally responsible for insuring that the completed project is free from all defects due to faulty materials, equipment, and workmanship for a period of one (1) year from the date of FINAL ACCEPTANCE of the entire project. If the CONTRACTOR fails, for any reason, to promptly repair or replace any faulty component of the project, the OWNER may cause the necessary work to be done and either deduct the total cost thereof from the CONTRACTOR's retainage, or draw directly upon the CONTRACTOR's Irrevocable Letter of Credit. If the cost incurred by the OWNER exceeds the amount retained, or the amount set forth in the CONTRACTOR's Irrevocable Letter of Credit, the CONTRACTOR shall pay the difference to the OWNER.

17. SUBSURFACE CONDITIONS:

17.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify

the OWNER by WRITTEN NOTICE of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS: or

17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.2 The OWNER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the work, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given the required WRITTEN NOTICE; provided that the OWNER may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

18. SUSPENSION OF WORK, TERMINATION AND DELAY:

18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety (90) days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an extension of the CONTRACT TIME if directly attributable to any suspension.

18.2 If the CONTRACTOR is adjudged a bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials, or equipment, or if he disregards laws, ordinances, rules, regulations, or orders of any public body having jurisdiction of the WORK, or if he disregards authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of five (5) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment, and machinery thereon owned by the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case, the CONTRACTOR shall not be entitled to receive any further payment until the WORK IS FINISHED. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

18.3 Where the CONTRACTOR's services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.4 After five (5) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the contract. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days WRITTEN NOTICE to the OWNER and the ENGINEER stop the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME, or both to compensate for the costs and delays attributable to the stoppage of the WORK.

18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

If the suspension, delay, or interruption is the result of unforeseeable causes beyond the control and without the fault or negligence of the OWNER or ENGINEER, including but not restricted to, acts of God, or of the public enemy, acts of another CONTRACTOR, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, abnormal and unforeseeable weather, and differing site conditions, the CONTRACTOR shall be entitled only to an extension of CONTRACT TIME and not CONTRACT PRICE.

19. PAYMENTS TO CONTRACTOR:

19.1 At least ten (10) days before each progress payment falls due (but not more than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER's title to the material and equipment and protect his interest therein, including applicable insurance. Each partial payment estimate shall include the following certification and declaration by the CONTRACTOR, set forth in Subparagraphs 19.1.1 and 19.1.2.

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

19.1.2 I hereby declare that I have not, during the period covered by this Application, performed any work, furnished any material, sustained any loss, damage, or delay for any reason, including soil conditions encountered or created, or otherwise done anything for which I shall ask, demand, sue for, or claim compensation from the OWNER or its agents, and the OWNER's ENGINEER or its agents, in addition to the regular items set forth in the Contract as dated above executed between myself and the OWNER, and in the CHANGE ORDERS for work issued by the OWNER in writing as provided thereunder, except as I hereby make claim for additional compensation and/or extension of time, as set forth on the itemized statement attached hereto.

There is/is not an itemized statement attached. (STRIKE ONE)

19.2 The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate after which time the ENGINEER will have an additional ten (10) days to review. The OWNER will, within thirty (30) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate.

19.2.1 The CONTRACTOR shall submit progress payment requests monthly.

19.2.2 The OWNER shall retain five percent (5%) of the amount of each payment for the duration of the project. If at any time the OWNER determines that satisfactory progress is not being made on the PROJECT, or if the CONTRACTOR repeatedly fails to make prompt payments to subcontractors or for the labor, materials, or equipment, the OWNER shall establish the retainage at a level of ten percent (10%) of all payments claimed.

19.2.3 At the time of SUBSTANTIAL COMPLETION of the project, the retainage shall be reduced to one percent (1%).

19.3 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.

19.4 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the

CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.5 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

19.6 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the appropriate payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS.

19.7 The CONTRACTOR will indemnify and save the OWNER or the OWNER's agents harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER's request, and at any time during the course of the PROJECT, furnish satisfactory evidence that all obligations of the nature designated above, have been paid, discharged, or waived. If the CONTRACTOR fails to do so, the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills 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 the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.8 If the OWNER fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR. The legal rate of interest shall be as specified in VAMS 408.020.

20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE:

20.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the Performance Bond and Payment Bonds.

21. INSURANCE:

21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims which may arise out of or result from the CONTRACTOR's execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The form and limits of such insurance shall be as set forth in Section 00 52 00- Agreement 2022 of these CONTRACT DOCUMENTS. Note that a separate policy must be provided for Owner's and Contractor's Protective Liability Insurance, in addition to the policies for Workers" Compensation, Employer's Liability, Commercial General Liability, and Automobile Liability.

22. CONTRACT SECURITY:

22.1 The CONTRACTOR shall, within ten (10) days after the receipt of the NOTICE OF AWARD, furnish the OWNER with a Performance Bond and a Labor and Materials Payment Bond in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions, and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If, at any time, a surety

of any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal BONDS, the CONTRACTOR shall, within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such surety or sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

23. ASSIGNMENTS:

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

24. INDEMNIFICATION:

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from the performance of the WORK, provided that any such claims, damages, loss or expense is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR and SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under Worker's Compensation acts, disability benefit acts, or other employee benefits acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees, arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications.

25. SEPARATE CONTRACTS:

25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR's WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

25.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

25.3 If the performance of additional work by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others entitles him to an extension of the CONTRACT TIME, he may make a claim therefor as provided in Sections 14 and 15.

26. SUBCONTRACTING:

26.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s) in excess of fifty percent (50%) of the CONTRACT PRICE, without prior written approval of the OWNER.

26.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

26.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provisions of the CONTRACT DOCUMENTS.

26.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

27. ENGINEER'S AUTHORITY:

27.1 The ENGINEER shall act as the OWNER's representative during the construction period. He will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

27.2 The ENGINEER will not assume responsibility for the construction means, control, techniques, sequences, procedures, or construction safety. Notwithstanding any reference to any rule, regulation or guideline, the required and/or implied duty of the ENGINEER to conduct construction review of the CONTRACTOR's performance does not, and is not intended to, result in the assumption of any responsibility by the ENGINEER for review of the adequacy of the CONTRACTOR's safety measures in, on, or near the construction site.

28. LAND AND RIGHTS-OF-WAY:

28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

28.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the land owned and rights-of-way acquired.

28.3 The CONTRACTOR shall provide at his own expense and without liability to the OWNER, any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29. GUARANTY:

29.1 The CONTRACTOR shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from the date of final acceptance of the entire project by the OWNER and ENGINEER. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of FINAL ACCEPTANCE of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects, including the repairs of any damage to other parts of the system resulting from such defects. This obligation shall survive termination of the Contract. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to promptly make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER, after notification to the CONTRACTOR, may do so and charge the CONTRACTOR the cost thereby incurred, including, but not limited to, costs of labor, materials, supplies, and equipment incurred by the OWNER.

30. TAXES:

30.1 The CONTRACTOR will pay all sales, consumer, use, and other similar taxes required by the law of the place where the work is performed.

END OF SECTION 00 72 00

SECTION 00 73 00 - SUPPLEMENTAL GENERAL CONDITIONS

1.1 "OR EQUAL", "OR APPROVED ALTERNATE" CLAUSE

Whenever material or article required is specified or shown on the plans by using the name of the proprietary product or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design will be considered an equal alternate and satisfactory, providing the material or article so proposed is of equal substance and function in the Engineer's opinion. However, substitute items shall not be purchased or installed without the Engineer's written approval. Descriptive data on any item offered as an equal or as an alternate, must be submitted to the Engineer no later than seven (7) days before the opening of bids, and the Engineer will issue addenda identifying manufacturers of approved alternate equipment.

1.2 CONTRACT DRAWINGS AND SPECIFICATIONS

The CONTRACTOR shall receive six (6) sets of the contract drawings and specifications with the "Notice of Award". The CONTRACTOR shall maintain at the site for the OWNER one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders, and other modifications, in good order, and marked to record all changes made during construction. These shall be available to the OWNER.

1.3 RECORD DRAWINGS

The CONTRACTOR shall deliver to the OWNER a complete set of Contract Drawings neatly recorded with all changes made during construction. These Drawings shall be labeled "Record Drawings" with the date of the submittal and the Contractor's name and signature clearly indicated. These "Record Drawings" shall be submitted following final acceptance of the Project and prior to the final payment.

1.4 CLOSE OUT DOCUMENTATION

Prior to Substantial Completion by the CONTRACTOR of the Project, and prior to the receipt of payment of any amount in excess of ninety-five percent (95%) of the total final contract dollar amount, the CONTRACTOR shall obtain and deliver to the OWNER, through the Engineer:

Notarized Contractor's Certificate of Compliance in SECTION 00 65 13, signed by the CONTRACTOR, or his legal representative, certifying that all persons providing labor have been paid in accordance with wage rates applicable to the Project, and listing names of all suppliers, materialmen, subcontractors, and others providing goods and/or services for the Project.

Affidavit of Payment of Debts in SECTION 00 65 19.13 signed by the CONTRACTOR, listing all manufacturers, materialmen, subcontractors, and others furnishing services and/or materials for the Project and stating they have been paid in full.

Notarized Affidavit of Release of Lien in SECTION 00 65 19.16, from all manufacturers, materialmen, subcontractors, and others furnishing services and/or materials for the Project.

1.5 EXISTING SITE CONDITIONS DOCUMENTATION

Prior to beginning construction, the CONTRACTOR shall be responsible for documenting the condition of existing improvements, by taking detailed photographs and/or videos. The documentation will be used to settle any disputes with the CONTRACTOR for damage to existing improvements. If documentation does not exist to settle such disputes, the Resident Project Representative's judgment shall be relied upon.

END OF SECTION 00 73 00

SECTION 00 73 43 - WAGE RATE REQUIREMENTS

STATE OF MISSOURI PREVAILING WAGE LAW & RULES

Prevailing hourly rates of wages shown on the following annual wage order are hereby incorporated in the contract specifications and made a part thereof. Contractor's attention is particularly called to the Performance-Payment Bond form, which includes provisions that will guarantee his faithful performance of the prevailing hourly wage requirements of the contract.

Not less than the prevailing hourly rate of wages, as set out in the wage order attached to and made a part of the specification for work under the contract, shall be paid to all workers performing work under the contract.

The contractor will forfeit a penalty to the Owner of $100 per day (or portion of a day) for each worker who is paid less than the prevailing rate for any work done under the contract by the contractor or by any subcontractor.

The contractor and all subcontractors to the contract must require all onsite employees to complete the ten-hour construction safety training program required under Section 292.675 RSMo, unless they have previously completed the program and have documentation of doing so.

The contractor will forfeit a penalty to the Owner of $2,500 plus an additional $100 for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required safety training.

The Contractor shall be required to submit a certified copy of all weekly payrolls to the Owner and Engineer showing that the classification of workmen and the hourly wage rates being paid fully comply with the Wage Determination for the Project. Required from subcontractors, also via the Contractor, send one copy to City, one copy to Engineer.

The Contractor shall cause to be displayed a complete copy of the Wage Determination for the project as set forth in the Prevailing Wage Law.

Prior to Final Acceptance of the Project, the CONTRACTOR shall obtain and deliver in duplicate to the Owner, through the Engineer, notarized Affidavits of Compliance with the Prevailing Wage Law, in the form attached hereto, from the Contractor and all subcontractors furnishing services for the Project.

PREVAILING WAGE LAW, CHAPTER 290
Section 290.210 through 290.340 as Amended RSMo 1987, 1986, & Cumm. Supp. 1993

290.210 Definitions - As used in Section 290.210 to 290.340, unless the context indicates otherwise:

(1) "Construction" includes construction, reconstruction, improvement, enlargement, alteration, painting, and decorating, or major repairs

(2) "Department" means the Department of Labor and Industrial Relations.

(3) "Locality" means the county where the physical work upon public works is performed, except that if there is not available in the county a sufficient number of competent skilled workmen to construct the public works efficiently and properly, "locality" may include two or more counties adjacent to the one in which the work or construction is to be performed and from which such workers may be obtained in sufficient numbers to perform the work, and that, with respect to contracts with the state highway commission, "locality" may be construed to include two or more adjacent counties from which workmen may be accessible for work on such construction.

(4) "Maintenance work" means the repair, but not the replacement of existing facilities when the size, type, or extent of the existing facilities is not thereby changed or increased.

(5) "Prevailing hourly rate of wages" means the wages paid generally in the locality in which the public works is being performed, to workmen engaged in work of a similar character including the basic hourly rate of pay and the amount of the rate of contributions irrevocably made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program, and the amount of the rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to workmen and mechanics pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the workmen affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance disability and sickness insurance, accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal or state law to provide any of the benefits; provided that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determination of the department, insofar as Sections 290.210 to 290.340 are concerned, may be discharged by the making of payments in cash, by the making of irrevocable contributions to trustees or third persons as provided herein, by the assumption of an enforceable commitment to bear the costs of a plan or program as provided herein, or any combination thereof, where the aggregate of such payments, contributions, and costs is not less than the rate of pay plus the other amounts as provided herein.

(6) "Public Body" means the State of Missouri or any officer, official, authority, board or commission of the state or other political subdivision thereof, or any institution supported in whole or in part by public funds.

(7) "Public Works" means all fixed works constructed for public use or benefit or paid for wholly or in part out of public funds. It also includes any work done directly by any public utility company when performed by it pursuant to the order of the public service commission or other public authority whether or not it be done under public supervision or direction or paid for wholly or in part out of public funds, when let to contract by said utility. It does not include any work done for or by any drainage or levee district.

(8) "Workmen" means laborers, workmen, and mechanics.

290.220 Policy declared - It is hereby declared to be the policy of the State of Missouri that a wage of no less than the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed, shall be paid to all workmen employed by or on behalf of any public body engaged in public works exclusive of maintenance work.

290.230 Prevailing wage rates required on construction of public works.

(1) Not less than the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed, and not less than the prevailing hourly rate of wages for legal holiday and overtime work, shall be paid to all workmen employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work. Only such workmen as are directly employed by contractors or subcontractors in actual construction work on the site of the building or

construction job shall be deemed to be employed upon public works.

(2) When the hauling of materials or equipment includes some phase of construction other than the mere transportation to the site of the construction, workmen engaged in this dual capacity shall be deemed employed directly on public works.

290.240 Department of Labor and Industrial Relations to enforce - make regulations

(1) The department shall inquire diligently as to any violation of Sections 290.210 to 290.340, shall institute actions for penalties herein prescribed, and shall enforce generally the provisions of Sections 290.210 to 290.340.

(2) The department may establish rules and regulations for the purpose of carrying out the provisions of Sections 290.210 to 290.340.

290.250 Prevailing wage, incorporation into contracts -- failure to pay, Penalty -- complaint of violation, public body or prime contractor to withhold payment. Every public body authorized to contract for or construct public works, before advertising for bids or undertaking such construction shall request the department to determine the prevailing rates of wages for workmen for the class or type of work called for by the public works, in the locality where the work is to be performed. The department shall determine the prevailing hourly rate of wages in the locality in which the work is to be performed for each type of workman required to execute the contemplated contract and such determination or schedule of the prevailing hourly rate of wages shall be attached to and made a part of the specifications for the work. The public body shall then specify in the resolution or ordinance and in the call for bids for the contract, what is the prevailing hourly rate of wages in the locality for each type of workman needed to execute the contract and also the general prevailing rate for legal holiday and overtime work. It shall be mandatory upon the contractor to whom the contract is awarded and upon any subcontractor under him, to pay not less than the specified rates to all workmen employed by them in the execution of the contract. The public body awarding the contract shall cause to be inserted in the contract a stipulation to the effect that not less than the prevailing hourly rate of wages shall be paid to all workmen performing work under the contract. It shall also require in all contractor's bonds that the contractor include such provisions as will guarantee the faithful performance of the prevailing hourly wage clause as provided by the contract. The contractor shall forfeit as a penalty to the state, county, city, and county, city, town, district, or other political subdivision on whose behalf the contract is made or awarded ten dollars for each workman employed, for each calendar day, or portion thereof, such workman is paid less than the said stipulated rates for any work done under said contract, by him or by any subcontractor under him, and the said public body awarding the contract shall cause to be inserted in the contract a stipulation to this effect. It shall be the duty of such public body awarding the contract, and its agents and officers, to take cognizance of all complaints of all violations of the provisions of Sections 290.210 to 290.340 committed in the course of the execution of the contract, and when making payments to the contractor becoming due under said contract, to withhold and retain therefrom all sums and amounts due and owing as a result of any violation of Sections 290.210 to 290.340. It shall be lawful for any contractor to withhold from any subcontractor under him sufficient sums to cover any penalties withheld from him by the awarding body on account of said subcontractor's failure to comply with the provisions of Sections 290.210 to 290.340 and if payment has already been made to him, the contractor may recover from the amount of the penalty in a suit at law.

290.260 Determination of hourly rate for highway commission, when made, where filed, objections, hearing, determination

(1) The department, as it deems necessary, shall from time to time investigate and determine the prevailing hourly rate of wages in the localities. A determination applicable to every locality to be contained in a general wage order shall be made annually on or before July 1st of each year for the Missouri State Highway Commission and shall remain in effect until supersede by a new general wage order. In determining prevailing rates, the department shall ascertain and consider the applicable wage rates established by collective bargaining agreements, if any, and the rates that are paid generally within the locality.

(2) A certified copy of the determination so made shall be filed immediately with the Secretary of State and with the department in Jefferson City. Copies shall be supplied by the department to all persons requesting them within ten days after the filing.

(3) At any time within thirty days after the certified copies of the determinations have been filed with the Secretary of State and the Department, any person who is affected thereby may object in writing to the determination or the part thereof that he deems objectionable by filing a written notice with the department, stating the specific grounds of the objection.

(4) Within thirty days of the receipt of the objection, the department shall set a date for a hearing on the objection. The date for the hearing shall be within sixty days of the receipt of the objection. Written notice of the time and place of the hearing shall be given to the objectors at least ten days prior to the date set for the hearing.

(5) The department, at its discretion, may hear each written objection separately or consolidate for hearing any two or more written objections. At the hearing, the department shall first introduce in evidence the investigation it instituted and the other facts which were considered at the time of the original determination which formed the basis for its determination. The department or the objector or any interested party thereafter may introduce any evidence that is material to the issues.

(6) Within twenty days of the conclusion of the hearing, the department must rule on the written objection and make the final determination that it believes the evidence warrants. Immediately, the department shall file a certified copy of its final determination with the Secretary of State and with the Department and shall serve a copy of the final determination on all parties to the proceedings by personal service or by registered mail.

(7) This final decision of the department of the prevailing wages in the locality is subject to review in accordance with the provisions of Chapter 536, RSMo. Any person affected, whether or not the person participated in the proceedings resulting in the final determination, may have the decision of the department reviewed. The filing of the final determination with the Secretary of State shall be considered a service of the final determination on persons not participating in the administrative proceedings resulting in the final determination.

(8) At any time before trial any person affected by the final determination of the department may intervene in the proceedings to review under chapter 536, RSMo, and be made a party to the proceedings.

(9) All proceedings in any court affecting a determination of the department under the provisions of Sections 290.210 to 290.340 shall have priority in hearing and determination over all other civil proceedings pending in the court, except election contests.

290.262 Determination of hourly rate by location and occupation title, when made, where filed objections, hearings-final determination-notice to department by public body, when –

(1) Except as otherwise provided in Section 290.260, the department shall annually investigate and determine the prevailing hourly rate of wages in each locality for each separate occupational title. A final determination applicable to every locality to be contained in an annual wage order shall be made annually on or before July first of each year, and shall remain in effect until superseded by a new annual wage order or as otherwise provided in this section. In determining prevailing rates, the department shall ascertain and consider the applicable wage rates established by collective bargaining agreements, if any, and the rates that are paid generally within the locality, and shall, by March tenth of each, make an initial determination for each occupational title within the locality.

