RICHARD L. JOHNSON
ASSOCIATES | ARCHITECTS

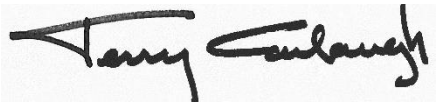
ADDENDUM ONE

Project No.:	**PROJECT NUMBER 22-020** **IFB NO. 22B-2240**
Date:	**SEPTEMBER 1, 2022**
Subject:	**CHANGES TO BIDDING DOCUMENTS**
Project:	**ADDITION & RENOVATIONS WORK AT** **WINNEBAGO COUNTY ANIMAL SERVICES** **ROCKFORD, ILLINOIS**
Bids Due:	**2:00PM, TUESDAY, SEPTEMBER 13, 2022**
From:	**RICHARD L. JOHNSON ASSOCIATES, INC.** **4703 CHARLES STREET** **ROCKFORD, IL 61108**
To:	**ALL PROJECT DOCUMENT HOLDERS**

Please reproduce this Addendum as needed, and attach to the Project Manuals for the above project.

Bidders shall indicate receipt of this and all Addenda in the space provided on the Bid Form. Failure to do so may be sufficient cause to reject the bid.

Sincerely,
RICHARD L. JOHNSON ASSOCIATES, INC.



_____
Terry Carbaugh, Principal

This Addendum consists of:
Pages 1 thru 4.
Mandatory Pre-Bid Meeting Notes.
Pre-Bid Attendance List.
Revised Bid Form, pages 004113-BF-1 thru 004113-BF-11.
Revised Section 001113 Advertisement for Bids.
Revised Section 002213 Supplementary Instructions to Bidders.

Revised Section 015000 Temporary Facilities & Controls.
Revised Section 042000 Unit Masonry.
New Section 072726 Fluid Applied Membrane Air Barriers.
Revised Mechanical Drawings M1, M2, M4, with a revised date of September 1, 2022.
Revised Electrical Drawings E2, E3, with a revised date of September 1, 2022.
Construction Fence layout drawing.

NOTE: Wherein this Addendum conflicts with the original Project Manual and Drawings, this Addendum shall govern.

CLARIFICATION

1.1. Construction start and completion dates have been changed, see attached Prebid meeting notes.

CHANGES to the PROJECT MANUAL

2. BID FORM

2.1. Bid Form 004113, BF-3, Notice to Bidders:

- submittal of subcontractors list has been revised.

3. SECTION 001113 ADVERTISEMENT FOR BIDS

3.1. Page 001113-1: Commencement of Work,

- has been revised

4. SECTION 002213 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

4.1. Page 002213-1, Para 2.1.3, Existing Conditions:

- Item C, has been revised.

4.2. Page 002213-2, Para 4.1, Form and Style of Bids:

- Item 1, has been revised.

4.3. Page 002213-3, Para 4.3, Submission of Bids:

- Item 1, has been revised.

5. SECTION 015000 TEMPORARY FACILITES & CONTROLS

5.1. Page 015000-1, 2.1, Temporary Facilities:

- Added item C, Contractor Office

- Added item D, Chain Link fencing

6. SECTION 042000 UNIT MASONRY

6.1. Page 015000-8, 2.9, Miscellaneous Masonry Accessories:

- Added item C, Cavity Wall Insulation

7. SECTION 072726 FLUID APPLIED MEMBRANE AIR BARRIER

7.1. Add specification section 072726 Fluid Applied Membrane Air Barrier to the project manual. See attached specification.

CHANGES to the Mechanical Drawings

8. SHEET M1

8.1. Delete sheet M1 and replace it with attached sheet M1 with a revision date September 1, 2022.

9. SHEET M2

9.1. Delete sheet M2 and replace it with attached sheet M2 with a revision date September 1, 2022.

10. SHEET M4

10.1. Delete sheet M4 and replace it with attached sheet M4 with a revision date September 1, 2022.

CHANGES to the Electrical Drawings

11. SHEET E2

11.1. Delete sheet E2 and replace it with attached sheet E2 with a revision date September 1, 2022.

12. SHEET E3

12.1. Delete sheet E3 and replace it with attached sheet E3 with a revision date September 1, 2022.

BIDDING QUESTIONS and Answer LOG

13. Rudolph Masonry (8.31.2022):

- Which walls are the shear walls, sheet 1/S301?
  Response: Shear walls are designated with diamond "A", see note 8 on sheet S201.
- What type of insulation is acceptable for the masonry cavity?
  Response: Cavity wall insulation has been added to specification section 042000 Unit Masonry in Addendum One.
- Masonry Air Barrier, would W.R. Meadow – Air-Shield LMP be acceptable?
  Response: Yes, Air Shield LM by W.R. Meadow is an acceptable manufacture. New section 072726 Fluid Applied Membrane Air Barrier is attached in Addendum One.
- Is there vertical rebar in the non-load bearing walls? If yes size & spacing
  Response: Reinforcing for non-load bearing walls will be clarified in addendum two.