(2) A certified copy of the initial determinations so made shall be filed immediately with the Secretary of State and with the Department in Jefferson City. Copies shall be supplied by the Department to all persons requesting them within ten days after filing.

(3) At any time within thirty days after the certified copies of the determinations have been filed with the Secretary of State and the Department, any person who is affected thereby may object in writing to a determination or part thereof that he deems objectionable, by filing a written notice with the Department, stating the specific grounds of the objection. If no objection is filed, the determination is final after thirty days.

(4) After the receipt of the objection, the Department shall set a date for a hearing of the objection. The date for the hearing shall be within sixty days of the receipt of the objection. Written notice of the time and place of the hearing shall be given to the objectors at least ten days prior to the date set for the hearing.

(5) The Department, at its discretion, may hear each written objection separately, or consolidate for hearing any two or more written objections. At the hearing, the Department shall first introduce in evidence the investigation it instituted and the other facts that were considered at the time of the original determination that formed the basis for its determination. The Department or the objector or any interested party thereafter may introduce any evidence that is material to the issues.

(6) Within twenty days of the conclusion of the hearing, the Department shall rule on the written objection and make the final determination that it believes the evidence warrants. Immediately the Department shall file a certified copy of its final determination with the Secretary of State and with the Department, and shall serve a copy of the final determination on all parties to the proceedings by personal service or by registered mail.

(7) This final decision of the Department of the prevailing wages in the locality for each occupational title is subject to review in accordance with the provisions of Chapter 536, RSMo. Any person affected, whether or not the person participated in the proceedings resulting in the final determination, may have the decision of the Department reviewed. The filing of the final determination with the Secretary of State shall be considered a service of the final determination on persons not participating in the administrative proceedings resulting in the final determination.

(8) At any time before trial, any person affected by the final determination of the Department may intervene in the proceedings to review under Chapter 536, RSMo, and be made a party to the proceedings.

(9) Any annual wage order made for a particular occupational title in a locality may be altered once each year, as provided in this subsection. The prevailing wage for each such occupational title may be adjusted on the anniversary date of any collective bargaining agreement that covers all persons in that particular occupational title in the locality in accordance with any annual incremental wage increases set in the collective bargaining agreement. If the prevailing wage for an occupational title is adjusted pursuant to this subsection, the employee's representative or employer, in regard to such collective bargaining agreement, shall notify the Department of this adjustment, including the effective date of the adjustment. The adjusted prevailing wage shall be in effect until the next final annual wage order is issued pursuant to this section. The wage rates for any particular job, contracted and commenced within sixty days of the contract date, which were set as a result of the annual or revised wage order, shall remain in effect for the duration of that particular job.

(10) In addition to all other reporting requirements of sections 290.210 to 290.340, each public body that is awarding a contract for a public works project shall, prior to beginning of any work on such public works project, notify the Department, on a form prescribed by the Department, of the scope of the work to be done, the various types of craftsmen who will be needed on the project, and the date work will commence on the project.

290.263 Hourly wage must equal or exceed federal minimum wage - The hourly wages to be paid as prescribed in Section 290.250 to workmen upon public works shall not be less than the minimum wage specified under Section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended.

290.265 Wage rates posted, where - A clearly legible statement of all prevailing hourly wage rates to be paid to all workmen employed in order to execute the contract and employed on the construction of the public works shall be kept posted in a prominent and easily accessible place at the site thereof by each contractor and subcontractor engaged in the public works projects under the provisions of this law and such notice shall remain posted during the full time that any such workman shall be employed on the public works.

290.270 Declaration as to prevailing wages final - maximum wages and hours not limited - The finding of the department ascertaining and declaring the prevailing hourly rate of wages shall be final for the locality, unless reviewed under the provisions of Sections 290.210 to 290.340. Nothing in Sections 290.210 to 290.340, however, shall be construed to prohibit the payment to any workman employed on any public work of more than the prevailing rate of wages. Nothing in Sections 290.210 to 290.340 shall be construed to limit the hours of work which may be performed by any workman in any particular period of time.

290.280 Administration of oaths - subpoenas - enforcement of subpoenas - The authorized representative of the department may administer oaths, take or cause to be taken the depositions of witnesses, and require by subpoena the attendance and testimony of witnesses and the production of all books, records, and other evidence relative to any matter under investigation or hearing. The subpoena shall be signed and issued by the department's authorized representative. In case of failure of any person to comply with any subpoena lawfully issued under this section, or any refusal of any witness to produce evidence or to testify to any matter regarding which he may be lawfully interrogated, the authorized representative of the department may proceed to enforce obedience to the subpoenas in the manner provided by Section 536.077, RSMo, for administrative agencies. The authorized representative of the department shall have the power to certify to official acts.

290.290 Contractor's payroll records, contents - affidavit of compliance required – signs on motor vehicles and equipment, requirements – temporary stationary sign, when – exception –

(1) The contractor and each subcontractor engaged in any construction of public works shall keep full and accurate records clearly indicating the names, occupations, and crafts of every workman employed by them in connection with the public work together with an accurate record of the number of hours worked by each workman and the actual wages paid therefor. The payroll records required to be so kept shall be open to inspection by any authorized representative of the contracting public body or of the department at any reasonable time and as often as may be necessary and such records shall not be destroyed or removed from the state for the period of one year following the completion of the public work in connection with which the records are made.

(2) Each contractor and subcontractor shall file with the contracting public body upon completion of the public work and prior to final payment therefor an affidavit stating that he had fully complied with the provisions and requirements of this chapter, and no public body shall be authorized to make final payment until such affidavit is filed therewith in proper form and order.

(3) Each contractor and subcontractor engaged in any construction of public works shall have its name, acceptable abbreviation or recognizable logo, and the name of the city and state of the mailing address of the principal office of the company, on each motor vehicle and motorized self-propelled piece of equipment that is used in connection with such public works project during the time the contractor or subcontractor is engaged on such project. The sign shall be legible from a distance of twenty feet, but the size of the lettering need not be larger than two inches. In cases where equipment is leased, or where affixing a legible sign to the equipment is impractical, the contractor may place a temporary stationary sign with the information required pursuant to this subsection, at the main entrance of the construction project site in place of affixing the required information on the equipment, so long as such sign is not in violation of any state or federal statute, rule, or regulation. Motor vehicles that are required to have similar information affixed thereto pursuant to requirements of a regulatory agency of the state or federal government are exempt from the provisions of this subsection.

(4) The provisions of subsection 3 of this section shall not apply to construction of public works for which the contract awarded is in the amount of two hundred fifty thousand dollars or less.

290.300 Actions for prevailing wages by workmen authorized - Any workman employed by the contractor or by any subcontractor under the contractor who shall be paid for his services in a sum less than the stipulated rates for work done under the contract, shall have a right of action for double whatever difference there may be between the amount so paid and the rates provided by the contract together with a reasonable attorney's fee to be determined by the court, and an action brought to recover same shall be deemed to be a suit for wages, and any and all judgments entered therein shall have the same force and effect as other judgments for wages.

290.305 Rebates by workmen prohibited, exceptions. No person, firm, or corporation shall violate the wage provisions of any contract contemplated in Sections 290.210 to 290.340 or suffer or require any employee to work for less than the rate of wages so fixed, or violate any of the provisions contained in Sections 290.210 to 290.340. Where workmen are employed and their rate of wages has been determined as provided in Sections 290.210 to 290.340, no person, either for himself or any other person, shall request, demand, or receive, either before or after such workman is engaged, that such workman pay back, return, donate, contribute, or give any part or all of said workman's wages, salary, or thing of value, to any person, upon the statement, representation, or understanding that failure to comply with such request or demand will prevent such workman from procuring or retaining employment, and no person shall, directly or indirectly, pay, request, or authorize any other person to violate this section. This section does not apply to any agent or representative of a duly constituted labor organization acting in the collection of dues or assessments of such organization.

290.315 Deductions from wages agreement to be written, approval of public body required - All contractors required in Sections 290.210 to 290.340 to pay not less than the prevailing rate of wages shall make full payment of such wages in legal tender, without any deduction for food, sleeping accommodations, transportation, use of small tools, or any other thing of any kind or description. This section does not apply where the employer and employee enter into an agreement in writing at the beginning of said term of employment covering deductions for food, sleeping accommodations, or other similar items, provided such agreement is submitted by the employer to the public body awarding the contract and the same is approved by such public body as fair and reasonable.

290.320 Advertising for bids before prevailing wage is determined prohibited - No public body, officer, official, member, agent, or representative authorized to contract for public works shall fail, before advertising for bids or contracting for such construction, to have the department determine the prevailing rates of wages of workmen for each class of work called for by the public works in the locality where the work is to be performed as provided in Sections 290.210 to 290.340.

290.325 Awarding contract on payment without prevailing wage determinations prohibited - No public body, officer, official, member, agent, or representative thereof authorized to contract for public works shall award a contract for the construction of such improvement or disburse any funds on account of the construction of such public improvement, unless prevailing rates of wages of workmen for the class of work called for by such public works in the locality where the work is to be performed and such determination has been made a part of the specifications and contract for such public works.

290.330 Convicted violators of Sections 290.210 to 290.340 listed, effect of - The department after investigation, upon complaint or upon its own initiative, shall file with the Secretary of State a list of the contractors and subcontractors whom it finds have been prosecuted and convicted for violations of Sections 290.210 to 290.340 and such contractor or subcontractor, or simulations thereof, shall be prohibited from contracting directly or indirectly with any public body for the construction of any public works or from performing any work on the same as a contractor or subcontractor for a period of one year from the date of the first conviction for such violation and for a period of three years from the date of such subsequent violation and conviction thereof. No public body shall award a contract for a public works to any contractor or subcontractor, or simulation thereof, during the time that its name appears on said list. The filing of the notice of conviction with the Secretary of State shall be notice to all public bodies and their officers, officials, members, agents, and representatives.

290.335 Notice of violation, failure to comply, attorney general shall sue, injunctive relief authorized - If it is found that a public body, contractor, or subcontractor has not complied with any of the terms of Sections 290.210 to 290.340, the department shall give notice of the precise violations in writing to such public body, contractor, or subcontractor. Sufficient time may be allowed for compliance therewith as the department deems necessary. After the expiration of the time prescribed in said notice, the department may, in writing, inform the Attorney General of the fact that such notice has been given, and that the public body, contractor, or subcontractor or the authorized representative or agent thereof to whom it was directed has not complied with such notice. Upon receipt thereof, the Attorney General shall, at the earliest possible time, bring suit in the name of the state in the circuit court of the county in which such public body is located or where any such contractor or subcontractor is engaged in any further work or payments thereunder if the contract has been awarded, until the requirements of such notice are fully complied with. The court may issue a temporary restraining order with due notice to the defendant in such action. The plaintiff shall, in any such injunctive action, post an adequate bond to be set by the circuit judge. Upon final hearing thereof, if the court is satisfied that the requirements of the notice by the department to the defendant were not unreasonable or arbitrary, it shall issue an order enjoining the awarding of such contract for a public works, or any further work or payments thereunder if the contract has been awarded, until the notice is fully complied with. Such injunction shall continue operative until the court is satisfied that the requirements of such notice have been complied with and the court shall have an exercise with respect to the enforcement of such injunctions all the power in it in other similar cases. Both the plaintiff and the defendant in such action have the same rights of appeal as are provided by law in other injunction proceedings.

290.340 Penalty for violation - Any officer, official, member, agent, or representative of any public body, contractor, or subcontractor who willfully violates and omits to comply with any of the provisions and requirements of Sections 290.210 to 290.340 shall be punished for each violation thereof by a fine not exceeding five hundred dollars, or by imprisonment not exceeding six months, or both such fine and imprisonment. Each day such violation or omission continues shall constitute a separate offense as contemplated by this section.

RULES OF DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS
CHAPTER 3 - PREVAILING WAGE LAW RULES

8 CSR-30-3.010 Prevailing Wage Rates for Public Works Projects (Purpose: This rule sets forth prevailing wage requirements relative to work performed by workmen on public funded projects.)

(1) All public bodies of Missouri contemplating construction work must obtain from the department a determination of the prevailing hourly rate of wages in the locality (wage determination) that is applicable to that construction. The rates so determined shall be incorporated in the contract specifications and made a part of those specifications, except that construction contracts of the State Highway and Transportation Commission need not list specific wage rates to apply, but may refer to the wage rates contained in the appropriate General Wage Orders issued by the department, as applicable.

(2) Request for wage determinations shall be initiated at least thirty (30) calendar days before advertisement of the specifications for the contract for which the determination is sought. An exception from this provision will be made by the department only upon a proper showing of extenuating circumstances. The department has prepared and printed Form No. PW-1 for use in making a request. The form may be secured by writing Division of Labor Standards, P.O. Box 449, Jefferson City, Missouri 65102.

(3) A separate request must be filed for each separate project by the public body, except the State Highway and Transportation Commission, which will be furnished prevailing wage determinations under General Wage Orders. One public body cannot use the wage determinations made by this department for another public body even though both public bodies are located in the same county. Special wage determinations issued by the department only apply to the public body and its project described in the special wage determination.

(4) Each wage determination issued by the department shall contain the current wage rates prevailing in the locality at the time the determination is issued. To ensure that the current prevailing hourly rate of wages as established in the wage determination is paid on the public works project, the public works project must be started in good faith or a contract awarded for the project within one hundred eighty (180) days from the date the wage determination is issued. If the proposed public works project is not started in good faith or a contract is not awarded for completion of the project within one hundred eighty (180) days from the date the wage determination is issued, before proceeding with the project the public body shall request from the department an amended wage determination, containing the then current prevailing hourly rate of wages. The amended wage determination shall be subject to objection pursuant to the provisions of section 290.260, RSMo. An amended wage determination becomes final either by order of the Labor and Industrial Relations Commission or automatically if not objected to pursuant to section 290.260, RSMo. This final determination shall contain the prevailing wage rates to be paid on the project. This provision shall not apply to the General Wage Order issued by the department for the State Highway and Transportation Commission.

(5) It should be understood by all interested parties that the certified prevailing wage rates determined by the department are minimum wage rates. The contractor may not pay less than the prevailing wage rates determined by the department for the project or contract awarded to him/her as set forth in the proposal on which s/he submitted his/her bid. Employees are free to bargain for a higher rate of pay and employers are free to pay a higher rate of pay.

(6) Where classification of workers not included in the original contract is desired, the public body shall request the department to issue a determination of the prevailing hourly rate of wages in the appropriate localities. In these cases, it shall be the responsibility of the public body to make an arrangement with the contract which would result in compliance with the wage determinations, as though they were a part of the original contract.

(7) The public body shall make examinations of the payrolls and other records of each contractor or subcontractor as may be necessary to assure compliance with the provisions of the law. In connection with those examinations, particular attention should be given to the correctness of classifications and any disproportionate employment of any workers. The examinations shall be of a frequency that may be necessary to assure conformity with the provisions of the law. An examination shall be made after the project has been substantially completed, but prior to the acceptance of the affidavit as required by section 290.290, RSMo. If any violation of sections 290.210 to 290.340, RSMo is discovered by the inspecting public body, it's their duty under section 290.250, RSMo to withhold and retain from payments to the contractor all sums and amounts due and owing as a result of any violation. Any violation shall be immediately reported to the Division of Labor Standards at P. O. Box 449, Jefferson City, Missouri 65102 or by telephone.

(8) Each month, the successful bid contractors shall submit certified copies of their current payrolls to the contracting public body. The public body, upon receipt of the payrolls on a project, shall keep the payrolls on file for a period of one (1) year from the date of submission of the final payrolls by the contractor. The payroll records shall set out accurately and completely the following: name and address of each worker, the class or type of worker, rate of pay, daily and weekly number of hours worked for each class or type of work performed, deduction made, and actual wages paid for each class or type of work performed by each worker. The payroll records shall be made available at all times for inspection by authorized representatives of the Department of Labor and Industrial Relations.

Woodman Engineering Company v. Butler, 442 SW2d 83 (Mo. App. 1969). The function of reviewing court in prevailing wage cases is to decide if the determination of the commission was authorized by law and was supported by competent and substantial evidence upon the whole record. A decision clearly contrary to the evidence should be set aside. However, all pertinent evidence and factors must be considered in determining the applicable prevailing wage.

City of Joplin v. Industrial Commission of Missouri, 329 SW2d 687 (Mo en banc 1959). Administrative agencies do not have authority to determine constitutionality of legislation. Determination of prevailing wage earnings by commission must be based upon all current relevant factors.

8 CSR 30-3.020 DEFINITIONS (PURPOSE: This rule sets forth the definition of certain terms for purposes of issuance and use of wage determinations under the Prevailing Wage Law, sections 290.210-290.340, RSMo and the rules in this chapter.

(1) The term construction of public works generally includes construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The term includes, without limitation, the construction of buildings, structures, and improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, canals, dredging, shoring, rehabilitation and reactivation of plants, scaffolding, drilling, blasting, excavating clearing, and landscaping. The manufacture or furnishing of materials, articles, supplies, or equipment is not construction of public works within the meaning of the Prevailing Wage Law unless conducted in connection with and at the site of construction. The term construction of public works also means all work done in the construction or development of a public works project, including, without limitation, altering, remodeling, demolishing existing structures, installation on the site of the construction of items fabricated off-site, painting, and decorating, the transporting of materials and supplies to or from the site of the construction by the employees of the construction contractor or construction subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the construction by persons employed by the contractor or subcontractor.

(2) The term major repair, for purposes of identifying construction subject to the Prevailing Wage Law, means the repair of an existing facility, such as a roof or other existing system or work that performs a unique and necessary function, where the amount of repair involves twenty percent (20%) or more of the roof or other existing facility. If the size, type, or extent of the existing facilities is changed or increased, the work performed shall constitute construction subject to the Prevailing Wage Law. A project shall be considered to be maintenance work, as opposed to major repair subject to the Prevailing Wage Law, if the repair involves less than twenty percent (20%) of the existing facility and the size, type, or extent of the existing facility is not changed or increased.

(3) The term site of the building or construction job means the physical place(s) where the public works are to be constructed, and also means other adjacent or nearby property used by the contractor or subcontractor in that construction which can reasonably be said to be included in the site. Except as otherwise provided in this section, fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, tool yards, and the like are part of the site of the building or construction job provided they are dedicated in a substantial degree to the performance of the public works project, and are so located in proximity to the actual construction location that it would be reasonable to include them. The dedication of seventy-five percent (75%) or more of the output of a fabrication plant, batch plant, and the like to the public works project raises a rebuttable presumption that such a facility is part of the site of the building or construction job. The presumption may be rebutted by evidence showing that the facility was established for other legitimate commercial purposes that make the facility useful well after the public works project has been completed. Not included in the site of the building or construction job are permanent home offices, branch plant establishments, fabrication plants and tool yards of a contractor or subcontractor whose location and continuance in operation are determined wholly without regard to a particular public works project. In addition, fabrication plants, batch plants, borrow pits, job headquarters, tool yards, and the like, of a commercial supplier or materialman which are established by a supplier of materials for the project before opening of bids and not on the project site are not included in the site of the building or construction job. The permanent,

previously established facilities are not a part of the site of the building or construction job, even where the operations for a period of time may be dedicated exclusively, or nearly so, to the performance of a public works project.

8 CSR 30-3.030 Apprentices and Trainees (PURPOSE: This rule sets forth the requirements for the payment of apprentice wages for workers employed on public works subject to the Prevailing Wage Law.)