END ADDENDUM NUMBER 1

RICHARD L. JOHNSON
ASSOCIATES | ARCHITECTS

MANDATORY PRE-BID MEETING NOTES

IFB No. 22B-2240 Addition and Renovations at Winnebago County Animal Services

RLJA Job # 22-020

MANDATORY PRE-BID DATE & TIME:
Tuesday, August 30, 2022 @ 9:00am., Winnebago County Animal Services

GENERAL ITEMS

1. Meeting Sign-Up Sheets were passed around to attendees.
2. Introductions were completed.
3. Bids are due on Tuesday, September 13, 2022, at 2:00 pm
    a. Submit Bids to:
    Ann Johns
    Director of Purchasing
    Room 202
    Winnebago County Administration Building
    404 Elm Street, Rockford, IL.
4. Bids will be opened and read aloud in Room 303.
5. All bids shall be submitted in a sealed envelope.
    "22B-2240 Additions and Renovations at Winnebago County Animal Services
6. Base Bid includes all work except what is included in Alternate Bids #1, #2, #3 #4 and #5.
7. Alternate Bids:
    a. All work required for demolition and remodeling work associated with Reception A1, Waiting A2, and Office A3.
    b. All work required for Replacement of Site Lighting
    c. All work required with the replacement of existing rooftop units RTU-1, RTU-2, and RTU-3.
    d. All work required with providing electronic air filtering system to existing RTU-1, RTU-2, and RTU-3.
    e. Provide 100% Performance & Payment Bond.
8. Complete all County form that are included with Bid Form.
9. The materials used on the project are Tax Exempt.
10. 5% Bid Bond MUST Accompany the Bid.
11. 100% Performance & Payment Bond is required for base bid only.
12. Liquidated damages are not included in this project.
13. Prevailing wages rates must be in accordance with all federal laws and laws by the state.
14. The building permit will be obtained by the Architect thru the City of Rockford.
15. The project is bid out to General Contractors under one contract.
16. Last RFI date is Friday, September 2, 2022.
17. Last Addendum date is Tuesday, September 6, 2022.
18. Contact Brett Frazier at 608-359-5739 (cell) to schedule any additional site visits. Site visits can take place between the hours of 7:00am and 5:00pm, Monday through Friday.

19. Bidders shall address questions and correspondence to the following: (email is preferred)
    Mr. Allan Johnson
    Richard L. Johnson Associates Architects
    4703 Charles Street
    Rockford, Illinois 61108
    Phone: (815) 398-1231
    Email: ajohnson@rljarch.com
20. A site inspection and date of the inspection is required on the bid form.
21. Mark the number of addendums you receive on the bid form. Visit our website or contact our office the morning the bids are due to make sure you have the correct number of addendums listed on the bid form.
22. Contractors can tap off the existing building's electrical and water services for construction purposes.
23. Contractor shall provide portable toilet facilities.
24. Construction meetings are required during construction. Contractor to take meeting notes and distribute. Construction meetings will be held at weekly intervals.
25. Job trailer requirements will be clarified in addendum two.
26. Construction fencing requirements will be clarified in addendum two.
27. All construction testing will be paid by the Owner.
28. Contractor's work schedule can be 7:00 AM - 6:00 PM. Working weekends are allowed, with prior notification to the owner.
29. The building will remain in operation during construction. Mechanical shutdowns must be coordinated with the owner. Shut down must not disrupt day to day operations.
30. The contractor shall employ a full-time superintendent. That superintendent shall be always on site when work is taking place at the project site, until substantial completion.
31. The construction schedule is shown below:

Board Award	October 14, 2022
Start Addition	March 20, 2023
Complete Addition	September 14, 2023
Start Renovations	As soon as the addition can be occupied
Complete Renovations	November 20, 2023

32. The project was briefly reviewed and was followed with a walk-thru of the project site.

DISCUSSION ITEMS

1. An existing sprinkler system exist in a select few rooms. Contractor shall coordinate with local authorities if system is to be shut down.
2. Existing Condensers at loading dock might need to remain working during construction. This will be clarified in addendum two.
3. Curb adaptors will be required for new RTU'S that replace existing RTU's.
4. Electrical contractor will provide rough ins only for proxy readers. Owner to install system and wiring.

END OF MEETING NOTES

RICHARD L. JOHNSON
ASSOCIATES | ARCHITECTS

Project Name: Additions and Renovations Work at Winnebago County Animal Services
For Winnebago County
Project #: 22-020
Date: 9:00am, 8-30-22

NAME	COMPANY	PHONE/EMAIL
Terry Carbaugh	Richard L. Johnson Assoc.	815-398-1231 tcarbaugh@rljarch.com
Kevin Behling	Scandroli	815-962-4037 estimating@scandroli.com
Earl Wilsey	Schmeling Construction Co.	815 399-7800 jearlw@schmelingconstruction.com
Mike McIntyre	Winter Construction Inc	815-235-1234 mmcintyre@winterconstruction.com
Terry Jungenberg	Rockford Structures	815-633-6161 tjungenberg@rockfordstructures.com
Dan Lei	Morse Electric	815-226-4217 dlei@themorsegroup.com
Paul Naretta	McDermaid Roofing & Insulating	815-963-8458 McRoofe@McDermaidRoofing.com
Dave Dinges	Stenstrom Const. Group	815-398-2420 DAVED@RSTENSTROM.COM
Tom McNamara	Larson & Larson Builders	815-633-1776 Estimating@LLBuilders.net
Jenne Tipton	Sjostrom	815-316-3695 estimating@sjostromconstruction.ca

LISA HANLEY	815.494.1117	LEGACY DESIGNS	lisa@legacydesignsnet
FRANK GALLAGHER	815.494.2610	LEGACY DESIGNS	frank@legacydesigns.n
Ann Johns	815-319-4380	WINN COUNTY	
Reid Tennant	815-319-4685	Winnebago County	rtennant@fm.wincoil.gov
Brett Frazier	815.319.4114	Winnebago County	bfrazier@wcas.wincoil.go

BID FORM

BIDS SUBMITTED BY _____

_____

Date _____

To: Ann Johns
Director of Purchasing
County of Winnebago
404 Elm Street, Room 202
Rockford, Illinois 61101

Gentlemen:

The undersigned, having become familiar with the local conditions affecting cost of work and with the Bidding Documents, including Advertisement for Bids, Instructions to Bidders, Supplementary Instructions to Bidders, General Conditions, Drawings and Specifications, and Addenda issued thereto, as prepared by Richard L. Johnson Associates, Inc., Architects•Interior Designers, 4703 Charles Street, Rockford, Illinois 61108, hereby agrees to furnish all labor, material and equipment necessary for the Addition & Renovations Work for Winnebago County Animal Services, 4715 North Main Street, Rockford, Illinois for the prices hereinafter stated.

BASE BID

The undersigned agrees to do all the work required, exclusive of work called for in Alternate Bids, for the sum of:

_____ DOLLARS ($_____)
and that such work will be substantially complete in the following number of calendar days:_____.

ALTERNATE BIDS (*Bidders must fill in all Alternate Bids as listed.)*

ALTERNATE BID NO. 1:

The undersigned agrees to do all the work required for demolition and remodeling work associated with new rooms Reception A1, Waiting A2 and Office A3 for an Add to the Base Bid of:

ADD _____ DOLLARS ($_____).

ALTERNATE BID NO. 2:

The undersigned agrees to do all the work required for Replacement of Site Lighting for an Add to the Base Bid of:

ADD _____ DOLLARS ($_____).

ALTERNATE BID NO. 3:

The undersigned agrees to do all the work associated with Replacement of existing rooftop units RTU 1, RTU-2 and RTU-3 for an Add to the Base Bid of:

ADD _____ DOLLARS ($_____).

ALTERNATE BID NO. 4:

The undersigned agrees to do all the work associated with Providing electronic air filtering system to existing rooftop units RTU 1, RTU-2 and RTU-3 for an Add to the Base Bid of:

ADD _____ DOLLARS ($_____).

ALTERNATE BID NO. 5:

The undersigned agrees to provide a 100% Performance & Payment Bond for an Add to the Base Bid of:

ADD_____DOLLARS ($_____).

SUBSTITUTIONS

All bids shall be based on the items, materials and manufacturers indicated by the Specifications and Drawings, with only such modifications as are made by Addenda.

Bidders desiring to use items other than those indicated by the Drawings, Specifications and Addenda shall list such proposed substitutions in the spaces below, together with the amounts to be added to or deducted from the amount(s) bid should any such proposed substitution be found acceptable after opening of Bids.

NOTE: *Manufacturers' names and materials reviewed by Architect during bidding period, but not included in an Addendum, must be listed below if said materials are to be considered. NO EXCEPTIONS.*

BRAND OR MODEL SPECIFIED	PROPOSED SUBSTITUTION	ADD	DEDUCT

NOTICE TO BIDDERS: If sufficient space is not available on this form for the information required, attach typewritten sheets with the necessary information.

SUBCONTRACTORS

If the undersigned is awarded the Contract, the below listed subcontractors will be employed for their respective parts of the Work.

SUBCONTRACT **SUBCONTRACTOR'S NAME**

Demolition Work _____

Gravel Base Work _____

Concrete Pavement, Walk & Curb Work _____

Cast-In-Place Concrete for Building Structure Work _____

Unit Masonry Work _____

Metal Fabrications Work _____

Wood Trusses Work _____

Building Insulation Work _____

Asphalt Shingles Roofing Work _____

EPDM Roofing Work _____

Sheet Metal Work _____

Joint Sealants Work _____

Hollow Metal Doors & Frames Work _____

Flush Wood Doors Work _____

Overhead Sectional Doors Work _____

Aluminum Framed Entrance Work _____

Aluminum Storefront Windows Work _____

Finish Hardware Work _____

Glazing Work _____

Gypsum Board Work _____

Ceramic Tile Base Work _____

Acoustical Ceilings & Wall Panels Work _____

Resilient Flooring & Base Work _____

Painting Work _____

Metal Casework Work _____

Earth Moving for Building Work _____

Plumbing Work _____

HVAC Work _____

Electrical Work _____

NOTICE TO BIDDERS: The above list of Subcontractors will be required to be completed and submitted within 24 hours after the bid opening. Bidder's failure to submit the completed list may result in disqualification of Bid. RLJ-22-020 and WC-22B-2240

ADDENDA RECEIVED

Contractor acknowledges that it incorporates the following Addenda in its Bid.

Addendum #	Date	Addendum #	Date	Addendum #	Date

PRE-BID MEETING ATTENDANCE

The undersigned attended the mandatory Pre-Bid Meeting. YES___NO___

SITE INSPECTION

Existing premises and conditions were checked by an on-site inspection? YES___NO___

ADDITIONAL INFORMATION & FORMS REQUIRED

Federal Tax Identification Number: _____

Contractor's State License Number (if applicable):_____

VENDOR REGISTRATION FORM

SUSPENSION/DEBARMENT CERTIFICATION FORM

W-9 FORM

BUSINESS REFERENCE FORM

The Undersigned agrees to furnish for the Owner's approval the following information, complete and in the form prescribed, prior to commencement of Work. The Undersigned further agrees that failure to furnish such information will be construed to be an unauthorized deviation by the Undersigned from the Contract Documents and as such will because to withhold any and all payment which may become due Undersigned.

Details of insurance coverages outlined in "Insurance" in the Supplementary Conditions.

Submittal and Material Schedule.

NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and_____agent or representatives present at the time of filing this Bid, being duly sworn, on their oaths say that neither they nor any of them, have in any way, directly or indirectly, entered into any arrangement or agreement with any other Bidder, or with any public officer or the County of Winnebago, Illinois, whereby such affiant or affiants or either of them, has paid or is to pay to such other Bidder or public officer any sum of money, or has given or is to give other Bidder or public officer anything of value whatsoever, or such affiant or affiants or either of them has not, directly or indirectly, entered into any arrangement or agreement with any other Bidder or Bidders, which tends to or does lessen or destroy free competition in the letti ng of the Contract sought by the attached Bids; that no inducement of any form or character other than that which appears upon the face of the Bid will be suggested, offered, paid, or delivered to any person whomsoever to influence the acceptance of the said Bid or awarding of the Contract; nor has this Bidder any agreement or understanding of any kind whatsoever, with any person, whomsoever to pay, deliver to, or share with any other person in any way or manner, any of the proceeds of the Contract sought by this Bid.

_____ _____

_____ _____

SUBSCRIBED and sworn to before me by _____

this_____day of_____2022. My Commission Expires _____

COMMENCEMENT AND COMPLETION OF CONTRACT

The undersigned agrees, if awarded the Contract, to commence the contract work upon authorization by the Owner and to complete the Work without delay. The undersigned further agrees to execute the Contract in strict accordance with the Contract Documents prepared by Richard L. Johnson Associates, Inc., Architects•Interior Designers, 4703 Charles Street, Rockford, IL 61108.

NON-DISCRIMINATION

The Contractor shall comply the Public Works Employment Discrimination Act, 775 ILCS 10/0.01 et seq., as amended. The Contractor must have a written sexual harassment policy, which meets Illinois State Statutes, 775 ILCS, 15/3.

PREVAILING WAGE

The State of Illinois requires that all wages paid by the Contractor and each subcontractor must be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended. This requires payment of the general prevailingrate for each craft or type of worker, including payment of the general prevailing rate for legal holiday and overtime work. The Illinois Department of Labor publishes the prevailing wage rates on its website. The Contractor must review the wage rates applicable to the work of the contract at regular intervals in order to ensure the timely payment of current wage rates. The Contractor agrees that no additional notice is required. The Contractor must be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. A copy of the prevailing wage rates is posted on the County website. If wage rates change during the course of the project, the new rates will be available online at www.state.il.us/agency/idol.

If this Bid requires Prevailing Wages: please visit the IDOL website for instructions. It is the responsibility of the Awarded Vendor to submit Certified Payrolls to the State. https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/prevailing-wage-act.aspx

EMPLOYMENT OF ILLINOIS WORKERS ON PUBLIC WORKS ACT

Pursuant to (30 ILCS 570/3) the "Employment of Illinois Workers in Public Works Act," whenever there is "a period of excessive unemployment" in Illinois, defined by any month immediately following two consecutive calendar months during which the level of employment in the state has exceeded 5%, then any person or entity working in a Public Works project for the county shall employ at least 90% Illinois laborers on such project. The County expects all contractors on Public Works projects to abide by this act in addition to prevailing wage until the provisions of this act are lifted by the State of Illinois. More information about the Employment of Illinois Workers on Public Works Act can be found here: http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=549&ChapterID=7

CERTIFIED PAYROLL REQUIREMENTS

The certified payroll records must include for every worker employed on the public works project the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, number of hours worked each day, and starting and ending time of work each day. These certified payroll records are considered public records and public bodies must make these records available to the public under the Freedom of Information Act, with the exception of the employee's address, telephone number and social security number. Any contractor who fails to submit a certified payroll or knowingly files a false certified payroll is guilty of a Class B misdemeanor.

HOLD HARMLESS CLAUSE

The successful bidder will agree to indemnify, save harmless and defend the County of Winnebago, its agents, Board members, servants, and employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses and expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of or in connection with the work covered by this contract upon award. The foregoing indemnity shall apply except if such injury, death or damage is caused directly by the willful and wanton conduct of the County of Winnebago, its agents, Board members, servants, or employees or any other person indemnified hereunder.

BID RESPONSE

It is required that the bidder completely read the Bid prior to filling out to become acquainted with terms and conditions of the bid document and merchandise requirements. No relief will be allowed from the bid conditions unless you take written exception to that condition on your bid.

GENERAL CONDITIONS

This bid shall be firm for at least 150 days after the latest time specified for submission for bids and thereafter until written notice is received from the bidder.

AWARD OF ORDER

The County will award a purchase order to the lowest responsive, responsible bidder meeting the County's requirements as listed in this document. The County will be the sole judge of acceptability of any products and services offered.

EXCEPTIONS

The bid speaks for itself. Bidders taking exception to any terms, conditions or specifications of this bid must clearly state in writing such exception(s) either on or with their bid. The County will be the sole judge of the acceptability of any exception noted, and is not bound to consider any bid submitted with exceptions.

TERMINATION

Failure to comply with the terms and conditions as herein stated shall be cause for cancellation of the contract. The County will give written notice of unsatisfactory performance and the contractor will be allowed thirty (30) days to take corrective action and accomplish satisfactory control. If at the end of the thirty days, the County deems the contractor's performance still unsatisfactory, the contract shall be canceled. The exercise of its right of cancellations shall not limit the County's right to seek any other remedies allowed by law.

The successful bidder will agree that the resulting contract is made subject to available budgetary appropriations and shall not create any obligation on behalf of the County in excess of such appropriations. In the event that no funds or insufficient funds are appropriated and budgeted, this Contract shall terminate without penalty or expense to the County thirty (30) days after written notification of termination from the County.