(1) Journeyman's rate of pay shall be paid to all workers employed on public works construction except apprentices and trainees registered and participating in apprentice or trainee programs registered with the United States Department of Labor, Bureau of Apprenticeship and Training; and apprentices and trainees registered and participating in apprenticeship and skill training programs certified by the Secretary of the United States Department of Transportation as promoting equal opportunity in connection with federal-aid highway construction programs.

(2) Apprentices shall be permitted to work at less than the predetermined rate for the class or type of work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the United States Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training. The allowable ratio of apprenticeship to journeymen on the site of the construction for any class or type of workers 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 the payroll at an apprenticeship wage rate, who is not registered or otherwise employed as stated in this rule, shall be paid not less than the applicable wage rate on the wage determination for the class or type of work actually performed. In addition those apprentices performing work on the site of the construction who are 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 class or type of work actually performed. Every apprentice shall 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 for the class or type of worker 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 shall be paid the full amount of fringe benefits listed on the wage determination for the applicable class or type of work performed. In the event the Bureau of Apprenticeship and Training withdraws approval of an apprenticeship program, the contractor shall no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the class or type of work performed until an acceptable program is approved.

(3) 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 that has received prior approval, evidenced by formal certification by the United States 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 for the applicable class or type of work performed. Any employee listed on the payroll at a trainee rate who is not registered and participating in a Training Plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on 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.

(4) Workers employed on federal-aid highway construction projects may be paid at an apprentice or trainee rate of pay if enrolled in an apprenticeship or skill training program which has been certified by the Secretary of the United States Department of Transportation pursuant to 23 USC 113. In the event the Secretary of Transportation withdraws approval of a program, the contractor will no longer be permitted to pay workers less than the applicable predetermined rate for the work performed until an acceptable program is approved.

8 CSR 30-3.040 Classifications of Construction Work (PURPOSE: The Department of Labor and Industrial Relations has the responsibility under section 290.260, RSMo to determine the prevailing hourly rate of wages to be paid to workers engaged in work of a similar character. This rule establishes classifications of construction work for the department to use in determining the prevailing hourly rate of wages for work of a similar character.)

(1) All public works construction, for which the prevailing hourly rate of wages of workers are to be determined, shall be classified as either:

(A) Building construction; or
(B) Highway and heavy construction.

(2) Building construction shall mean the following:

(A) Building structures, including modification, additions or repairs, or both, to be used for shelter, protection, comfort, convenience, entertainment, or recreation, or for protection of people or equipment;
(B) Buildings at an airport project, such as terminal buildings, freight buildings, and any other construction necessary for the operation of the airport facilities;
(C) Stadiums, athletic fields, dressing rooms, bleachers, and all other buildings needed in connection with an athletic or entertainment facility;
(D) Entire buildings that are built aboveground in connection with highway, subway, or tunnel projects, such as tool stations or housing for mechanical equipment;
(E) Excavation for the building itself, including backfilling inside and outside the building;
(F) Storm and sanitary sewers inside the building and to the curb line;
(G) Work in connection with telephone, electrical, water, oil, gas, or fuel lines, or other utility or communication lines inside a building and to the curb line;
(H) Sidewalks other than those that are poured in connection with a street or road project;
(I) Driveways that are built to serve a building;
(J) Parking lots connected to a building and all structures built as parking facilities;
(K) Retaining walls built in conjunction with a building project;
(L) Demolition of a building(s) as part of the site preparation for new building construction;
(M) Landscaping of building sites or the planting of all shrubbery that is incidental to building construction as defined in section (2); and
(N) Work on water and wastewater treatment plants within the fence line.

(3) Highway and heavy construction shall mean the following:

(A) Work in conjunction with roads, streets, parkways, alleys, and highways, including, but not limited to grading, paving, curbing, signs, fences, guard rails, bridges, lighting, retaining walls, and landscaping;
(B) Work on viaducts, overpasses, underpasses, drainage projects, aqueducts, irrigation projects, flood control projects, reclamation projects, reservoir filtration and supply projects, water power, duct lines, distribution lines, pipe lines, locks, dikes, levees, revetments projects, excluding work specifically defined as building construction;
(C) Work in connection with underground construction on tunnels and shafts;
(D) Railroad work in its entirety, including elevated railroads;

(E) Main and side sewers;
(F) Work in connection with airports, such as runways, roads and streets, but excluding that which is listed as building construction;
(G) Work in connection with telephone, electrical, water, oil, gas, or fuel lines, or any other utility or communication lines from the curb line;
(H) Sidewalks when poured incidental to a street or road project;
(I) Parking lots not incidental to a building construction project; and
(J) Demolition of all buildings as part of site preparation for any highway and heavy construction as is otherwise defined in section (3).

(4) On public works contracts that involve both classifications of construction as defined in sections (2) and (3) of this rule, the Department of Labor and Industrial Relations shall issue a determination including both of these classifications.

8 CSR 30-3.050 Posting of Prevailing Wage Rates (PURPOSE: This rule sets forth the requirements for the posting of prevailing wage rates on public works projects subject to the Prevailing Wage Law.)

(1) Contractors and subcontractors engaged in public works projects shall post the prevailing hourly rate of wages in a dry, accessible place within the field office at the site of the building or construction job. On public works projects for which no field office is needed or established, such as road construction, sewer lines, pipelines and the like, a contractor/subcontractor may post the prevailing hourly rates of wages at the contractor/subcontractor's local office or batch plant, so long as the contractor/subcontractor provides a copy of the prevailing hourly wage rates to any worker upon request. Prevailing hourly wage rates must be posted and maintained in a clearly legible condition for the duration of the public works project as provided by law.

END OF SECTION 00 73 43

SECTION 00 73 46 – WAGE DETERMINATION SCHEDULE

Contractor shall use wage rates as specified herein and in accordance with state and federal law.

Missouri
Division of Labor Standards
WAGE AND HOUR SECTION

MICHAEL L. PARSON, Governor

Annual Wage Order No. 31

Section 049
JASPER COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by
Todd Smith, Director
Division of Labor Standards

Filed With Secretary of State: **March 8, 2024**

Last Date Objections May Be Filed: **April 8, 2024**

Prepared by Missouri Department of Labor and Industrial Relations

Building Construction Rates for
JASPER County

Section 049

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	$29.82
Boilermaker	$27.80*
Bricklayer-Stone Mason	$48.61
Carpenter	$59.01
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	$40.19
Plasterer	
Communication Technician	$27.80*
Electrician (Inside Wireman)	$48.51
Electrician Outside Lineman	$27.80*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	$27.80*
Glazier	$42.46
Ironworker	$27.80*
Laborer	$40.73
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	$27.80*
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	$27.80*
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	$27.80*
Plumber	$52.30
Pipe Fitter	
Roofer	$27.80*
Sheet Metal Worker	$49.79
Sprinkler Fitter	$27.80*
Truck Driver	$27.80*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. The public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.
**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title as defined in RSMo Section 290.210.

Heavy Construction Rates for
JASPER County

Section 049

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	$27.80*
Millwright	
Pile Driver	
Electrician (Outside Lineman)	$27.80*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	$43.93
General Laborer	
Skilled Laborer	
Operating Engineer	$51.90
Group I	
Group II	
Group III	
Group IV	
Truck Driver	$27.80*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title.

ANNUAL WAGE ORDER NO. 31

3/24

OVERTIME
and
HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, **"overtime work"** shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January first;
The last Monday in May;
July fourth;
The first Monday in September;
November eleventh;
The fourth Thursday in November; and
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

ANNUAL WAGE ORDER NO. 31 3/24

END OF SECTION 00 73 46

SECTION 01 11 00 – SUMMARY OF WORK

1. GENERAL

1.1 The work consists of furnishing all labor, materials, equipment, tools, supervision and testing to complete the project as described in these specifications and as shown on the drawings. The Scope of Work includes:

1.1.1 Remove chiller/boiler and associated piping in old Museum and replace with new standard split system units.

1.1.2 Remove large packaged rooftop unit and rooftop condensing unit and replace with 15-ton packaged roof top unit.

1.1.3 Replace four remaining rooftop units with new units.

1.1.4 Add new gas piping, condensate piping, and ductwork as indicated.

1.1.5 Electrical revisions required to support new split system units and packaged rooftop units.

1.2 Location: The project site is located as shown on the drawings.

1.3 Access: Access by the Contractor and/or his employees to the building shall be coordinated with City staff.

1.4 Safety: Precautions shall be exercised at all times by the Contractor for the protection of persons, employees, and property. The safety provisions of applicable laws and local building and construction codes (OSHA and manufacturer's safety requirements) shall be observed. The Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work.

1.5 Inclusive in the work is close coordination with all appropriate jurisdictional agencies and responsibility for construction standards, traffic control, and safety requirements of these agencies.

2. PERMITS

2.1 Secure all necessary permits from respective authorities necessary to complete construction.

2.1.1 Contractor and subcontractors shall have an Occupational License on file with the City of Joplin as required by Section 00 52 00, paragraph 30.

2.1.2 In addition to the Occupational License, the Contractor shall obtain a Commercial Improvements Permit from the City of Joplin. Cost for said permit is outlined in ARTICLE IV. - PERMITS AND FEES of the Joplin Code of Ordinances, Section 26-91 - Building permit fees; re-inspection fee.

2.1.3 City building inspections shall be conducted as required by the City. Contractor shall be responsible for notifying the City via the online portal and coordinating inspections.

3. RELATED DOCUMENTS

3.1 Drawings are included as part of this specification. Installation shall be per the construction drawings, supplemented as necessary by any applicable construction details.

3.2 Locate all existing underground installations in advance of excavating or trenching, by contacting the owners thereof, prospecting, and the use of the Company 1-800-DIG-RITE (344-7483), and other appropriate locating services.

3.3 All damage to existing private and/or municipal utilities or improvements shall be repaired, including the cost of all required materials, labor, and equipment. All repairs shall be made as authorized by the owner of the utility and/or party involved and in compliance with all jurisdictional requirements. Repair and/or replacement cost shall be considered incidental to the performance and perfection of the contract.

4. SCHEDULING OF WORK

4.1 Schedule all work, including location of utilities, to coordinate with appropriate jurisdictional agencies.

5. REGULATORY REQUIREMENTS

5.1 Obtain all necessary permits and licenses and comply with all codes of construction as required by the City of Joplin.

5.2 Pay for any bond or other charges associated with obtaining the necessary permits or licenses.

6. CONSTRUCTION STANDARDS

6.1 Generally applicable standards have been included in the specifications. Any other construction details otherwise required will be provided by the Engineer. Engineer may make substitutions of equivalent materials or assemblies for those shown in the standards.

7. REFERENCES AND ABBREVIATIONS

7.1 The latest edition of the following specifications cover certain specified materials and methods to be utilized. Abbreviations as used in the specifications shall mean the following:

7.1.1 AWWA: American Water Works Association.

7.1.2 AGA: American Gas Association

7.1.3 ASTM: American Society for Testing Materials

7.1.4 AASHTO: American Association of State Highway & Transportation Officials

7.1.5 ANSI: American National Standards Institute

7.1.6 API: American Petroleum Institute

7.1.7 ASA: American Standards Association

7.1.8 DOT: Federal Department of Transportation

7.1.9 AWS: American Welding Society

7.1.10 AREA: American Railway Engineering Association

7.1.11 ACI: American Concrete Institute

7.1.12 BOCA: Building Officials and Code Administrators

8. QUALITY CONTROL

8.1 Establish a quality control system to insure conformance of all items of work, including that of subcontractors, to applicable specifications and drawings with respect to the materials, workmanship, construction, finish, functional performance, and identification. The controls shall be adequate to cover all layout and construction operations, shall be keyed to the proposed construction sequence, and shall be subject to approval by the Engineer.

9. ENVIRONMENTAL

9.1 In the event of spillage or discharge of oil to the environment, the contractor shall comply with the provisions of Title 40 Code of Federal Regulations: Part 110 – Discharge of Oil: Part 112 – Oil Pollution Prevention; Part 300 – National Oil and Hazardous Substances Pollution contingency Plans; and all applicable State, County, and municipal regulations.

9.2 The contractor and the Owner, in their respective obligations under the terms of the Contract, shall conform to the provisions of the Clean Air Act (41 U.S.C. 7506(C)).

END OF SECTION 01 11 00

SECTION 01 25 00 – SUBSTITUTION PROCEDURES

1. GENERAL

1.1 Description: Equipment and materials by manufacturers and suppliers other than those named on the drawings will be considered by the Engineer under procedures set forth hereinafter.

1.2 Sole Manufacturer and Suppliers:

1.2.1 The provisions contained within the General Conditions and the Supplemental General Conditions concerning "Sole Manufacturer" and "Letters of Certification" shall apply to equipment and materials designated hereinafter, unless specified otherwise.

2. MATERIAL AND EQUIPMENT

2.1 As noted on drawings.

3. ALTERNATE MANUFACTURERS OF EQUIPMENT AND MATERIALS

3.1 Submittal: Suppliers and manufacturers other than those listed wishing to have their equipment and materials considered may submit literature and data completely describing their products to the Engineer for review up to fourteen (14) calendar days prior to the date of bid opening. Documentation received after the date fourteen (14) days prior to the bid opening date will not be considered.

3.2 The Engineer will review submittal of alternate equipment and material. Those items determined by the Engineer to conform to the specifications and receiving approval may be utilized in the Project. Written approval will be provided to prospective bidders.

END OF SECTION 01 25 00

HVAC AIR DEVICES & DUCTWORK

- SUPPLY AIR DEVICE (4-WAY)
- SUPPLY AIR DEVICE (3-WAY)
- SUPPLY AIR DEVICE (2-WAY)
- RETURN/EXHAUST AIR DEVICE
- EXISTING SUPPLY AIR DEVICE
- EXISTING RETURN AIR DEVICE
- SIDEWALL AIR DEVICE
- TYPE<X> SIZE (TYP) — AIR DEVICE TAG WITH MARK NUMBER FLOW, SIZE AND (MATCHING DEVICES)
- SUPPLY DUCT UP
- SUPPLY DUCT DOWN
- RETURN/EXHAUST DUCT UP
- RETURN/EXHAUST DUCT DOWN
- WxH — RECTANGULAR DUCT WIDTH×HEIGHT
- DIAØ — ROUND DUCT (SPIRAL)
- EXISTING DUCTWORK
- DIAØ — ROUND DUCT (SNAP-LOCK)
- ROUND DUCT TAKEOFF WITH MANUAL DAMPER
- TAG-ID — EQUIPMENT TAG W/EQUIPMENT TYPE AND IDENTIFICATION NUMBER

HVAC SENSORS & SYMBOLS

- T — THERMOSTAT
- TS — TEMPERATURE SENSOR
- TC — TEMPERATURE CONTROLLER
- H — HUMIDITY SENSOR
- CO2 — CARBON DIOXIDE SENSOR
- CO2 — CARBON DIOXIDE SENSOR - DUCT MOUNT
- CO — CARBON MONOXIDE SENSOR
- R — REFRIGERANT PIPING
- D — CONDENSATE PIPING
- BALANCING DAMPER
- MOTORIZED DAMPER W/ADJUSTABLE STOP
- FIRE DAMPER
- SMOKE DAMPER
- FIRE/SMOKE DAMPER
- ZONE DAMPER
- BYPASS DAMPER
- MECHANICAL EQUIPMENT
- MECHANICAL EQUIPMENT ON ROOF

ELECTRICAL SWITCHES

MOUNT AT 48" ABOVE FINISH FLOOR (AFF) UNLESS OTHERWISE NOTED. WHEN MOUNTED IN MASONRY, SWITCH MOUNTING HEIGHT SHALL ALIGN WITH MASONRY COURSING NEAREST TO 48" (MID-POINT) AFF, BUT SHALL NOT BE HIGHER THAN 48" (MID-POINT) AFF.

- S — SINGLE POLE SWITCH
- S2 — DOUBLE POLE SWITCH
- S3 — THREE-WAY SWITCH
- S4 — FOUR-WAY SWITCH
- SDM — DIMMER SWITCH
- SM — MOTOR RATED SWITCH
- SK — KEYED SWITCH
- S2K — 2-POLE KEYED SWITCH
- S3K — 3-WAY KEYED SWITCH
- ST — TIME SWITCH
- SP — PILOT LIGHT SWITCH
- OS — WALL BOX OCCUPANCY SENSOR
- OS — OCCUPANCY SENSOR - CEILING MOUNTED
- OS — OCCUPANCY SENSOR - WALL MOUNTED
- PC — PHOTOELECTRIC CONTROL (PEC)

RECEPTACLES

UNLESS IN FLOOR BOX, MOUNT AT HEIGHT SCHEDULED ABOVE FINISH FLOOR (AFF). WHEN MOUNTED IN MASONRY, RECEPTACLE MOUNTING HEIGHT SHALL ALIGN WITH MASONRY COURSING NEAREST TO SCHEDULED HEIGHT, BUT SHALL NOT BE LOWER THAN 16" (MID-POINT) AFF.

- 1 — RECEPTACLE-REFER TO RECEPTACLE SCHEDULE
- 2 — QUADRUPLEX RECEPTACLE-REFER TO RECEPTACLE SCHEDULE
- RECEPTACLE IN FLOOR BOX, REFER TO KEYED NOTES ON PLAN
- QUAD. RECEPTACLE IN FLOOR BOX, REFER TO KEYED NOTES ON PLAN
- X-XX — SPECIAL RECEPTACLE, NUMERIC 'X-XX' INDICATES NEMA CONFIGURATION

EQUIPMENT

INSTALL EQUIPMENT TO COMPLY WITH WORKING SPACE REQUIREMENTS LISTED IN ARTICLE 110 OF THE NATIONAL ELECTRICAL CODE.

- LOAD CENTER, PANELBOARD, SWITCHBOARD, OR MOTOR CONTROL CENTER
- xx/xx — DISCONNECT SWITCH WITH AMPACITY AND NUMBER OF POLES INDICATED
- J — JUNCTION BOX
- D — DIRECT EQUIPMENT CONNECTION
- D — ELECTRIC HAND DRYER
- XX — MOTOR LOAD:
  EF - EXHAUST FAN — AHU - AIR HANDLING UNIT
  P - PUMP — CU - CONDENSING UNIT
  OHD - OVERHEAD DOOR — CF - CEILING FAN
  RTU - ROOFTOP UNIT
- XX — PUSHBUTTON OPERATOR;
  EMS - EMERGENCY STOP
  DAW - DOOR ACTUATOR - WALL MOUNTED
  DAP - DOOR ACTUATOR - PEDESTAL MOUNTED
  PTE - EMERGENCY PUSH TO EXIT
- MOTOR STARTER
- TRx — TRANSFORMER
- PP-XX — CIRCUIT HOMERUN
- UGE — UNDERGROUND ELECTRIC
- OHE — OVERHEAD ELECTRIC
- UGT — UNDERGROUND TELEPHONE
- OHT — OVERHEAD TELEPHONE

COMMUNICATION OUTLET ROUGH-IN

UNLESS IN FLOORBOX OR OTHERWISE NOTED, MOUNT AT 18" ABOVE FINISH FLOOR (AFF). WHEN MOUNTED IN MASONRY, OUTLET MOUNTING HEIGHT SHALL ALIGN WITH MASONRY COURSING NEAREST TO SCHEDULED HEIGHT, BUT SHALL NOT BE LOWER THAN 16" (MID-POINT) AFF.

PROVIDE A 4" SQUARE JUNCTION BOX AND 3/4" CONDUIT WITH DE-BURRED ENDS, INCLUDING 90° SWEEP, INTO ACCESSIBLE CEILING SPACE. FOR SINGLE-GANG OUTLETS IN FRAMED WALLS, PROVIDE A SINGLE-GANG PLASTER RING.