The successful bidder will agree that pursuant to requirements imposed under Illinois law, the County shall have 120 days after each election of county board members to terminate this Agreement, without cause and without penalty.

GOVERNING LAW

The contract will be governed by and construed in accordance with the laws of the State of Illinois without regard for the conflict of law provisions. Venue is proper only in the County of Winnebago.

APPLICABLE CODES AND ORDINANCES

Contractor hereby certifies that all materials used conform to all articles and sections of all current applicable National Building Codes and other relevant construction-related codes. Workmanship and materials shall conform to all local applicable codes and ordinances.

ASSUMPTION OF RISK

Until the completion and final acceptance by the County of all work under or implied by this Contract, the work shall be under the Contractor's care and charge and he shall be responsible, therefore. Contract shall rebuild, replace, repair, restore and make good all injuries, damages, re-erection, and repairs rendered necessary by causes, of any nature, to all or any portion of the work.

DRUG FREE WORKPLACE

The Contractor (whether an individual or company) agrees to provide a drug free workplace as provided for in 30 ILCS 580/1 et seq.

PAYMENT

Original invoices must be presented for payment in accordance with instructions contained on the Purchase Order including reference to Purchase Order number and submitted to the correct address for processing. The County shall pay all invoices pursuant to 50 ILCS 505, "Local Government Prompt Payment Act".

RESERVATION OF RIGHTS

The County of Winnebago reserves the right to reject any or all bids failing to meet the County's specifications or requirements and to waive technicalities. If in the County of Winnebago's opinion, the lowest bid is not the most responsible bid, considering value received for monies expended, the right is reserved to make awards as determined solely by the judgment of the County of Winnebago. In determining the lowest responsible bidder, the County shall take into consideration the qualities of the articles and services supplied, their conformity with the specifications, and their suitability to the requirements of the County and the delivery terms. Intangible factors, such as the Bidder's reputation and past performance, will also be weighed.

INSURANCE REQUIREMENTS
The Contractor and Subcontractors or Partners will purchase and maintain insurance for the coverages for a minimum of three (3) years after completion of the Contract.

Upon notice of acceptance of Bid, the successful bidder shall, within fifteen (15) calendar days of said notice, furnish to the Director of Purchasing a certificate of Insurance and provide policy endorsements evidencing specific coverage of the types of insurance in the amounts specified below. Such coverage shall be placed with a responsible company acceptable to Winnebago County licensed to do business in the State of Illinois, and with a minimum insurance rating of A: VII as found in the current edition of A M Best's Key Rating Guide. Each policy shall bear an endorsement precluding the cancellation or reduction of said policies without providing Winnebago County thirty (30) days prior notice thereof in writing. All required insurance shall be maintained by the contractor in full force and effect during the life of the contract, and until all work has been approved and accepted by Winnebago County. The Proposer is responsible for all insurance deductibles and Self-Insured Retentions.

TYPE OF INSURANCE	MINIMUM LIMITS LIABILITY
1. Workers Compensation	Statutory
2. Employers Liability A. Each Accident & Disease	$1,000,000
3. *Commercial General Liability	$4,000,000
4. *Umbrella Excess Liability (over primary) Retention for Self-Insured Hazards (each occurrence)	$4,000,000
5. *Business Auto Liability	$2,000,000

Contractor shall procure an appropriate clause in, or endorsement on, each of its policies for the fire or extended coverage insurance and on all other forms of property damage insurance covering the Contractor's personal property, materials or equipment whereby the insurer waives subrogation or consents to a waiver of right of recovery against Agent and Owner, and having obtained such waiver or subrogation or waiver of the right to recovery, Contractor hereby agrees that it will not make any claim against or seek to recover from Agent or Owner for any loss or damage of property of the type covered by such insurance.

***ALSO Required in addition to a Certificate of Insurance are the following Endorsements for BOTH Commercial and Auto Liability:**

1. An Additional Insured Endorsement
2. Waiver of Subrogation for Insurance is Primary and Non-Contributory to additional insured insurance coverage

If any policy or coverage is written as "claims made" then coverage must be maintained for 4 years after project completion.

At all times during the term of the contract, the Proposer and its independent contractors shall maintain, at their sole expense, insurance coverage for the Proposer, its employees, officers and independent contractors, as follows:

- It is the responsibility of Proposer to provide a copy of this BID to their insurance
- It may also be required that the Proposer's insurer and coverage be approved by Winnebago County prior to execution of the Contract.
- No work shall be started until receipt of Certificate of Insurance.

The County of Winnebago shall be named as additionally insured on all certificates of insurance. Insurance certificates shall also reference project name and BID NUMBER. Insurance Certificates with required endorsements should be emailed to purchasing@purchasing.wincoil.gov

The insurance carrier of the insured is required to notify the County of termination of any of these coverage's, prior to the completion of any contract, at least 30 days prior to expiration.

CHANGES IN OR TERMINATION OF, INSURANCE COVERAGE

The insurance carrier of the insured is required to notify the County of termination of any of these coverage's, prior to the completion of any contract, at least 30 days prior to expiration.

INSURANCE RATING

All the above-specified types of insurance shall be obtained from companies that have at least an A rating in Best's Guide or the equivalent.

SURVIVAL OF INDEMNIFICATION

The indemnification described above shall not be limited due to the enumeration of any insurance coverage herein provided, and indemnification shall survive the termination of the Contract.

NOTICE OF LAWSUIT

Within 60 days of service of process, the County shall notify the Proposer of any lawsuit involving the indemnification provided for above. Failure to provide such notice shall not relieve the Proposer of its obligation to provide indemnification. However, the County shall be responsible for any additional costs of defense incurred due to their failure to provide such notice within 60 days.

CHOICE OF LEGAL COUNSEL

The Proposer shall provide coverage as provided in the contract and retains the right to choose legal counsel subject to the approval of the County, and appointment by the State's Attorney.

RIGHTS RETAINED

Notwithstanding the foregoing, nothing contained herein shall be deemed to constitute a waiver of any defenses or immunities otherwise available to the County.

STATEMENT OF BIDDER'S BUSINESS ORGANIZATION

This Statement is part of the Proposal for the entire work.

PROJECT _____

SUBMITTED BY _____

If the Proposal is submitted by an individual, execute the following form:

Firm Name _____

Owner and Official Address _____

Dated this _____ day of _____ 2022

By _____

If the Proposal is submitted by a partnership, execute the following form:

Firm Name _____

Firm Address: _____

All Partner Names:

_____ _____

_____ _____

Dated this _____ day of _____ 2022

By _____

If this Proposal is submitted by a corporation, execute the following form:

Corporate Name _____

State and City in which Incorporated _____

If incorporated in another state, are you authorized to do business in the State of Illinois? Yes _____ No _____

Name and Address of registered agent in Illinois:

_____ _____
(Title)

_____ _____
(Title)

CORPORATE SEAL

Dated this _____ day of _____ 2022

By _____ Title _____

NOTE: ALL ENTRIES MUST BE IN INK.

CONTRACTOR QUALIFICATION STATEMENT

Contractor Contact: _____

Telephone:_____Email: _____

CONTRACTOR MUST SUBMIT THIS BID FORM ALONG WITH REQUESTED SUBMITTALS IN ORDER TO BID ON THIS PROJECT. ANY CHANGES MUST BE SUBMITTED TO WINNEBAGO COUNTY BEFORE BID OPENING ON ANY PROJECT.

Submit:

1. **Federal Employer Tax Identification Number or Social Security Number:**_____
2. **Contractors State License Number** (if applicable):_____
3. **VENDOR REGISTRATION FORM**
4. **SUSPENSION/DEBARMENT CERTIFICATION FORM**
5. **W-9 FORM**
6. **BUSINESS REFERENCE FORM** will need to be completed

PLEASE PROVIDE ANSWERS TO THE FOLLOWING:

YEARS IN BUSINESS_____

ANNUAL SALES_____

PROVIDE A BRIEF DESCRIPTION OF YOUR BUSINESS (i.e. General Contractor, construction material supplier, plumbing, electrical, etc.)

_____

_____

1.01. **SIGNATURES**

Authorized signature in affirmation of the above statements and submittals:

_____	_____
(Name of Corporation)	(Authorized Signature) (Title)
_____	_____
(State of Incorporation) (Date)	(Print Name of Signer)

NOTE: This information will be reviewed for each bid to determine contractor eligibility.

END BID FORM

SECTION 001113
ADVERTISEMENT FOR BIDS

Sealed bids will be received by Winnebago County Purchasing Department, 404 Elm Street, Room 202, Rockford, IL 61101 for Addition & Renovations Work at Winnebago County Animal Services for Winnebago County.

The Owner's Bid Number is Bid #22B-2240.

The project consists of a single Contract for the Addition & Renovations Work at Winnebago County Animal Services Project designed by:
Richard L. Johnson Associates Architects (815) 398-1231.

Bids will be received by Purchasing Department 404 Elm Street, Room 202, Rockford, Illinois, 61101 until **2:00 P.M., Tuesday, September 13, 2022**. Immediately thereafter, the Bids will be opened in public, read aloud and recorded. Bids will be held good and may not be withdrawn for a period of ninety (90) calendar days.

General Contractor Bidders are **required** to attend a **MANDATORY** Pre-Bid meeting, scheduled for **9:00 A.M., Tuesday, August 30, 2022**, at Winnebago County Animal Services building, 4715 N. Main Street, Rockford, IL 61103. Subcontractors may voluntarily attend the Pre-Bid meeting.

General Contractor Bidders are **required** to make a visit to the site to survey existing conditions. These visits are **MANDATORY** for General Contractor Bidders and a pre-condition for Bidding. Visits **must** be acknowledged on the Bid Form by Bidder.

All requests for clarification and/or interpretations shall be made in writing to the Architect by the date specified and will be answered by written Addendum, when appropriate.

Commencement of the Work of this Contract shall begin no sooner than October 14, 2022 and be completed no later than November 20, 2023. See Prebid Meeting Notes for construction start and completion dates.

Owner reserves the right to waive any irregularities and to accept any or reject all bids when in the opinion of the Owner, such action will serve the best interest of the County.

Bids on all Work of this Contract shall be subject to the provisions of The Winnebago County Purchasing Ordinance. Compliance with this ordinance must be submitted to the Winnebago County Director of Purchasing by Contractor prior to start of construction. Each craft, type of worker and mechanic needed to execute the Contract shall be paid the prevailing wage rate for the locality in which the work is performed, in accordance with all federal laws and laws of the State as well as local ordinances and regulations applicable to the work hereunder and having force of law.

Bidders shall be required to complete all forms included within the Bid Form.

Bid Documents are on file for reference at:

Richard L. Johnson, Associates Architects.
Rockford, IL

Northern Illinois Building Contractors Association.
Rockford, IL

Bid Documents may be obtained free of charge from Architect, Richard L. Johnson Associates Architects, 4703 Charles Street, Rockford, IL 61108. 2 sets of Bidding Documents will be issued to Bidding Contractors.