- SINGLE-GANG OUTLET
- COMBINATION TELEPHONE/DATA OUTLET
- D — DATA OUTLET
- TV — TELEVISION OUTLET BOX
- TELEPHONE/DATA OUTLET IN RECESSED FLOOR BOX
- IC — INTERCOM OUTLET BOX
- S — INTERCOM SPEAKER
- C — CLOCK -SINGLE FACE
- C D — CLOCK - DOUBLE FACE

FIRE ALARM

COMPLY WITH REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) FOR CEILING-MOUNTING AND/OR WALL-MOUNTING HEIGHTS OF FIRE ALARM DEVICES.

- S — SMOKE DETECTOR
- S CO — COMBINATION SMOKE & CARBON MONOXIDE DETECTOR
- H — HEAT DETECTOR
- CEILING-MOUNTED STROBE
- WALL-MOUNTED STROBE
- F — WALL-MOUNTED HORN/SPEAKER WITH STROBE
- F CLG — CEILING-MOUNTED HORN/SPEAKER WITH STROBE
- F — WALL-MOUNTED HORN/SPEAKER
- TS — TAMPER SWITCH
- FS — FLOW SWITCH
- M — MAGNETIC DOOR HOLDER
- M — MAGNETIC DOOR HOLDER - WALL MOUNTED
- F — MANUAL PULL STATION
- FACP — FIRE ALARM CONTROL PANEL
- FARA — FIRE ALARM REMOTE ANNUNCIATOR
- DUCT SMOKE DETECTOR
- DUCT HEAT DETECTOR

LIGHT FIXTURES

- LAY-IN/RECESSED 24" X 48" OR 24" X 24" FLUORESCENT OR LED LIGHT
- SURFACE 24" X 48" OR 24" X 24" FLUORESCENT OR LED LIGHT
- STRIP, SUSPENDED, OR SURFACE MOUNT LIGHT
- INDUSTRIAL FLUORESCENT OR LED LIGHT
- DOWNLIGHT/CAN LIGHT OR WALL WASH LIGHT
- WALL MOUNTED LIGHT
- PENDANT LIGHT
- EXIT LIGHT, DIRECTIONAL EXIT LIGHT, OR EXIT/EMERGENCY LIGHT
- DUAL HEAD EMERGENCY LIGHT OR REMOTE HEAD

PIPE LABELS

- WS — WATER SERVICE
- C — COLD WATER
- H — HOT WATER
- R — HOT WATER RETURN
- S — BUILDING WASTE/SEWER
- K — KITCHEN WASTE
- V — VENT
- SD — STORM DRAIN
- OD — OVERFLOW DRAIN
- G — GAS
- EG — ELEVATED PRESSURE GAS
- CA — COMPRESSED AIR
- VAC — VACUUM
- F — FILTERED WATER
- EXISTING PIPE
- PIPE BELOW GRADE
- D — CONDENSATE DRAIN

VALVES & FITTINGS

- BALL VALVE
- CIRCUIT BALANCING VALVE
- PRESSURE REDUCING VALVE
- CHECK VALVE
- DOUBLE CHECK VALVE
- CAP
- EQUIPMENT CONNECTION
- ELBOW UP
- ELBOW DOWN
- TEE
- ELBOW
- TEE UP
- TEE DOWN
- WATER HAMMER ARRESTOR
- PIPING CONTINUATION

PLUMBING SYMBOLS

- RPBP — REDUCED PRESSURE BACKFLOW PREVENTER
- FD — FLOOR DRAIN - ROUND STRAINER
- FD — FLOOR DRAIN - SQUARE STRAINER
- CO — CLEANOUT
- COEX — OUTDOOR CLEANOUT
- WCO — WALL CLEANOUT
- FLOOR SINK
- RD — ROOF DRAIN
- OD — OVERFLOW DRAIN
- R — GAS PRESSURE REGULATOR
- M M — GAS METER

FIRE PROTECTION

- FS — FLOW SWITCH
- SIAMESE FIRE DEPT. CONN.
- BACKFLOW PREVENTER
- SH — SPRINKLER HEAD
- HOSE — HOSE CABINET
- VCAB — VALVE CABINET

GENERAL MEP SYMBOLS & ABBREVIATIONS

- 1 — PLAN KEY NOTE IDENTIFIER
- DENOTES "CONNECT TO EXISTING"
- X / XX — DETAIL REFERENCE IDENTIFIER
- KEY — PLAN REVISION IDENTIFIER

AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
BC	BELOW COUNTER
BOF	BOTTOM OF FIXTURE
CF	CEILING FAN
CLG	CEILING
COF	CENTER OF FIXTURE
C	COLD WATER
D	CONDENSATE DRAIN
CU	CONDENSING UNIT
EM	EMERGENCY
EF	EXHAUST FAN
EG	ELEVATED PRESSURE GAS
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
F	FILTERED WATER
GFI	GROUND FAULT INTERRUPTER
GH	BASKETBALL GOAL HOIST
HOR	HORIZONTAL
HP	HEAT PUMP
H	HOT WATER
K	KITCHEN WASTE
R	HOT WATER RETURN
MFG	MANUFACTURER
NIC	NOT IN CONTRACT
NL	NON-SWITCHED NIGHT LIGHT
NTS	NOT TO SCALE
OF/CI	OWNER FURNISHED, CONTRACTOR INSTALLED
OHD	OVERHEAD DOOR
P	PUMP
RE	REFER TO, REFERENCE
RTU	ROOF TOP UNIT
SF	SUPPLY FAN
S	SANITARY SEWER
TL	TWISTLOCK
TOF	TOP OF FIXTURE
TP	TAMPER PROOF
TW	TEMPERED WATER
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VENT
VTR	VENT THROUGH ROOF
WP	WEATHER PROOF
WS	WATER SERVICE

SECURITY

- SECURITY/CCTV CAMERA
- B — DOOR BUZZER
- B — DOOR BELL/CHIME
- CR — CARD READER
- DL — ELECTRIC DOOR LOCK
- DL M — MAGNETIC DOOR LOCK
- K — ACCESS KEYPAD
- M — MOTION SENSOR
- TG — GLASS BREAK SENSOR

REVISION	DATE

STATE OF MISSOURI
KEVIN NOELL CONWAY
NUMBER PE-28270
REGISTERED PROFESSIONAL ENGINEER
08/14/24

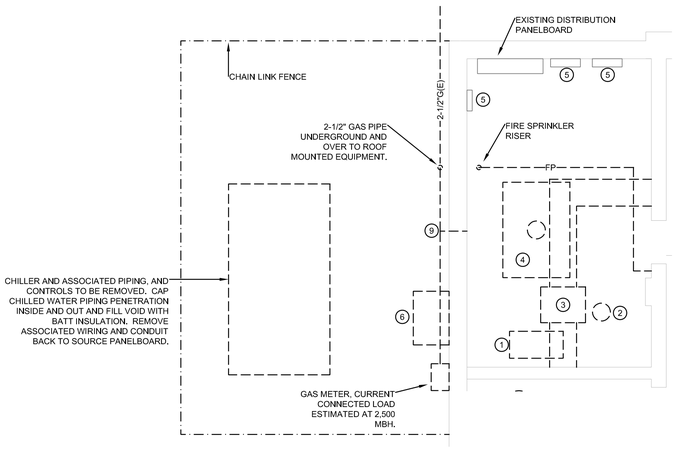
CONWAY DUNCAN
600 WEST COLLEGE STREET I SUITE 102
SPRINGFIELD I MISSOURI I 65806
P: 417.881.1586
MISSOURI COA: E-2014013301

HVAC UPGRADES for
DOROTHEA B HOOVER HISTORICAL MUSEUM
JOPLIN, MISSOURI

DRAWN BY:	CDI
CHECKED BY:	CRD/KNC
DATE:	08-08-2024
SCALE:	AS NOTED
PROJECT #:	--

SHEET #
SYMBOLS LEGEND

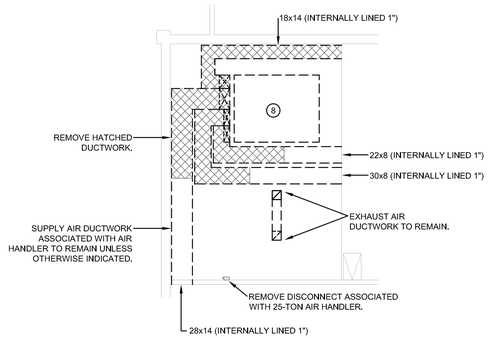
PME1.0



ENLARGED BOILER ROOM DEMOLITION PLAN

SCALE: 1/4" = 1'-0"

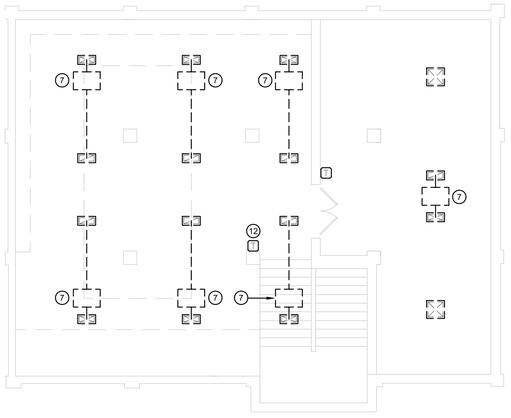
2 M1.0



MECHANICAL MEZZANINE DEMOLITION PLAN

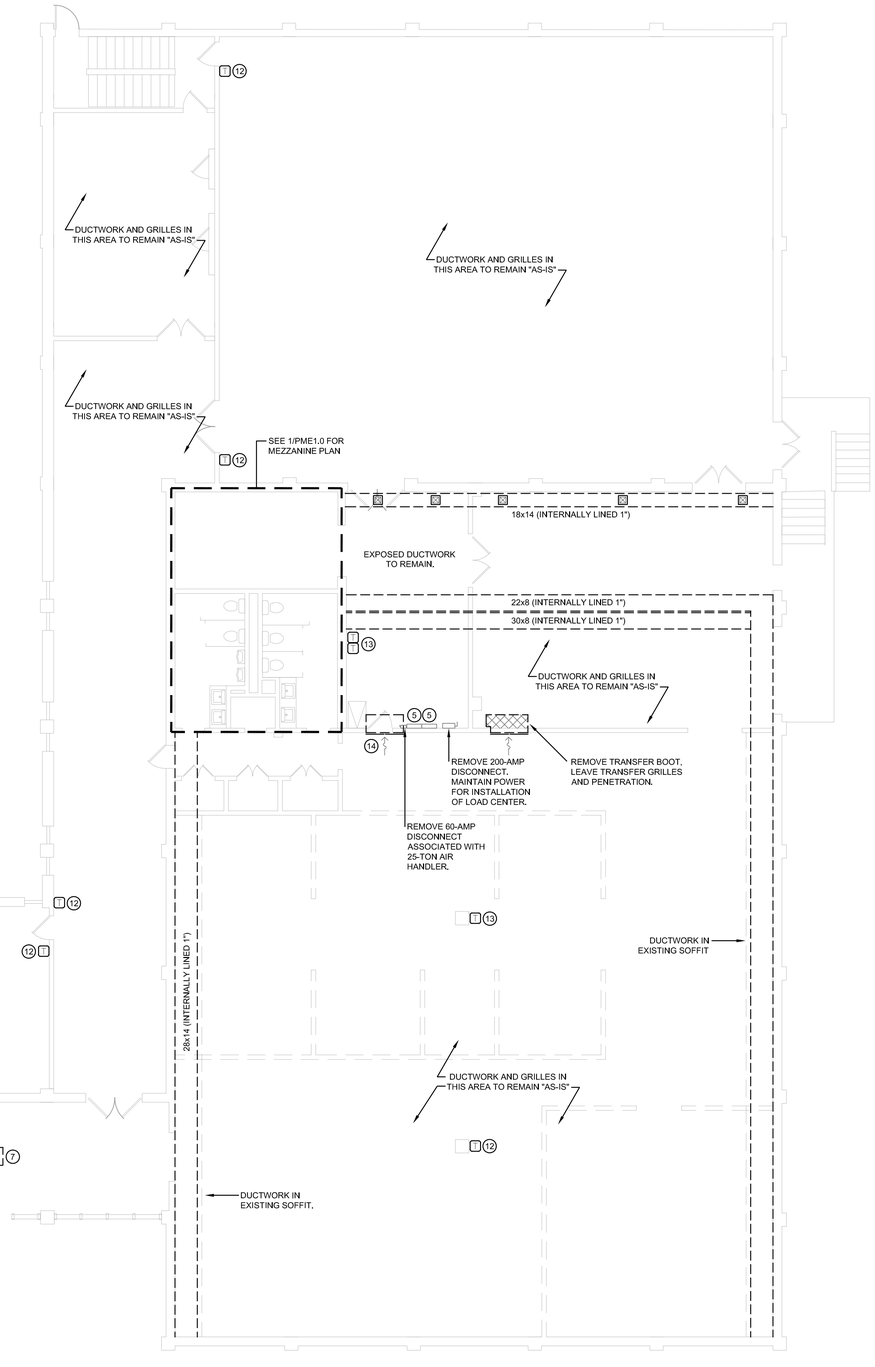
SCALE: 1/8" = 1'-0"

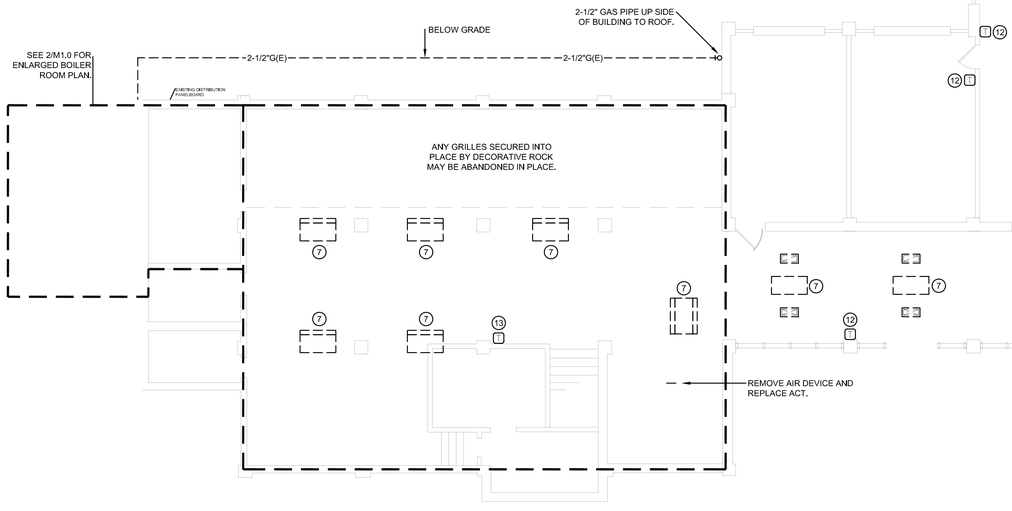
1 PME1.0



SECOND FLOOR MEP DEMOLITION PLAN

SCALE: 1/8" = 1'-0"





FIRST FLOOR MEP DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

KEYNOTES

INDICATED BY SYMBOLS (1) , (2) , ETC.

1. BASE MOUNT END SUCTION PUMP AND ASSOCIATED CONTROLS, AND VFD TO BE REMOVED. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE PANELBOARD. MARK ASSOCIATED BREAKER AS "SPARE".
2. INLINE PUMP AND ASSOCIATED CONTROLS AND VFD TO BE REMOVED. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE PANELBOARD. MARK ASSOCIATED BREAKER AS "SPARE".
3. FAN COIL AND ASSOCIATED CONTROLS, CONDENSATE, HYDRONIC PIPING AND DUCTWORK LOCATED WITHIN THE BOILER ROOM TO BE REMOVED. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE PANELBOARD. MARK ASSOCIATED BREAKER AS "SPARE".
4. BOILER AND ASSOCIATED CONTROLS TO BE REMOVED. REMOVE ALL ASSOCIATED PIPING LOCATED WITHIN THE BOILER ROOM. REMOVE FLUE BACK TO ROOF DECK AND CAP WEATHER TIGHT ON ROOF. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE PANELBOARD. MARK ASSOCIATED BREAKER AS "SPARE".
5. PANELBOARD/LOAD CENTER TO REMAIN.
6. 36x24 BOILER COMBUSTION AIR INTAKE TO BE REMOVED AND CAPPED. PAINT TO MATCH EXTERIOR.
7. FAN COIL AND ASSOCIATED CONTROLS, DUCTWORK, CONDENSATE, AND AIR DEVICES TO BE REMOVED. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE PANELBOARD. MARK ASSOCIATED BREAKER AS "SPARE".
8. 25 TON AIR HANDLER, ASSOCIATED CONTROLS, AND DAMPERS TO BE REMOVED. MAINTAIN SUPPLY AIR DUCTWORK FOR RECONNECTION AS SHOWN. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO SOURCE PANELBOARD. MARK ASSOCIATED BREAKER AS "SPARE".
9. DETACH GAS PIPING SERVING BOILER. RETAIN STUB-IN FOR FUTURE CONNECTION.
10. REMOVE SUPPLY GRILLE AND ASSOCIATED BRANCH DUCTWORK.
11. EXHAUST FAN TO REMAIN.
12. REMOVE T-STAT. KEEP WIRE AND WIREMOLD (WHERE APPLICABLE) FOR NEW T-STAT.
13. REMOVE T-STAT AND ASSOCIATED CONTROL WIRING, WIREMOLD, ETC. PATCH/PAINT WALL TO MATCH EXISTING.
14. TRANSFER DUCT/GRILLES TO REMAIN "AS IS".

GENERAL NOTES

1. ALL HYDRONIC PIPING TO BE DRAINED AND ABANDONED. REMOVE WHERE REQUIRED FOR INSTALLATION OF NEW EQUIPMENT/DUCTWORK.
2. ALL BOILER ROOM HYDRONIC PIPING, PUMPS AND ASSOCIATED AIR CONTROL EQUIPMENT TO BE REMOVED.
3. CONTRACTOR TO PROVIDE/REPLACE ACOUSTICAL CEILING TILES TO MATCH EXISTING WHERE DAMAGED DURING CONSTRUCTION OR REMOVAL OF AIR DEVICES OR EQUIPMENT CREATES AN VOID. CEILING TILES SHOULD MATCH TYPE AND COLOR OF SURROUNDING TILES.

ELECTRICAL DEMOLITION

1. REMOVE ALL EXISTING FIXTURES, DEVICES, EQUIPMENT AND ASSOCIATED WIRING IN CONFLICT WITH CONSTRUCTION.
2. FIXTURES, DEVICES, EQUIPMENT AND ASSOCIATED WIRING THAT ARE REMOVED REMAIN PROPERTY OF THE OWNER UNLESS REJECTED BY THE OWNER IN WRITING.
3. EXISTING OUTLET BOXES AND CONDUIT MAY BE USED AS LOCATION PERMITS.
4. PATCH AND REPAIR WHERE REQUIRED BY REMOVAL OF EXISTING ELECTRICAL ITEMS.