Bid Documents are also available for **download online** at www.rljarch.com. Complete document request form under "Contractors" and email it to Char Holmberg at cholmberg@rljarch.com.

Interpretations may be obtained from

Allan Johnson
Richard L. Johnson Associates Architects
Phone (815) 398-1231

By Ann Johns
Director of Purchasing
County of Winnebago
404 Elm Street, Room 202
Rockford, IL 61101

SECTION 002213
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

GENERAL

A. The standard American Institute of Architects (AIA) Document A701, "Instructions to Bidders," 1997 Edition, attached hereto, shall apply in full except for the modifications and supplementary instructions specified in this Section.

B. Owner requests Stipulated Sum Base Bids for work contemplated, as covered by the Project Manual and accompanying Drawings.

C. The laws of Illinois shall govern the solicitation and award of the Contract.

2.1.3 EXISTING CONDITIONS

A. Bidders must visit the site to survey existing conditions. Site visit is a mandatory requirement for General Contractor Bidders and must be acknowledged on Bid Form.

B. Subcontractors are urged to visit the site to survey existing conditions, but it is not a mandatory requirement for them in submitting prices to General Contractor Bidders.

C. During the Bidding Period, the site will be available to Bidders' inspection during weekday daytime hours, upon request to Brett J. Frazier: Cell Phone: 608-359-5739.

2.1.5 PERMITS AND FEES

A. The Owner (Winnebago County) will pay for any permit fees required by the City of Rockford.

2.1.6 TAXES

A. Sales Tax: According to Tax Rule #15 (Illinois Retailer's Occupational Tax, 2-1-69), supplies and materials used on this project are exempt from the Retailer's Occupational Tax and therefore said tax shall not be included in bid amounts.

B. This project is exempt from Federal Excise Tax

2.1.7 EMPLOYMENT AND WAGES PAID

A. Wage Rules:

1. Each craft, type of worker and mechanic needed to execute the Contract shall be paid the prevailing wage rate for the locality in which the work is performed, in accordance with all federal laws and laws of the State as well as ordinances and regulations applicable to the work hereunder and having force of law.

2. If, during the course of the Contract, the Department of Labor revises the prevailing wage rates, the Contractor shall have the sole responsibility and duty to ensure that wages paid, whether to employees of the Contractor or any subcontractor, are paid according to the revised prevailing rates. Revisions of the prevailing wage rates shall not be cause for an increase in the Contract Sum.

3. Each Bidder may obtain a copy of the Prevailing Wage Rates for Winnebago County from the Illinois Department of Labor.

3.2 INTERPRETATION OR CORRECTION OF THE BIDDING DOCUMENTS

Add to 3.2.2:

.1 Bidders shall address questions and correspondence to the following for:

Bidding Procedures & General Construction Technical Specifications

Mr. Allan Johnson
Richard L. Johnson Associates Architects
4703 Charles Street
Rockford, Illinois 61108
Phone: (815) 398-1231

Mr. Trevor Larson E.I.
Chastain & Associates LLC
6832 Salter Drive, Suite 100
Rockford, Illinois 61108
Phone: (815) 489-0050

3.3 SUBSTITUTIONS

Delete items 3.3.1, 3.3.2, 3.3.3 and 3.3.4 as written and substitute the following:

3.3.1 Bids shall be based upon the items**,** materials and manufacturers indicated by the Specifications and Drawings**,** with only such modifications as are made by Addenda.

3.3.2 Bidders desiring to make substitutions for items indicated by the Drawings**,** Specifications and Addenda**,** shall list such proposed substitutions in the Substitutions space included in the Bid Form**,** together with the amounts to be added to or deducted from their Base Bid should any such proposed substitutions be acceptable. Substitutions so listed will not be a determining factor in the award of the Contract.

3.3.3 Materials reviewed by the Architect during the bid period and not mentioned in an Addendum may be listed as substitutions to be considered for inclusion into the Contract.

3.3.4 Substitutions initiated by the Contractor and not listed on the Bid Form will NOT be reviewed by the Architect after opening of Bids.

4.1 FORM AND STYLE OF BIDS

Add to 4.1.1

.1 Bids shall be submitted in duplicate on furnished forms.

4.1.5 ALTERNATE BIDS

A. Only such Alternate Bids as are specifically requested on the Bid Form will be considered.

B. The amount proposed for any Alternate Bid requested shall be held valid for a minimum of 90 days beyond time allowed for withdrawal of bids.

4.1.8 TIME OF PERFORMANCE

A. Work shall commence upon notification by the Owner to proceed.

B. Work shall be substantially complete in the number of calendar days stated on the Bid Form.

4.2 BID SECURITY

A. Bid Security in the amount of 5% of the sum of the Base Bid and all add alternates that can apply shall be submitted with the Bid in the form of a certified check, cashier's check, bank draft, or bid bond from a bonding company with a Best rating of "B" or better, payable to the Owner.

4.3 SUBMISSION OF BIDS

Add to 4.3.1

.1 Submit Bids To:

Ann Johns
Director of Purchasing
Room 202
Winnebago County Administrative Building,
404 Elm Street, Rockford, Illinois, 61101

Add to 4.3.2

.1 Bids will be received until 2:00 P.M., Tuesday, September 13, 2022.

4.3.1 RECEIVING BIDS

A. All Bids shall be submitted in a sealed envelope boldly labeled with the words "SEALED BID ENCLOSED FOR **"22B-2240 ADDITION & RENOVATIONS WORK AT WINNEBAGO COUNTY ANIMAL SERVICES, ROCKFORD, ILLINOIS"**.