REVISION	DATE

STATE OF MISSOURI
CHRISTOPHER RAY DUNCAN
NUMBER PE-2005021661
PROFESSIONAL ENGINEER
08/08/24

CONWAY DUNCAN
600 WEST COLLEGE STREET I SUITE 102
SPRINGFIELD I MISSOURI I 65806
P: 417.881.1586
MISSOURI COA: E-2014013301

HVAC UPGRADES for
DOROTHEA B HOOVER HISTORICAL MUSEUM
JOPLIN, MISSOURI

DRAWN BY:	CDI
CHECKED BY:	CRD/KNC
DATE:	08-08-2024
SCALE:	AS NOTED
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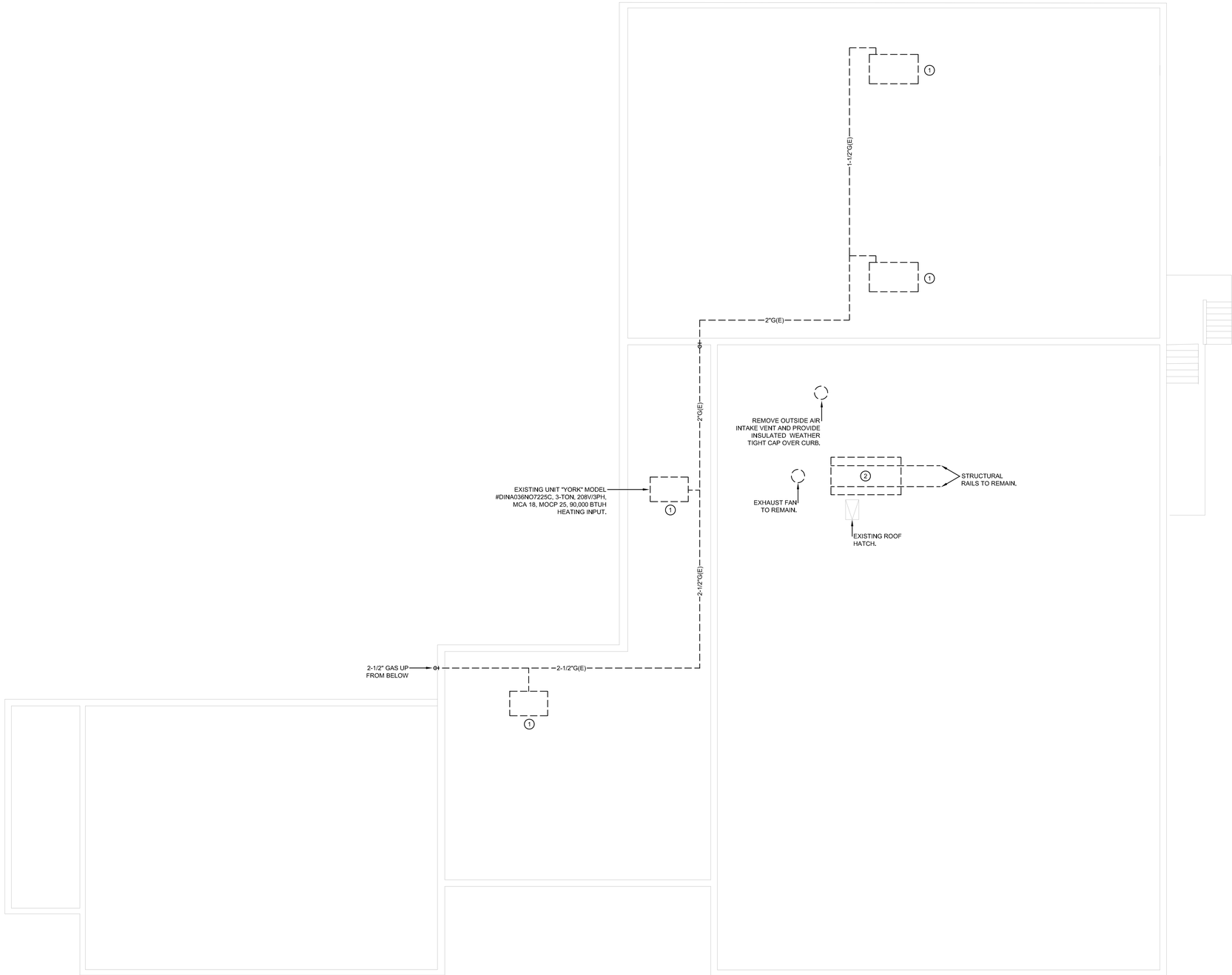
SHEET #
MEP DEMOLITION PLANS

PME1.0

KEYNOTES

INDICATED BY SYMBOLS (1) , (2) , ETC.

1. PACKAGED GAS/ELECTRIC ROOFTOP UNIT TO BE REMOVED. MAINTAIN GAS, POWER AND CURB FOR INSTALLATION OF CURB ADAPTOR.
2. REMOVE 25-TON CONDENSING UNIT, ASSOCIATED CONTROLS AND PIPING. STRUCTURAL RAILS TO REMAIN. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO 200-AMP DISCONNECT.



ROOF MEP DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

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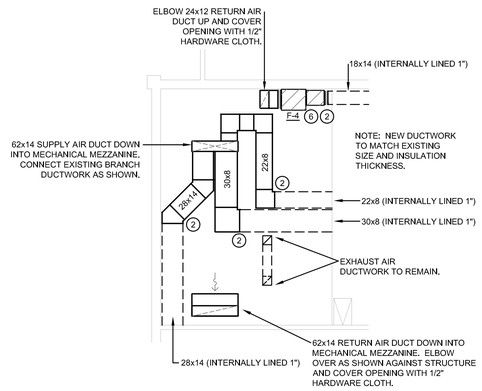
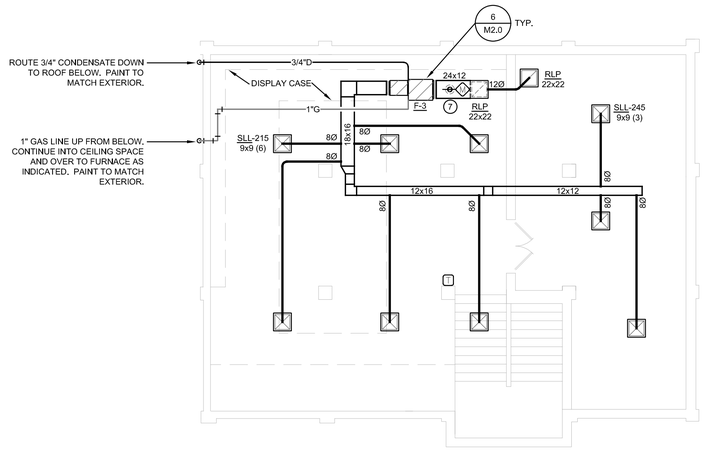
ROOF MEP
DEMOLITION PLAN

PME1.1



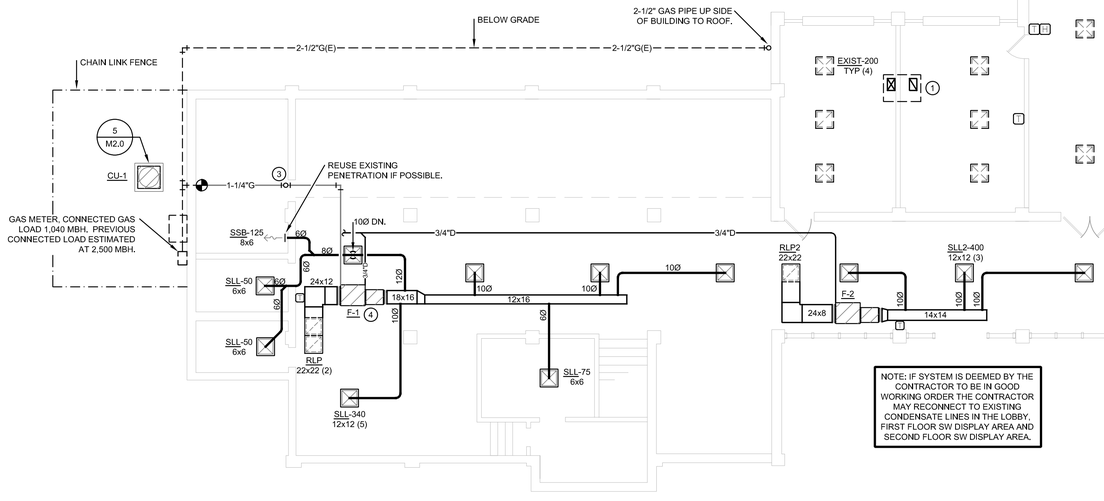
MEZZANINE MECHANICAL PLAN

SCALE: 1/8" = 1'-0"



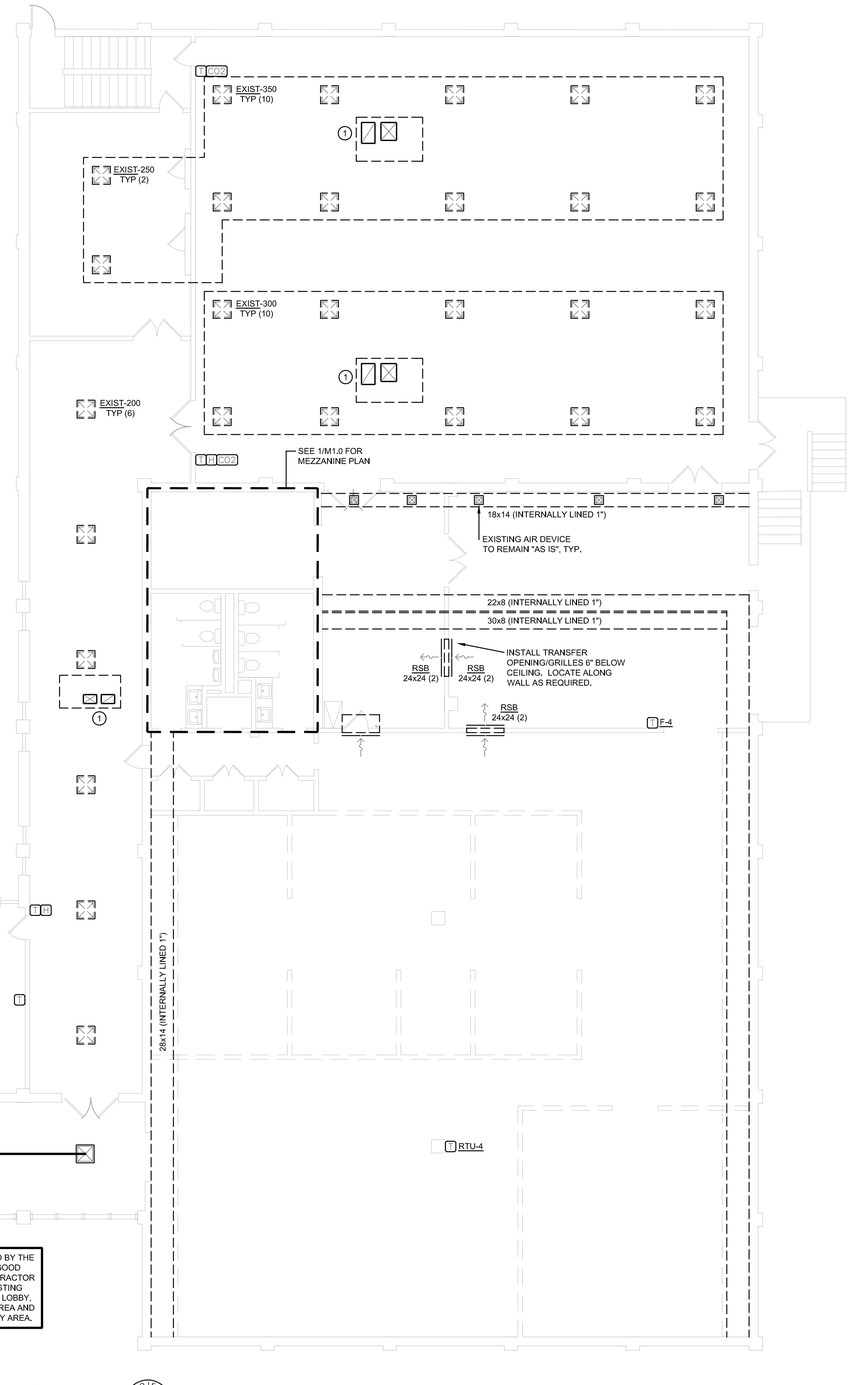
SECOND FLOOR MECHANICAL PLAN

SCALE: 1/8" = 1'-0"



FIRST FLOOR MECHANICAL PLAN

SCALE: 1/8" = 1'-0"



KEYNOTES

INDICATED BY SYMBOLS (1) , (2) , ETC.

1. RECONNECT TO EXISTING SUPPLY DUCTWORK. RETURN IS VIA PLENUM, INSTALL PER DETAIL.
2. CONNECT TO EXISTING DUCTWORK.
3. TEE 1" GAS PIPE UP THROUGH ROOF. ROUTE ALONG EXTERIOR WALL AND INTO UPPER LEVEL CEILING SPACE.
4. ROUTE COMBUSTION AND INTAKE PIPING OVER TO ABOVE RESTROOM CEILING AND PENETRATE ROOF.
5. ROUTE 1" CONDENSATE TO MECHANICAL ROOM FLOOR DRAIN OR RESTROOM SINK TAILPIECE.
6. ROUTE 3/4" CONDENSATE TO FLOOR DRAIN.
7. 6Ø OUTSIDE AIR DUCT UP TO INTAKE VENTILATOR ON ROOF.

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2018 EDITION OF THE INTERNATIONAL MECHANICAL & PLUMBING CODES.
2. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS OR FIELD MEASUREMENTS FOR DIMENSIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE COMPLETE SET OF PLANS FOR WORK PERTAINING TO HIS DISCIPLINE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE AND FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
5. THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS WORK WITH THE WORK OF OTHER SUBCONTRACTORS OF THE PROJECT. COORDINATION DOES NOT MEAN "I WAS HERE FIRST".
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL DEVICES REQUIRED TO ACHIEVE THE SEQUENCE OF OPERATIONS.
7. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCING ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.
8. THE HVAC SYSTEM SHALL BE BALANCED BY THE CONTRACTOR TO WITHIN 10% OF THE DESIGN FLOW RATES AND A TEST REPORT SHALL BE SUBMITTED TO THE ENGINEER'S OFFICE. A CERTIFIED TEST & BALANCE IS NOT REQUIRED, HOWEVER, THE TEST PROCEDURES AND RESULTING REPORT SHALL FOLLOW NEBB STANDARDS.
9. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED HVAC EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE ELECTRICAL REQUIREMENTS OF THE HVAC EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT OTHER THAN THE SPECIFIED EQUIPMENT BEING FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING A BID.
11. THE CONTRACTOR SHALL SCHEDULE AND EXECUTE ALL WORK WITH REGARD TO THE OWNER'S USE OF THE BUILDING DURING PERIOD OF CONSTRUCTION. VERIFY ALL POSSIBLE SCHEDULING CONFLICTS WITH THE OWNER'S REPRESENTATIVE.
12. ALL HVAC EQUIPMENT LOCATED ON THE ROOF TO BE INSTALLED A MINIMUM OF 10'-0" FROM THE EDGE OF THE ROOF.

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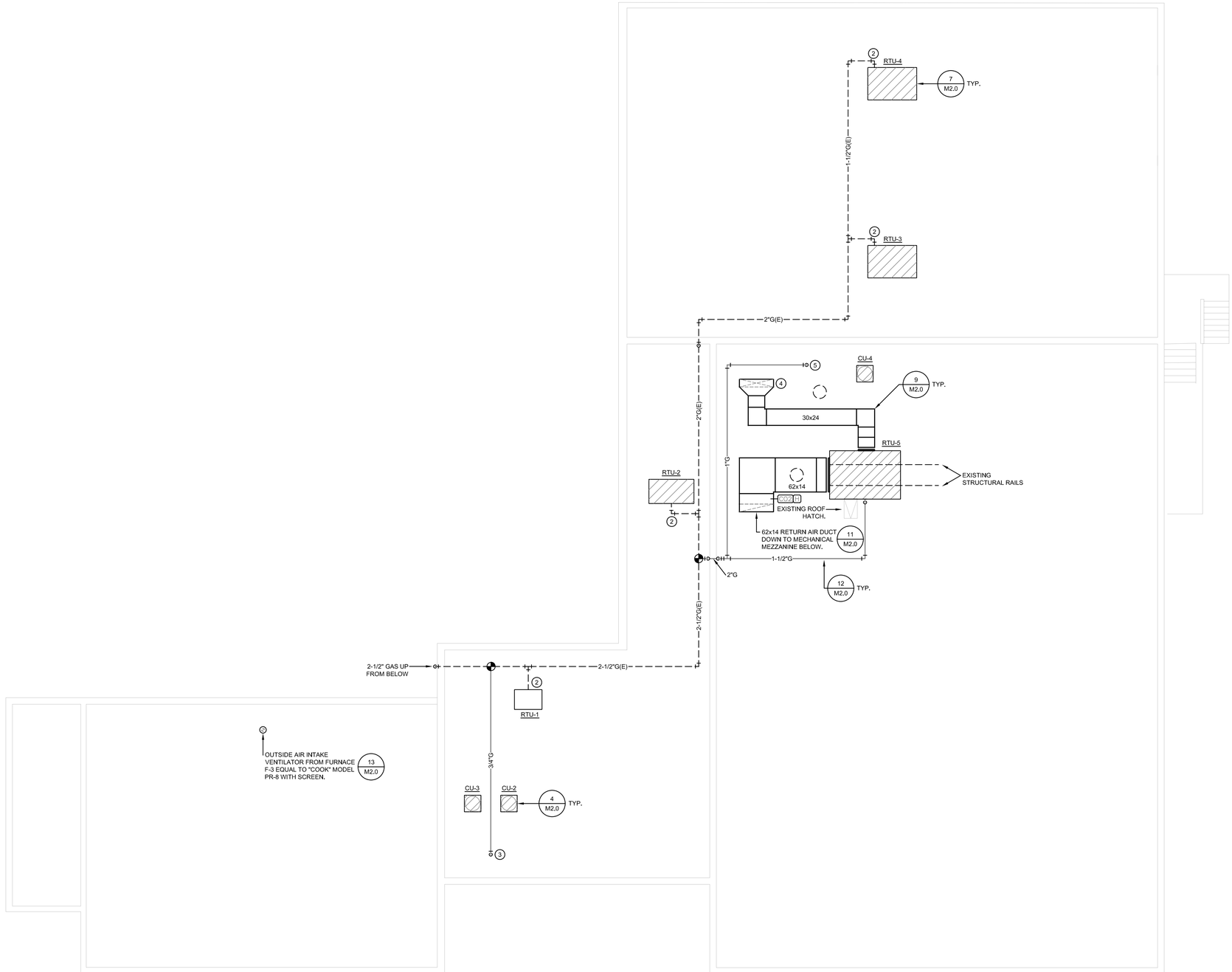
SHEET #
MECHANICAL PLANS

M1.0

KEYNOTES

INDICATED BY SYMBOLS (1) , (2) , ETC.

1. RECONNECT TO EXISTING SUPPLY DUCTWORK. RETURN IS VIA PLENUM, INSTALL PER DETAIL.
2. RECONNECT TO EXISTING GAS. PROVIDE NEW SHUT OFF VALVE, UNION AND DIRT LEG.
3. 3/4" GAS LINE DOWN THROUGH ROOF TO FURNACE F-2. SEE SHEET M1.0.
4. 62x14 SUPPLY AIR DUCT DOWN TO MECHANICAL MEZZANINE BELOW.
5. 1" GAS LINE DOWN THROUGH ROOF TO FURNACE F-4. SEE SHEET M1.0.



ROOF MECHANICAL PLAN

SCALE: 1/8" = 1'-0"

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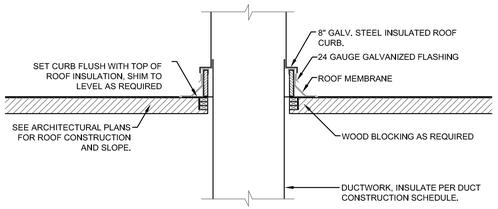
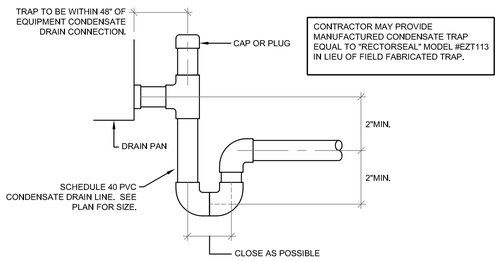
ROOF MECHANICAL PLAN

M1.1



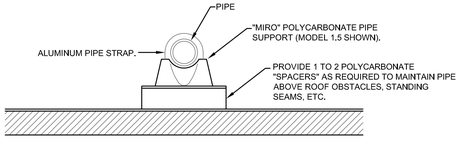
DUCTWORK THROUGH ROOF DETAIL (11 / M2.0)
NOT TO SCALE



CONDENSATE TRAP DETAIL (10 / M2.0)
NOT TO SCALE

ROOF MOUNTED RELIEF/INTAKE VENTILATOR DETAIL (13 / M2.0)
NOT TO SCALE

PIPE SUPPORT	
3/4"-1-1/2" PIPING:	"MIRO" MODEL 1.5
2"-3" PIPING:	"MIRO" MODEL "3-R-2"
4"-6" PIPING:	"MIRO" MODEL "5-RAH"

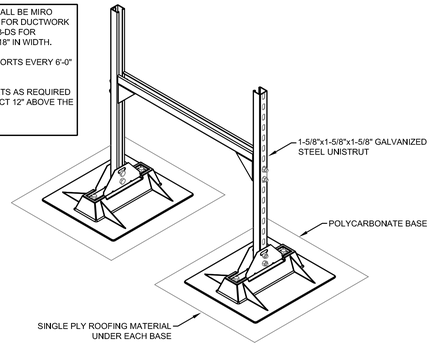


PIPE SUPPORT DETAIL (12 / M2.0)
NOT TO SCALE

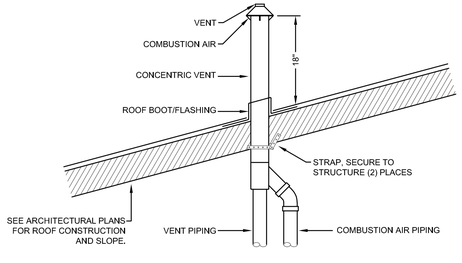
SUPPORTS: PRODUCT SHALL BE MIRO INDUSTRIES MODEL 6-DS FOR DUCTWORK UP TO 18" IN WIDTH AND 8-DS FOR DUCTWORK EXCEEDING 18" IN WIDTH.

SPACING: PROVIDE SUPPORTS EVERY 6'-0" MINIMUM.

HEIGHT: ADJUST SUPPORTS AS REQUIRED TO HOLD BOTTOM OF DUCT 12" ABOVE THE ROOF.

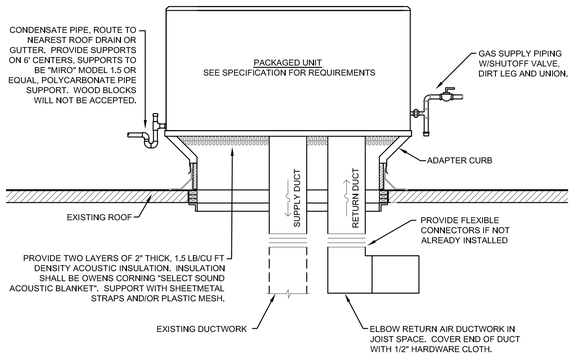


EXTERIOR DUCTWORK SUPPORT DETAIL (9 / M2.0)
NOT TO SCALE



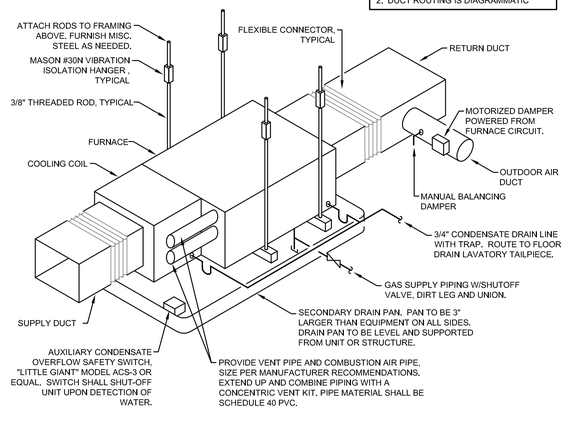
ROOF CONCENTRIC VENT DETAIL (8 / M2.0)
NOT TO SCALE

NOTE:
1. PROVIDE SERVICE CLEARANCES AS REQUIRED BY MANUFACTURER.
2. DUCT ROUTING IS DIAGRAMMATIC



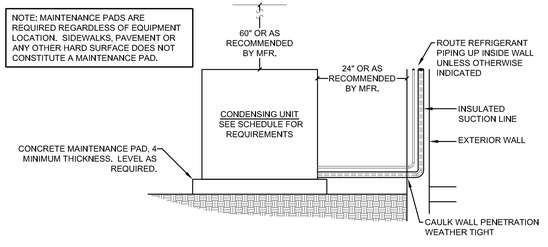
ROOF MOUNTED PACKAGED UNIT DETAIL (7 / M2.0)
NOT TO SCALE

NOTE:
1. PROVIDE SERVICE CLEARANCES AS REQUIRED BY MANUFACTURER.
2. DUCT ROUTING IS DIAGRAMMATIC

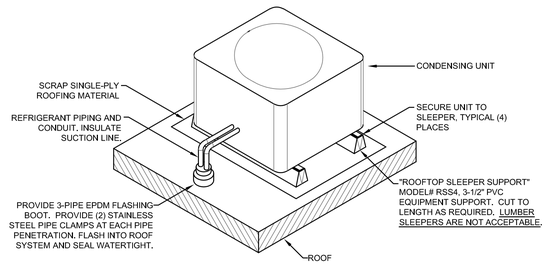


HORIZONTAL CONDENSING GAS FURNACE DETAIL (6 / M2.0)
NOT TO SCALE

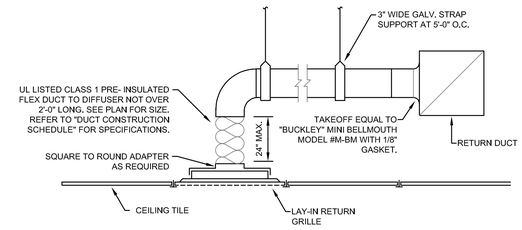
NOTE: MAINTENANCE PADS ARE REQUIRED REGARDLESS OF EQUIPMENT LOCATION. SIDEWALKS, PAVEMENT OR ANY OTHER HARD SURFACE DOES NOT CONSTITUTE A MAINTENANCE PAD.



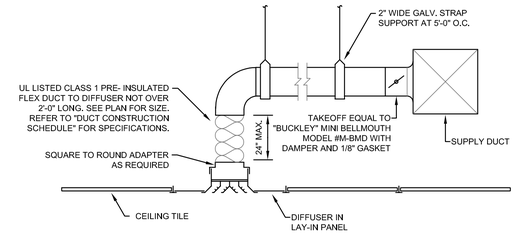
CONDENSING UNIT DETAIL (5 / M2.0)
NOT TO SCALE



CONDENSING UNIT DETAIL (4 / M2.0)
NOT TO SCALE

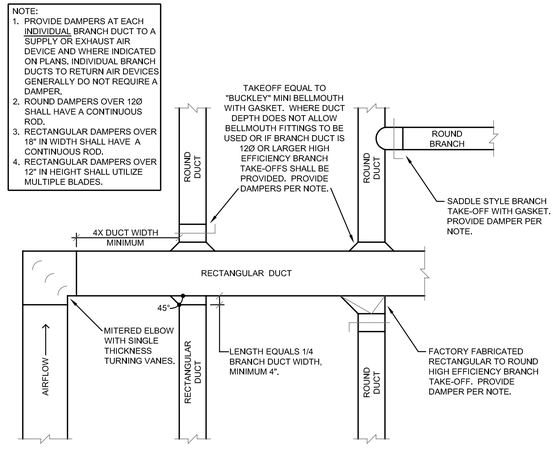


RETURN GRILLE DETAIL (3 / M2.0)
NOT TO SCALE



SUPPLY DIFFUSER DETAIL (2 / M2.0)
NOT TO SCALE

NOTE:
1. PROVIDE DAMPERS AT EACH INDIVIDUAL BRANCH DUCT TO A SUPPLY OR EXHAUST AIR DEVICE AND WHERE INDICATED ON PLANS. INDIVIDUAL BRANCH DUCTS TO RETURN AIR DEVICES GENERALLY DO NOT REQUIRE A DAMPER.
2. ROUND DAMPERS OVER 12Ø SHALL HAVE A CONTINUOUS ROD.
3. RECTANGULAR DAMPERS OVER 18" IN WIDTH SHALL HAVE A CONTINUOUS ROD.
4. RECTANGULAR DAMPERS OVER 12" IN HEIGHT SHALL UTILIZE MULTIPLE BLADES.



DUCTWORK CONSTRUCTION DETAIL (1 / M2.0)
NOT TO SCALE

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SHEET #
MECHANICAL DETAILS

M2.0

CONDENSING UNIT SCHEDULE

MARK	MFR.	MODEL #	NOMINAL COOLING CAPACITY (BTU/H)	ELECTRICAL			ACCESSORIES
				VOLTS/ PHASE	MCA	MOCP	
CU-1	YORK	TCD60	60,000	208/3	21.2	25	TS
CU-2	YORK	TCD036	36,000	208/3	14.3	15	TS
CU-3	YORK	TCD60	60,000	208/3	21.2	25	TS
CU-4	YORK	TCD048	48,000	208/3	18.4	20	TS

GENERAL NOTES
1. APPROVED MANUFACTURER/BRAND NAME: YORK, JCI, CARRIER, LENNOX
2. UNIT SHALL BE RATED IN ACCORDANCE WITH ARI STANDARDS.
2. UNIT EFFICIENCY SHALL BE 13 SEER UNLESS OTHERWISE NOTED.
3. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. INSULATE SUCTION LINES WITH 1/2" ARMAFLEX.

ABBREVIATIONS
TS: THERMOSTAT, SEE NOTE IN SEQUENCE OF OPERATIONS.

VALVE SCHEDULE

FUNCTION	SIZE	TYPE	MANUFACTURER MODEL#	MATERIAL	ASTM	END CONNECTIONS	PRESSURE RATING (PSI)	REMARKS	APPROVED MANUFACTURERS
ISOLATION (NATURAL & LP GAS)	1/2" - 2"	BALL QUARTER TURN	–	BRASS/BRONZE	B62	NP	5	1,2	NIBCO, WATTS
	2-1/2" - 6"	LUBRICATED PLUG	–	SEMI-STEEL	A536	MJ	200	2	HOMESTEAD,NORDSTROM

APPROVED MANUFACTURERS
1. BELL & GOSSETT, CRANE, GRINNELL, KEYSTONE, MILWAUKEE VALVE, NIBCO, STOCKHAM, UPONOR, VICTAULIC, WATTS

GENERAL NOTES
1. VALVE SHALL BE SAME SIZE AS UPSTREAM PIPE UNLESS OTHERWISE NOTED.

REMARKS
1. PROVIDE LEVER HANDLE FOR INTERIOR APPLICATIONS AND FLAT OR SQUARE HEAD FOR EXTERIOR APPLICATIONS.
2. VALVE SHALL BEAR AGA STAMP

ABBREVIATIONS:
MJ: GASKETED MECHANICAL JOINT
NP: NPT

PIPING SCHEDULE

SYSTEM	PIPING			FITTINGS		FIELD TEST		INSULATION	REMARKS
	SIZE	TYPE	ASTM	MATERIAL	TYPE	PRESSURE (PSI)	TIME (HOURS)		
NATURAL GAS PIPING - LOW PRESSURE (7" W.C. TO 2 PSI)	1/2" - 2"	SCH. 40 BLACK STEEL	A53	MALLEABLE-IRON	SEE REMARKS	SEE REMARKS	--	NOT REQUIRED	1,2,3
	2-1/2" AND LARGER	SCH. 40 BLACK STEEL	A53	MALLEABLE-IRON	MW	SEE REMARKS	--	NOT REQUIRED	1,2
CONDENSATE PIPING - EXTERIOR	ALL	DWV PVC	2665	PVC	SW,DF	NONE	--	NOT REQUIRED	--
CONDENSATE PIPING - INTERIOR (IN PLENUM)	ALL	TYPE L HARD DRAWN COPPER	B88	WROUGHT COPPER	SJ	100	1	1/2" FG 1/2" CE	--
REFRIGERANT PIPING	ALL	ACR	B280	COPPER	SJ	SEE REMARKS	--	SEE REMARKS	4,5

ABBREVIATIONS

CE: CLOSED-CELL ELASTOMERIC (SEE BELOW)
DF: DRAINAGE FITTING
FG: FIBERGLASS (SEE BELOW)
MW: MALLEABLE-IRON WELDED
SW: SOLVENT WELD
SJ: 95-5 TIN-ANTIMONY SOLDER JOINT

HANGERS & SUPPORTS:

HANGAR RODS SHALL CONFORM TO THE FOLLOWING:

PIPE SIZE	ROD DIAMETER
UP TO 2"	3/8"
2-1/2" TO 5"	1/2"
6" TO 10"	5/8"

TRAPEZE HANGER RODS SHALL BE OF SUFFICIENT SIZE TO CARRY WEIGHT OF TRAPEZE CHANNEL, PIPING AND CONTENTS, INSULATION SUPPORTS AND AN ADDITIONAL 200 LB. LOAD.

SUPPORT VERTICAL PIPING AT EVERY FLOOR.

MAXIMUM SPACING OF HANGERS AND SUPPORTS FOR STEEL, COPPER AND CAST IRON

PIPE SIZE	SPACING
1/2"	4'-0"
3/4" TO 1"	6'-0"
1-1/4" AND LARGER	8'-0"

MAXIMUM SPACING OF HANGERS AND SUPPORTS FOR PVC

PIPE SIZE	SPACING
1/2" TO 2"	4'-0"
2" AND LAGER	6'-0"

GENERAL NOTES
1. ALL PIPING SHALL BE SUPPORTED AT EVERY JOINT/FITTING.
2. WIRE OR PERFORATED STRAP IRON HANGERS, EXPANSION ANCHORS, AND POWER ACTUATED FASTENERS WILL NOT BE PERMITTED.

REMARKS
1. PIPING SHALL BE SEAMLESS, GRADE B
2. INSPECT, TEST, AND PURGE NATURAL GAS SYSTEMS ACCORDING TO NFPA 54, PART 4 "GAS PIPING INSPECTION, TESTING, AND PURGING" AND LOCAL GAS UTILITY REQUIREMENTS.
3. ACCESSIBLE GAS PIPE FITTINGS SHALL BE MALLEABLE-IRON THREADED. CONCEALED GAS FITTINGS SHALL BE MALLEABLE-IRON WELDED.
4. PRESSURE TEST SYSTEM WITH 150 PSIG OF DRY NITROGEN FOR 15 MINUTES. VERIFY MAXIMUM PRESSURE TESTING LIMITATIONS WITH EQUIPMENT MANUFACTURERS LITERATURE PRIOR TO TESTING.
5. INSULATE SUCTION LINES WITH 3/4" CLOSED-CELL ELASTOMERIC INSULATION INSULATE LIQUID LINES WITH 1/2" CLOSED-CELL ELASTOMERIC INSULATION FOR HEAT PUMP APPLICATIONS.

INSULATION

APPROVED MANUFACTURERS: CERTAINTEED, KNAUF INSULATION JOHNS MANVILLE, OWENS CORNING ARMACELL, AEROFLEX

FIBERGLASS: MINIMUM 3½ POUNDS PER CUBIC FOOT DENSITY, FIBERGLASS FACTORY MOLDED OR SPUN PIPE INSULATION WITH A "K" FACTOR OF 0.24 AT 75F, MEAN TEMPERATURE AND A FACTORY APPLIED FIRE RETARDANT SELF SEALING VAPOR BARRIER "ASJ" JACKET. BUTT ALL JOINTS FIRMLY TOGETHER, COVER JOINTS WITH 3" BUTT STRIPS, SMOOTHLY SECURE ALL JACKET LAPS AND JOINTS STRIPS WITH ADHESIVE, SELF-SEALING LAPS SHALL BE APPLIED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS. ENDS OF PIPE INSULATION SHALL BE SEALED OFF WITH A VAPOR BARRIER COATING AT ALL FITTINGS AND VALVES AND AT INTERVALS OF 21' ON CONTINUOUS RUNS.

CLOSED-CELL ELASTOMERIC INSULATION: IN TUBULAR FORM EQUAL TO ARMACELL "AP ARMAFLEX". SELF-SEALING PIPE INSULATION SUCH AS ARMACELL "AP ARMAFLEX SS" IS NOT ALLOWED. BUTT ALL JOINTS FIRMLY TOGETHER AND SEAL WITH ARMAFLEX 520 BLV ADHESIVE.

NOTE: ALL PIPE INSULATION TO BE INSTALLED IN PLENUMS SHALL BE RATED FOR PLENUM INSTALLATION. INSULATION SHALL HAVE A FLAME-SPREAD INDEX OF LESS THAN 25 AND A SMOKE-DEVELOPED INDEX OF LESS THAN 50 AS TESTED BY ASTM E 84-03.

PACKAGED GAS/ELECTRIC UNIT SCHEDULE

MARK	MFR.	MODEL #	COOLING		HEATING INPUT (BTU/H)	SUPPLY FAN			ELECTRICAL			OUTSIDE AIRFLOW (CFM)	APPROX. WEIGHT (LB.)	ACCESSORIES	REMARKS
			NOMINAL CAPACITY (BTU/H)	EFF.		AIRFLOW (CFM)	ESP (IN. WC.)	HP	VOLTS/ PHASE	FLA	MOCP				
RTU-1	YORK	PCG4A24	24,000	14 SEER	50,000	800	0.4	1/10	208/1	19.6	25	125	508	CO,DS,HG,EA,FR OA,RCA,TS	--
RTU-2	YORK	ZE036H10	36,000	14 SEER	100,000	1,200	0.5	3/4	208/3	19.6	25	125	600	CO,DS,HG,HR,EA FR,OA,RCA,TS	--
RTU-3	YORK	ZJ090N12	90,000	12 EER	120,000	3,000	0.75	1-1/2	208/3	41.4	50	300	1,100	CO,DS,HG,HR,EA FR2,OA,RCA,SD TS2	1
RTU-4	YORK	ZJ120N12	120,000	12 EER	180,000	4,000	0.75	3	208/3	54.9	60	300	1,100	CO,DS,HG,EA FR2,OA,RCA,SD TS2	1
RTU-5	YORK	AH15S	180,000	12 EER	262,000/ 350,000	6,000	0.75	5	208/3	76	90	500	2,500	CO,DS,HG,HR,EA FR2,OA,RS,SD TS2	1,2

GENERAL NOTES
1. APPROVED MANUFACTURER/BRAND NAME: YORK, JCI, CARRIER, LENNOX, AAON
2. UNIT SHALL BE RATED IN ACCORDANCE WITH ARI STANDARDS.
3. UNIT WEIGHT SHOWN INCLUDES CURB WEIGHT.
4. REFRIGERANT SHALL BE TYPE R-410A UNLESS OTHERWISE SPECIFIED.
5. COMPRESSORS SHALL BE SCROLL TYPE UNLESS OTHERWISE SPECIFIED.
6. SPECIFIED HEATING FUEL: NATURAL GAS

REMARKS
1. 2-STAGE COOL AND 2-STAGE HEAT
2. SIDE DISCHARGE

ABBREVIATIONS
CO: FACTORY MOUNTED "POWERED" CONVENIENCE OUTLET
DS: FACTORY INSTALLED DISCONNECT
HG: HAIL GUARDS
HR: HOT GAS REHEAT WITH HUMIDISTAT
EA: THROUGH THE BASE ELECTRICAL UTILITY ACCESS
FR: 1" FILTER RACK
FR2: 2" FILTER RACK
OA: MOTORIZED OUTSIDE AIR DAMPER 0% THROUGH %50, WITH HOOD AND SCREEN
RCA: ROOF CURB ADAPTER
RS: ENGINEERED SUPPORT SYSTEM TO SUPPORT UNIT ON ELEVATED STRUCTURAL RAILS.
SD: RETURN DUCT SMOKE DETECTOR
TS: THERMOSTAT, SEE NOTE IN SEQUENCE OF OPERATIONS.
TS2: 2-STAGE COOL/2-STAGE THERMOSTAT, SEE NOTE IN SEQUENCE OF OPERATIONS.

FURNACE/COOLING COIL SCHEDULE

MARK	MFR.	MODEL #	NOMINAL COOLING CAPACITY (BTU/H)	HEATING INPUT (BTU/H)	SUPPLY FAN			OUTSIDE AIRFLOW (CFM)	ACCESSORIES	REMARKS
					AIRFLOW (CFM)	ESP (IN. WC.)	HP			
F-1	YORK	TM9E080C20	60,000	80,000	1,950	0.5	1	150	CC,CK,FR	1
F-2	YORK	TM9E060B12	36,000	60,000	1,200	0.5	1/2	--	CC,CK,CP,FR	--
F-3	YORK	TM9E100C20	60,000	100,000	2,000	0.5	1	--	CC,CK,FR	--
F-4	YORK	TM9E080C16	48,000	80,000	1,600	0.5	1/2	--	CC,CK,FR	--

GENERAL NOTES
1. APPROVED MANUFACTURER/BRAND NAME: YORK, JCI, CARRIER, LENNOX
2. UNIT SHALL BE RATED IN ACCORDANCE WITH ARI STANDARDS.
3. HEATING EFFICIENCY SHALL BE 95% AFUE MINIMUM UNLESS OTHERWISE NOTED.
4. SPECIFIED HEATING FUEL: NATURAL GAS
5. FURNACE MARK NUMBERS ARE TO BE MATCHED TO CONDENSING UNITS WITH THE SAME MARK NUMBER UNLESS OTHERWISE NOTED. (EXAMPLE: F-1 IS MATCHED TO CU-1)
6. MOTOR SHALL BE HIGH EFFICIENCY ELECTRONICALLY COMMUTATED MOTOR (ECM) TYPE.

REMARKS
1. UNIT WIDTH TO BE NO MORE THAN 20" IN ORDER TO FIT IN THE CEILING CAVITY.

ABBREVIATIONS
CC: CASED COOLING COIL SAME MANUFACTURER AS FURNACE
CK: CONCENTRIC VENT KIT
CP: CONDENSATE PUMP *MAY BE REQUIRED*
FR: 1" FILTER RACK

TEST AND BALANCE

A. HVAC SYSTEM TEST AND BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AGENCY.

B. THIS AGENCY SHALL BE CERTIFIED BY THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) OR BY THE AMERICAN AIR BALANCE COUNCIL (AABC), FIVE (5) COPIES OF THE FINAL BALANCING REPORT SHALL BE SUBMITTED ON APPLICABLE NEBB REPORTING FORMS FOR REVIEW. EACH INDIVIDUAL FINAL REPORTING FORM SUBMITTED SHALL BEAR THE NAME OF THE PERSON WHO RECORDED THE DATA AND THE SEAL OF THE SUPERVISOR OF THE PERFORMING FIRM.

C. HVAC SYSTEMS WILL BE TESTED AND BALANCED BY AN INDEPENDENT AGENCY RETAINED BY THE CONTRACTOR.

D. THE INDEPENDENT TESTING AND BALANCING AGENCY (TAB) SHALL PERFORM THE BALANCING AND TESTING OF THE HVAC IN ACCORDANCE WITH THE PROCEDURES OF AABC OR NEBS TO ANALYZE, BALANCE, ADJUST AND TEST AIR MOVING EQUIPMENT AND AIR DISTRIBUTION SYSTEM.

E. FLOW RATES SHALL BE BALANCED TO WITHIN 10% OF THE DESIGN FLOW RATES.

F. THE CONTRACTOR SHALL PUT ALL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS AND EQUIPMENT INTO OPERATION AND SHALL CONTINUE THE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCE AND SHALL PLACE THE AUTOMATIC TEMPERATURE CONTROL SYSTEM IN SATISFACTORY OPERATION BEFORE THE TAB AGENCY SHALL BEGIN WORK.

G. PRIOR TO THE FINAL ACCEPTANCE OF THE HVAC SYSTEM BY THE ENGINEER, THE CONTRACTOR SHALL ALLOW THE TAB AGENCY TO SCHEDULE THIS WORK IN COOPERATION WITH OTHER TRADES INVOLVED AND COMPLY WITH THE COMPLETION DATE OF THE PROJECT.

H. THE CONTRACTOR SHALL SCHEDULE THE FOLLOWING NECESSARY PERSONNEL:

1. MECHANICS - TO OPERATE, ADJUST, REPLACE OR REPAIR THE HVAC EQUIPMENT THAT IS FOUND REQUIRING ANY CHANGE/REPLACEMENT IN THE PULLEYS, BELTS, DAMPERS, VALVES, ETC., OF CONTRACTOR'S FURNISHED AND INSTALLED EQUIPMENT.

2. ELECTRICIAN - TO ASSIST IN ANY PROBLEMS RESULTING FROM ANY OF THE POWER OR CONTROL WIRING INSTALLATION, INCLUDING REPLACEMENT OF STARTERS, AND HEATER ELEMENTS.

3. THE CONTRACTOR SHALL MAKE ANY CHANGES IN PULLEYS, BELTS AND DAMPERS OR THE ADDITION OF DAMPERS AS REQUIRED FOR CORRECT BALANCE OF THE SYSTEM AS RECOMMENDED BY TAB AGENCY, AT NO COST TO OWNER.

I. THE CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS WITHIN 48 HOURS UPON NOTIFICATION OF TAB AGENCY OF THE DEFICIENCIES REQUIRING ADJUSTMENT. (PIECE-MEAL CORRECTION IS NOT ACCEPTABLE) AND WITHIN 10 WORKING DAYS FOR ITEMS THAT REQUIRE REPLACEMENT OR INSTALLATION.

J. THE CONTRACTOR SHALL HAVE ALL AIR FILTERS REPLACED PRIOR TO THE START OF TESTING AND BALANCING ACTIVITY.

K. IF THE CONTRACTOR HAD SCHEDULED THE TAB AGENCY TO PERFORM THE WORK AND THE HVAC SYSTEMS ARE NOT READY TO BE TESTED AND BALANCED, ANY ADDITIONAL COST REQUIRED TO EXTEND THE TAB WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.

SEQUENCE OF OPERATIONS

NOTE: CONTROLS TO BE PER "NSC BUILDING AUTOMATION" CONTACT MISTY GIVENS (623) 764-0467.

THERMOSTAT - OCCUPIED MODE
THE EVAPORATOR FAN AND BURNER(S)/COMPRESSOR(S) SHALL CYCLE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE.

THERMOSTAT - UNOCCUPIED MODE
THE EVAPORATOR FAN AND BURNER(S)/COMPRESSOR(S) SHALL CYCLE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE.

CO2 SENSOR & MOTORIZED DAMPER
WHERE SHOWN ON PLANS PROVIDE A WALL OR DUCT MOUNT SENSOR WITH A DIGITAL DISPLAY AND ADJUSTABLE SETPOINT. SENSOR SHALL OPEN MOTORIZED DAMPER TO SCHEDULED AIRFLOW WHEN CO2 LEVELS RISE ABOVE 1000PPM (ADJUSTABLE).

MOTORIZED DAMPER WITHOUT CO2 SENSOR
WHERE SHOWN ON PLANS PROVIDE A WALL OR DUCT MOUNT SENSOR WITH A DIGITAL DISPLAY AND ADJUSTABLE SETPOINT. SENSOR SHALL OPEN MOTORIZED DAMPER TO SCHEDULED AIRFLOW WHEN CO2 LEVELS RISE ABOVE 1000PPM (ADJUSTABLE).

MOTORIZED DAMPER WITHOUT CO2 SENSOR
MOTORIZED DAMPER SHALL OPEN TO SCHEDULED AIRFLOW DURING OCCUPIED PERIODS WHEN THE EVAPORATOR BLOWER IS ENERGIZED.

HOT GAS REHEAT
WHERE SPECIFIED WITH EQUIPMENT SHALL UTILIZE A WALL OR DUCT MOUNTED HUMIDITY SENSOR (SEE PLANS). SENSOR SHALL ENABLE THE HOT GAS REHEAT FUNCTION WHEN NECESSARY TO MAINTAIN SPACE RELATIVE HUMIDITY LEVELS BELOW 50% (ADJUSTABLE).

GENERAL
1. CHANGEOVER BETWEEN HEATING AND COOLING SHALL BE AUTOMATIC IN THE OCCUPIED AND UNOCCUPIED MODES.
2. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR INITIAL PROGRAMMING OF THE OCCUPANCY SCHEDULE AND NIGHT SETBACK TEMPERATURES.
3. THE NIGHT SETBACK TEMPERATURE SHALL NOT VARY FROM THE OCCUPIED SETPOINT BY MORE THAN 10°F (ADJUSTABLE).
4. WHEN EQUIPPED THE UNIT SHALL SHUT DOWN IF THE DUCT SMOKE DETECTOR SENSES SMOKE IN THE RETURN AIR DUCT.

DUCT CONSTRUCTION SCHEDULE

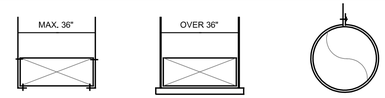
RECTANGULAR DUCT CONSTRUCTION MINIMUM METAL GAUGES

MAXIMUM SIDE	GALVANIZED STEEL	PERIMETER HALF	HANGER STRAP
THROUGH 12"	26 GAUGE	P/2 = 30"	1"x22 GAUGE
13" THROUGH 30"	24 GAUGE	P/2 = 72"	1x18 GAUGE
31" THROUGH 54"	22 GAUGE	P/2 = 96"	1"x16 GAUGE
55" THROUGH 84"	20 GAUGE	P/2 = 120"	1.5"x16 GAUGE

ROUND DUCT CONSTRUCTION MINIMUM METAL GAUGES

DIAMETER	LONGITUDINAL SEAM	SPIRAL SEAM	FITTINGS	HANGER STRAP
THROUGH 12"	26 GAUGE	28 GAUGE	26 GAUGE	1"X22 GAUGE
13" THROUGH 30"	24 GAUGE	26 GAUGE	24 GAUGE	1"X18 GAUGE

DUCT HANGER CONSTRUCTION AND SPACING REQUIREMENTS



HANGER STRAPS FASTEN TO STRUCTURE MAXIMUM 10' CENTERS

RECTANGULAR DUCTWORK

CONCEALED INSIDE THE CONDITIONED SPACE (ABOVE CEILING, IN CHASE, PLENUM, ETC.)
SUPPLY & OUTDOOR AIR: WRAP DUCTWORK WITH 1.5" THICK, 0.75 LB/CU FT DENSITY DUCT WRAP (R=5,1) EQUAL TO OWENS CORNING "SOFTR" DUCT WRAP.

RETURN: NO INSULATION IS REQUIRED UNLESS OTHERWISE NOTED

EXPOSED INSIDE THE CONDITIONED SPACE
SUPPLY & OUTDOOR AIR: LINE DUCTWORK WITH 1" THICK DUCT LINER (R=4,2) EQUAL TO OWENS CORNING TYPE "QUIETR" DUCT LINER. A PRE-FABRICATED, FLANGED DUCT SYSTEM EQUAL TO DUCTMATE IS PREFERRED BUT NOT REQUIRED.

RETURN: NO INSULATION IS REQUIRED UNLESS OTHERWISE NOTED

ROUND DUCTWORK

SUPPLY & OUTDOOR AIR: WRAP DUCTWORK WITH 1.5" THICK, 0.75 LB/CU FT DENSITY DUCT WRAP (R=5,1) EQUAL TO OWENS CORNING "SOFTR" DUCT WRAP. FLEXIBLE DUCT SHALL HAVE AN EQUAL OR GREATER R-VALUE.

RETURN: DUCT SHALL BE SNAPLOCK PIPE. NO INSULATION IS REQUIRED.

EXTERIOR DUCTWORK

DUCTWORK SHALL BE LINED WITH 1.5" THICK, 2.0 LB/CU FT DENSITY DUCT LINER (R=5,8) EQUAL TO OWENS CORNING AEROFLEX PLUS TYPE 200 DUCT LINER. THE EXTERIOR OF THE DUCTWORK SHALL BE ENCLOSED WITH 2" THICK MINERAL FIBER BOARD INSULATION. THE ASSEMBLY SHALL BE ENCASED WITH A 28 GA. ALUMINUM JACKET MEETING STANDARD ASTM B209. ALL SEAMS SHALL BE SEALED WITH A UV RESISTANT SEALANT.

GENERAL REQUIREMENTS

1. CONSTRUCTION: ALL DUCTWORK AND HANGERS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS. DUCT DIMENSIONS SHOWN ON THE PLANS ARE THE INSIDE CLEAR DIMENSIONS. UNLESS INDICATED OTHERWISE, ALL DUCTWORK SHALL BE GALVANIZED STEEL.
2. SEALANT: ALL DUCT JOINTS AND SEAMS SHALL BE SEALED WITH A WATER-BASED BRUSH ON DUCT SEALER EQUAL TO UNITED MCGILL DUCT SEALER.
3. TAPE: TAPE SHALL BE UL LISTED ALUMINUM DUCT TAPE.
4. FLEXIBLE DUCTWORK: DUCT SHALL BE UL LISTED CLASS 1 PRE-INSULATED FLEX DUCT. FLEXIBLE DUCTWORK SHALL BE CONSTRUCTED WITH AN ACOUSTICAL TRANSPARENT CPE FABRIC SUPPORTED BY A GALVANIZED STEEL MECHANICALLY LOCKED HELIX. WIRE HELIX TYPE CORE SUPPORT NOT ACCEPTABLE. INSULATION SHALL BE COVERED WITH A REINFORCED ALUMINUM PIGMENTED VAPOR BARRIER. FLEXIBLE DUCT TO BE "FLEXMASTER USA" TYPE 8M ONLY, OR SUBMIT A SAMPLE TO THE ENGINEER FOR AN ALTERNATE APPROVED EQUAL. FLEXIBLE DUCT SHALL BE USED FOR FINAL CONNECTION TO AIR DEVICE AND SHALL NOT EXCEED 6'-0" IN LENGTH.
5. FITTINGS: INSTALL TURNING VANES IN ALL RECTANGULAR ELBOWS GREATER THAN 45°. ALL BRANCH DUCTS SHALL HAVE A 45° ENTRY AT THE MAIN TRUNK DUCT.
6. TAKE-OFF FITTINGS: BRANCH DUCT TAKE-OFF FITTINGS SHALL BE MINIMUM 26 GAUGE GALVANIZED STEEL WITH FLANGE CONNECTOR AND ADHESIVE NEOPRENE GASKET. FLANGE SHALL BE PRE-DRILLED FOR SECURING TO DUCT WITH SCREWS. BRANCH DUCT TAKE-OFF FITTINGS FOR SUPPLY AND EXHAUST DIFFUSERS/REGISTERS SHALL INCLUDE AN INTEGRAL MANUAL VOLUME DAMPER W/LOCKING QUADRANT, DAMPER NOT REQUIRED ON RETURN AIR. TAKE-OFF FITTINGS TO BE "BUCKLEY" MODEL ATM & ATMD OR EQUAL. WHERE DUCT HEIGHT REQUIRES A RECTANGULAR TO ROUND TAKE-OFF, UTILIZE A "BUCKLEY" MODEL 3300 & 3300D OR EQUAL.
7. EXHAUST DUCTWORK DOES NOT REQUIRE INSULATION.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	MFR.	MODEL #	FUNCTION	MOUNTING	DAMPER	MATERIAL	FINISH	REMARKS
SLL	LOUVERED RECT, DIFFUSER-SQUARE NECK	KRUEGER	SSH	SUPPLY	LAY-IN	YES	ALUMINUM	BLACK	1
SLL2	LOUVERED RECT, DIFFUSER-SQUARE NECK	KRUEGER	SSH	SUPPLY	LAY-IN	YES	ALUMINUM	WHITE	--
SSB	DOUBLE DEFLECTION GRILLE	KRUEGER	S885	SUPPLY	SURFACE	YES	ALUMINUM	WHITE	VB,BS
RLP	PERFORATED GRILLE-SQUARE NECK	KRUEGER	6490	RETURN	LAY-IN	NO	STEEL	BLACK	1
RLP2	PERFORATED GRILLE-SQUARE NECK	KRUEGER	6490	RETURN	LAY-IN	NO	STEEL	WHITE	--
RSB	FIXED GRILLE	KRUEGER	S585	RETURN	SURFACE	NO	ALUMINUM	WHITE	HB,BS,BD35

GENERAL NOTES
1. APPROVED MANUFACTURERS: KRUEGER, ANEMOSTAT, PRICE, TITUS, CARNES, TUTTLE AND BAILEY, NAILOR
2. PROVIDE SQUARE TO ROUND ADAPTERS AS REQUIRED.
3. LAY-IN DIFFUSER NECK SIZES SHALL BE AS SHOWN ON THE PLANS, DIFFUSER PANEL SIZE SHALL BE 24x24 UNLESS OTHERWISE NOTED.
4. LAY-IN DIFFUSER THROWS ARE TO BE AS SHOWN ON THE PLANS. REFER TO THE HVAC LEGEND FOR DIFFUSER THROW DESIGNATIONS.
5. DAMPERS SHALL BE THE OPPOSED BLADE TYPE.
6. GRILLE/DIFFUSER DAMPERS ARE INTENDED FOR USE BY THE TENANT AND ARE NOT TO BE USED FOR INITIAL BALANCING.

REMARKS
1. IF BLACK IS NOT AVAILABLE AS A FACTORY OPTION PAINT THE AIR DEVICE BLACK TO MATCH CEILING.

ABBREVIATIONS
BD35: 35° BLADE DEFLECTION
BS: 1/2" BLADE SPACING.
HB: HORIZONTAL FRONT BLADES
VB: VERTICAL FRONT BLADES.

REVISION	DATE

STATE OF MISSOURI
CHRISTOPHER RAY DUNCAN
NUMBER PE-2005021661
REGISTERED PROFESSIONAL ENGINEER
08/08/24

CONWAY DUNCAN
600 WEST COLLEGE STREET I SUITE 102
SPRINGFIELD I MISSOURI I 65806
P: 417.881.1586
MISSOURI COA: E-2014013301

HVAC UPGRADES for
DOROTHEA B HOOVER
HISTORICAL MUSEUM
JOPLIN, MISSOURI

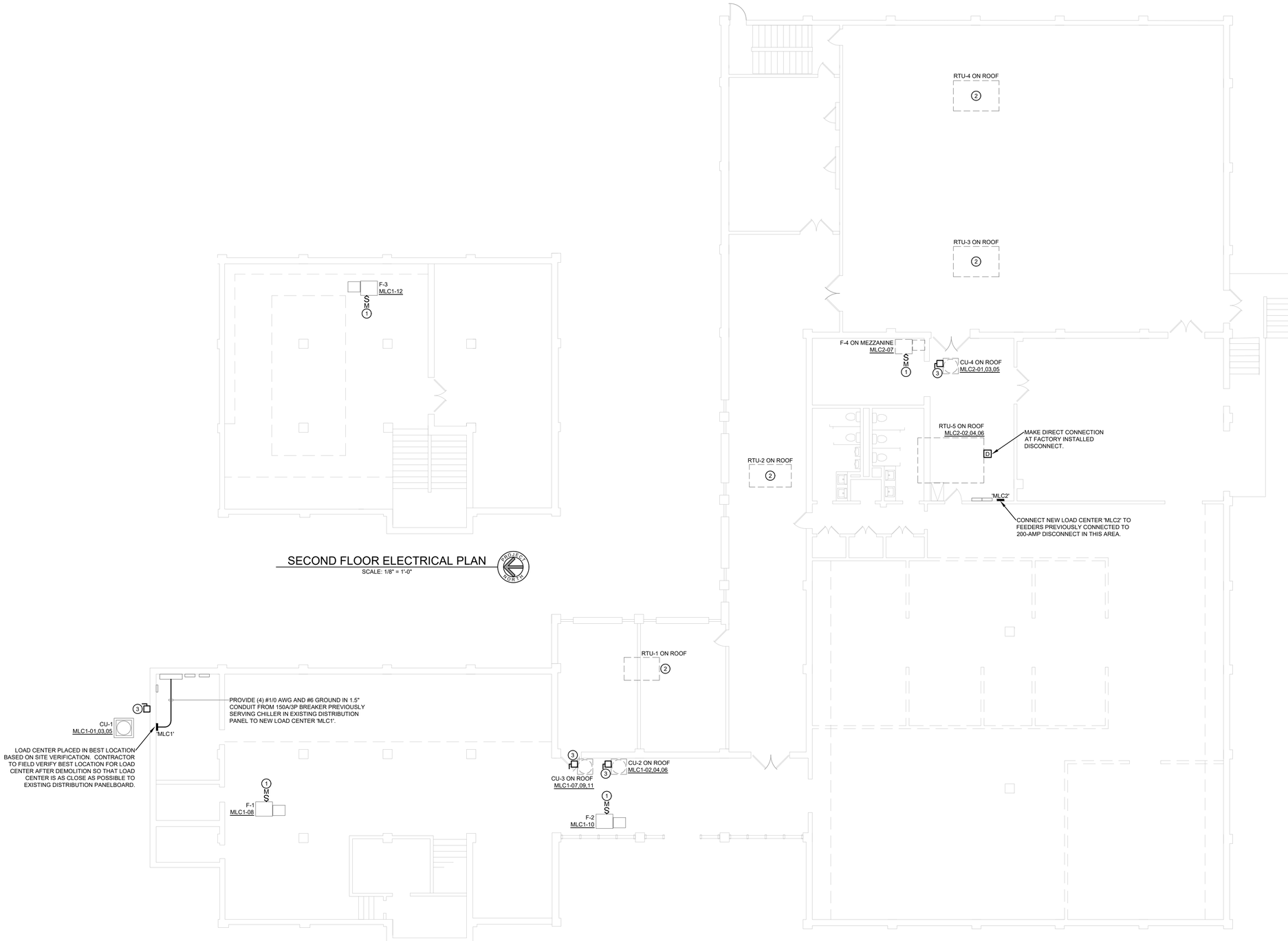
DRAWN BY: CDI
CHECKED BY: CRD/KNC
DATE: 08-08-2024
SCALE: AS NOTED
PROJECT #: --
SHEET #
MECHANICAL SCHEDULES
M3.0

KEYNOTES

INDICATED BY SYMBOLS 1 , 2 , ETC.

1. PROVIDE MOTOR-RATED SWITCH AS MEANS OF DISCONNECT FOR HVAC UNIT.
2. RECONNECT ROOFTOP UNIT TO EXISTING ELECTRICAL CONNECTION IN THIS AREA AT FACTORY INSTALLED DISCONNECT. VERIFY EXISTING BREAKER MATCHES MOCP FOR NEW ROOFTOP UNIT AND REPLACE BREAKER AND ASSOCIATED WIRING IF NECESSARY.
3. PROVIDE 240V/3P/30A NON-FUSED NEMA-3R DISCONNECT FOR HVAC UNIT AND MAKE LIQUID-TIGHT FINAL CONNECTION.

SECOND FLOOR ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"



FIRST FLOOR ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

REVISION	DATE

STATE OF MISSOURI
CHRISTOPHER RACOMAN
NUMBER
PE-2002021661
PROFESSIONAL ENGINEER

CONWAY DUNCAN
600 WEST COLLEGE STREET | SUITE 102
SPRINGFIELD | MISSOURI | 65806
P: 417.881.1586
MISSOURI COA: E-2014013301

HVAC UPGRADES for
DOROTHEA B HOOVER HISTORICAL MUSEUM
JOPLIN, MISSOURI

DRAWN BY:	CDI
CHECKED BY:	CRD/KNC
DATE:	08-08-2024
SCALE:	AS NOTED
PROJECT #:	--

SHEET #
ELECTRICAL PLANS

E1.0

LIGHTING AND APPLIANCE CIRCUIT BREAKER SCHEDULE - LOAD CENTER MLC1

Manufacturer:	SQUARE D	Panel Type:	QO	Enclosure:	NEMA 1	Mounting:	SURFACE	Main Amps:	200	MCB Amps:	N/A	Voltage:	208	Phase Volt:	120

Circuit Number	Load Description	Breaker Amp/Pole	Load Factor	Load (VA)	Phase Load A	Phase Load B	Phase Load C	Load (VA)	Load Factor	Breaker Amp/Pole	Load Description	Circuit Number
1	CONDENSING UNIT CU-1	25/3	1.00	2544	4260			1716	1.00	15/3	CONDENSING UNIT CU-2	2
3			1.00	2544		4260		1716	1.00			4
5			1.00	2544			4260	1716	1.00			6
7	CONDENSING UNIT CU-3	25/3	1.00	2544	4284			1740	1.00	20/1	FURNACE F-1	8
9			1.00	2544		3792		1248	1.00	15/1	FURNACE F-2	10
11			1.00	2544			4284	1740	1.00	20/1	FURNACE F-3	12
13	SPARE	20/1	1.00		0				1.00	20/1	SPARE	14
15	SPARE	20/1	1.00			0			1.00	20/1	SPARE	16
17	SPARE	20/1	1.00				0		1.00	20/1	SPARE	18
19	SPARE	20/1	1.00		0				1.00	20/1	SPARE	20
21	SPARE	20/1	1.00			0			1.00	20/1	SPARE	22
23	SPARE	20/1	1.00				0		1.00	20/1	SPARE	24
25	SPARE	20/1	1.00		0				1.00	20/1	SPARE	26
27	SPARE	20/1	1.00			0			1.00	20/1	SPARE	28
29	SPARE	20/1	1.00				0		1.00	20/1	SPARE	30
			TOTALS:	15264	8544	8052	8544	9876				

CONECTED VOLT-AMPS:	25140	CONNECTED AMPS:	70	MAXIMUM PHASE VOLT-AMPS:	8544	MAXIMUM PHASE AMPS:	71

LIGHTING AND APPLIANCE CIRCUIT BREAKER SCHEDULE - LOAD CENTER MLC2

Manufacturer:	SQUARE D	Panel Type:	NQ	Enclosure:	NEMA 1	Mounting:	SURFACE	Main Amps:	225	MCB Amps:	200	Voltage:	208	Phase Volt:	120

Circuit Number	Load Description	Breaker Amp/Pole	Load Factor	Load (VA)	Phase Load A	Phase Load B	Phase Load C	Load (VA)	Load Factor	Breaker Amp/Pole	Load Description	Circuit Number
1	CONDENSING UNIT CU-4	20/3	1.00	2208	11328			9120	1.00	90/3	ROOFTOP UNIT RTU-5	2
3			1.00	2208		11328		9120	1.00			4
5			1.00	2208			11328	9120	1.00			6
7	FURNACE F-4	15/1	1.00	1392	1392				1.00	20/1	SPARE	8
9	SPARE	20/1	1.00			0			1.00	20/1	SPARE	10
11	SPARE	20/1	1.00				0		1.00	20/1	SPARE	12
13	SPARE	20/1	1.00		0				1.00	20/1	SPARE	14
15	SPARE	20/1	1.00			0			1.00	20/1	SPARE	16
17	SPARE	20/1	1.00						1.00	20/1	SPARE	18
19	SPARE	20/1	1.00						1.00	20/1	SPARE	20
21	SPARE	20/1	1.00						1.00	20/1	SPARE	22
23	SPARE	20/1	1.00						1.00	20/1	SPARE	24
25	SPARE	20/1	1.00						1.00	20/1	SPARE	26
27	SPARE	20/1	1.00						1.00	20/1	SPARE	28
29	SPARE	20/1	1.00						1.00	20/1	SPARE	30
			TOTALS:	8016	12720	11328	11328	27360				

CONECTED VOLT-AMPS:	35376	CONNECTED AMPS:	98	MAXIMUM PHASE VOLT-AMPS:	12720	MAXIMUM PHASE AMPS:	106

CONDUCTORS AND CONDUIT SCHEDULE

OVERCURRENT PROTECTION DEVICE RATING	CONDUCTORS	EQUIPMENT GROUNDING CONDUCTOR	SINGLE PHASE 2-WIRE + GND. CONDUIT SIZE	SINGLE PHASE 3-WIRE + GND. CONDUIT SIZE	THREE PHASE 3-WIRE + GND. CONDUIT SIZE	THREE PHASE 4-WIRE + GND. CONDUIT SIZE
15 AMP	14 AWG	14 AWG	3/4"	3/4"	3/4"	3/4"
20 AMP	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"
25 AMP	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
30 AMP	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
35 AMP	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
40 AMP	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
45 AMP	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
50 AMP	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
60 AMP	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"
70 AMP	4 AWG	8 AWG	3/4"	1"	1"	1-1/4"
80 AMP	4 AWG	8 AWG	3/4"	1"	1"	1-1/4"
90 AMP	3 AWG	8 AWG	1"	1"	1"	1-1/4"
100 AMP	3 AWG	8 AWG	1"	1"	1"	1-1/4"
110 AMP	2 AWG	6 AWG	1"	1-1/4"	1-1/4"	1-1/4"
125 AMP	1 AWG	6 AWG	1-1/4"	1-1/4"	1-1/4"	1-1/2"
150 AMP	1/0 AWG	6 AWG	1-1/4"	1-1/2"	1-1/2"	1-1/2"
175 AMP	2/0 AWG	6 AWG	1-1/4"	1-1/2"	1-1/2"	2"
200 AMP	3/0 AWG	6 AWG	1-1/4"	2"	2"	2"
225 AMP	4/0 AWG	4 AWG	1-1/2"	2"	2"	2-1/2"
250 AMP	250 kcmil	4 AWG	2"	2"	2"	2-1/2"
300 AMP	350 kcmil	4 AWG	2"	2-1/2"	2-1/2"	2-1/2"
350 AMP	500 kcmil	3 AWG	2-1/2"	2-1/2"	2-1/2"	3"
400 AMP	600 kcmil	3 AWG	2-1/2"	3"	3"	3-1/2"

NOTE:
CONDUCTOR SIZES BASED ON COPPER, TYPE THHN, WITH THREE (MAXIMUM) CURRENT-CARRYING CONDUCTORS IN MINIMUM SIZED EMT. CONDUIT SIZES SHALL BE INCREASED AT CONTRACTOR'S DISCRETION, OR FOR CONDUIT MATERIALS OTHER THAN EMT AS REQUIRED. CONDUCTORS SHALL BE DERATED IF FOUR OR MORE CURRENT-CARRYING CONDUCTORS ARE PLACED IN A RACEWAY OR CABLE. WHERE PLANS INDICATE UP-SIZED CONDUCTORS DUE TO VOLTAGE DROP, THE EQUIPMENT GROUNDING CONDUCTOR SIZE SHALL BE INCREASED PROPORTIONATELY.

GENERAL NOTES

1. ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, 2017 EDITION.
2. DO NOT SCALE THESE DRAWINGS. OBTAIN DIMENSIONS FROM ARCHITECTURAL PLANS AND/OR FIELD CONDITIONS. COORDINATE LOCATION OF DEVICES AND FIXTURES WITH ARCHITECTURAL PLANS AND ELEVATIONS.
3. CONDUCTORS SHALL BE INSULATED COPPER, ROUTED WITHIN CONDUIT OR METAL CABLE ASSEMBLY. BRANCH CIRCUITS AND FEEDERS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTORS, SIZED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE ARTICLE 250.
4. CONDUIT BELOW GRADE SHALL BE PVC. EXTERIOR CONDUIT ABOVE GRADE SHALL BE RMC. INTERIOR CONDUIT ABOVE SLAB SHALL BE EMT. CONCEAL ALL CONDUIT IN FINISHED SPACES UNLESS NOTED OTHERWISE.
5. MC CABLE IS ALLOWED FOR BRANCH CIRCUITRY WITHIN STUD WALLS, AND FOR 60" LENGTH (MAX.) CONNECTIONS TO FIXTURES OR EQUIPMENT. MC CABLE SHALL NOT BE CONNECTED TO SOURCE PANELBOARD.
6. DISCONNECT SWITCHES SHALL BE GENERAL DUTY UNLESS OTHERWISE NOTED, NEMA 3R IF LOCATED EXTERIOR.
7. ELECTRICAL DEVICES SHALL BE EQUAL TO:

   RECEPTACLES
   HUBBELL BR20 SERIES
   GFCI RECEPTACLES
   HUBBELL GF20 SERIES
   MANUAL SWITCHES
   HUBBELL CSB_20 SERIES

   ACCEPTED MANUFACTURERS ARE EATON, HUBBELL, LEGRAND, AND LEVITON.
8. THE CONTRACTOR SHALL INSTALL A COMPLETE AND OPERABLE SYSTEM ACCORDING TO THE INTENT OF THESE DRAWINGS, WHETHER OR NOT ELEMENTS THEREOF ARE SPECIFICALLY CALLED OUT.
9. COORDINATE ALL WORK WITH OTHER TRADES TO AVOID CONFLICTS.
10. FIELD VERIFY THE EXISTING CONDITIONS AND MAKE ALLOWANCES FOR THE SAME.

ELECTRICAL ABBREVIATIONS

A	AMPERE
AC	ARMORED CABLE
AFCI	ARC-FAULT CIRCUIT INTERRUPTER
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAGE
CATV	COMMUNITY ANTENNA TELEVISION
CATVP	COAXIAL PLENUM CABLE
CATVR	COAXIAL RISER CABLE
CB	CIRCUIT BREAKER
CL2	CLASS 2 CABLE
CL2P	CLASS 2 PLENUM CABLE
CL2R	CLASS 2 RISER CABLE
CL3	CLASS 3 CABLE
CL3P	CLASS 3 PLENUM CABLE
CL3R	CLASS 3 RISER CABLE
CM	COMMUNICATIONS GENERAL-PURPOSE CABLE
cmil	CIRCULAR MIL
CMP	COMMUNICATIONS PLENUM CABLE
CMR	COMMUNICATIONS RISER CABLE
Cu	COPPER
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NONMETALLIC TUBING
EV	ELECTRIC VEHICLE
EVSE	ELECTRIC VEHICLE SUPPLY EQUIPMENT
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FLC	FULL LOAD CURRENT
FMC	FLEXIBLE METAL CONDUIT
FMT	FLEXIBLE METAL TUBING
GEC	GROUNDING ELECTRODE CONDUCTOR
GEN	MOTOR-GENERATOR SET
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER
GFPE	GROUND-FAULT PROTECTION OF EQUIPMENT
GND	GROUND
HACR	HEATING, AIR CONDITIONING, AND REFRIGERATION
HDPE	HIGH DENSITY POLYETHYLENE
HID	HIGH INTENSITY DISCHARGE
hp	HORSE POWER
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
Hz	HERTZ (CYCLE PER SECOND)
IEC	INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
IMC	INTERMEDIATE METAL CONDUIT
ITE	INFORMATION TECHNOLOGY EQUIPMENT
kcmil	ONE THOUSAND CIRCULAR MILS
kVA	KILOVOLT-AMPERES
kVAr	KILOVOLT-AMPERE REACTIVE
kW	KILOWATTS
LED	LIGHT-EMITTING DIODE
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT
LNG	LIQUEFIED NATURAL GAS
LP	LIQUEFIED PETROLEUM GAS
LRC	LOCKED-ROTOR CURRENT
MC	METAL-CLAD CABLE
MI	MINERAL-INSULATED, METAL-SHEATHED CABLE
MLO	MAIN LUGS ONLY
MV	MEDIUM VOLTAGE CABLE
MW	MEGAWATTS
NEC	NATIONAL ELECTRICAL CODE
NESC	NATIONAL ELECTRICAL SAFETY CODE
NM	NONMETALLIC SHEATHED CABLE
NMC	NONMETALLIC SHEATHED CABLE WITH CORROSION
NMS	NONMETALLIC SHEATHED CABLE WITH SIGNALING, DATA, AND COMMUNICATIONS CONDUCTORS, PLUS POWER OR CONTROL CONDUCTORS
NUCC	NONMETALLIC UNDERGROUND CONDUIT WITH CONDUCTORS
OCPD	OVERCURRENT PROTECTIVE DEVICE
OFC	CONDUCTIVE OPTICAL FIBER GENERAL-PURPOSE CABLE
OFCP	CONDUCTIVE OPTICAL FIBER PLENUM CABLE
OFCR	CONDUCTIVE OPTICAL FIBER RISER CABLE
OFN	NONCONDUCTIVE OPTICAL FIBER GENERAL-PURPOSE CABLE
OFNP	NONCONDUCTIVE OPTICAL FIBER PLENUM CABLE
OFNR	NONCONDUCTIVE OPTICAL FIBER RISER CABLE
PoE	POWER OVER ETHERNET
RMC	RIGID METAL CONDUIT
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SE	SERVICE-ENTRANCE CABLE
SPD	SURE-PROTECTIVE DEVICE
THW	THERMOPLASTIC, HEAT AND MOISTURE RESISTANT CABLE
THHN	THERMOPLASTIC, HEAT RESISTANT CABLE, NYLON JACKET OUTER SHEATH
THHW	THERMOPLASTIC, HEAT AND MOISTURE RESISTANT CABLE, NYLON JACKET OUTER SHEATH
TR	TAMPER-RESISTANT
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TW	THERMOPLASTIC, MOISTURE RESISTANT CABLE
UF	UNDERGROUND FEEDER AND BRANCH-CIRCUIT CABLE
UL	UNDERWRITERS LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
USE	UNDERGROUND SERVICE-ENTRANCE CABLE
V	VOLT
VA	VOLT-AMPERE
W	WATT
WR	WEATHER RESISTANT
XFMF	TRANSFORMER
XHH	CROSS-LINKED POLYETHYLENE, HEAT RESISTANT CABLE
XHHW	CROSS-LINKED POLYETHYLENE, HEAT AND MOISTURE RESISTANT CABLE

REVISION	DATE

STATE OF MISSOURI
KERRIST GIBBER
REGISTRATION NUMBER
PE-2010027061
PROFESSIONAL ENGINEER

CONWAY DUNCAN
600 WEST COLLEGE STREET I SUITE 102
SPRINGFIELD I MISSOURI I 65806
P: 417.881.1586
MISSOURI COA: E-2014013301

HVAC UPGRADES for
DOROTHEA B HOOVER
HISTORICAL MUSEUM
JOPLIN, MISSOURI

DRAWN BY: CDI
CHECKED BY: CRD/KNC
DATE: 08-08-2024
SCALE: AS NOTED
PROJECT #: ---
SHEET #
ELECTRICAL SCHEDULES

E2.0