B. Bids received before the time set for receipt of Bids will be securely kept unopened. No responsibility will attach to the Owner or the Architect for premature opening of a Bid not properly identified.

5.2.2 REJECTION OF BIDS

A. The Contract will be awarded to the lowest qualified bidder complying with the conditions of the Bidding Documents, provided that the lowest bid submitted is reasonable and that it is to the interest of the Owner to accept it. Award will not be based on any substitutions other than those solicited in the descriptions of Alternates.

B. Negligence on the part of the Bidder in preparing his Bid shall confer no right of withdrawal or modification of his Bid after the Bid has been opened.

C. Bidders may be required to cooperate with the Owner and Architect by providing a detailed breakdown of prices bid in order to show, in the manner and form required by the Architect, the division of costs between the several divisions of the Work.

D. The Owner reserves the right to reject any and all bids and to waive any irregularities in bids received whenever such rejection or waiver is in the interest of the Owner. The Owner also reserves the right to reject the bid of any bidder who has previously failed to perform properly or complete on time contracts of a similar nature; who is not in a position to perform the contract; or who has habitually and without just cause neglected the payment of bills or otherwise disregarded any obligation to subcontractors, material suppliers or employees. In determining the successful bidder, the following elements, in addition to those mentioned above, will be considered: Whether the bidder involved

(a) maintains a permanent place of business;
(b) has adequate plant equipment to do the work properly and expeditiously;

(c) has a suitable financial status to meet the obligations incidental to the work; and
(d) has appropriate technical experience.

E. In case of a discrepancy between the prices quoted in words and those quoted in numbers**,** the prices quoted in words shall govern.

F. **IMPORTANT NOTE TO ALL BIDDERS**

1. In regards to the Bid Requirements for Equal Employment Opportunity and Affirmative Action, all forms must be completely filled out and signed or your bid will not be considered or read.

2. This especially applies to the "Contractor or Vendor workforce Data Form."

3. The categories must all be filled out. They include:

   a. Job Classifications.
   b. Pay Range.
   c. Males.
   d. Females.
   e. Racial.

4. Bids which fail to address any of these categories will not be considered and will not be read.

5. Below are the Federal definitions of the following racial groups accepted as minorities by the County of Winnebago.

   a. **Black:** A person having origins in any of the Black racial groups or Africa, not of Hispanic origin.
   b. **Hispanic:** A person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race.
   c. **Asian:** A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes for example: China, Japan, Korea, the Philippine Republic and Samoa.
   d. **America Indian or Alaskan Native:** A person having origins in any of the original peoples of North America.

6. Falsification of any required Equal Employment Opportunity or Affirmative Action information on the part of the bidder could result in rejection of the bid submitted or in the case where a contract has already been awarded, in the cancellation of said contract.

7. Should you have any questions regarding any Affirmative Action of EEO requirements, please contact the Equal Opportunity Compliance Officer at (815) 987- 3034, or write to Equal Opportunity Compliance Division, Winnebago County, 404 Elm Street, Rockford, Illinois 61101.

5.3.1 AWARD OF CONTRACT

A. The bidder to whom the award is to be made will be notified at the earliest possible date.

B. The Bid, if accepted by the Owner, shall be awarded as a single contract to a General Contractor for all work of the project, including all subcontractor's work.

4.

7.1 PERFORMANCE BOND AND PAYMENT BOND

7.1 - Bond Requirements:

Add Section 7.1.1.1:

7.1.1.1 - Both a Performance Bond and a Payment Bond will be required, each in an amount equal to 100% of the Contract Sum.

7.2 - Time of Delivery and Form of Bonds:

Delete the first sentence of Section 7.2.1 and insert the following:

The Bidder shall deliver the required bonds to Owner no later than 10 days after the date of Notice of Intent to Award and no later than the date of execution of the Contract, whichever occurs first. Owner may deem the failure of the Bidder to deliver required bonds within the period of time allowed a default.

Delete Section 7.2.3 and insert the following:

7.2.3 - Bonds shall be executed and be in force on the date of the execution of the Contract

END SUPPLEMENTARY INSTRUCTIONS TO BIDDERS.

SECTION 015000
TEMPORARY FACILITIES & CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction.

B. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

B. Contractors personnel must use contractor supplied toilet facilities.

C. Offices: The Contractor shall provide and maintain at the site a temporary watertight office of suitable size for use by Subcontractors, himself and Architect, which shall include an area with table and chairs for project meetings.

D. Provide a 6’ high temporary chain link fencing with gates around construction area. Contractor to determine the area required that they need around the construction area for staging area.

2.2 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 SUPPORT FACILITIES INSTALLATION

A. General: Provide sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241

B. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

C. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

D. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

B. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

C. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

END OF SECTION 015000

SECTION 042000
UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Split-faced concrete block.
3. Mortar and grout.
4. Steel reinforcing bars.
5. Masonry-joint reinforcement.
6. Embedded flashing.
7. Miscellaneous masonry accessories.

B. Related Requirements:

1. Section 004323 "Alternates" for Alternate Bid Work designated for this section.
2. Section 033000 "Cast-in-Place Concrete" for masonry setting.
3. Section 055000 "Metal fabrications" for loose lintels.
4. Section 076200 "Sheet Metal Flashing and Trim" for sheet metal flashing and for furnishing manufactured installed in masonry joints.
5. Section 079200 "Joint Sealants" for sealants associated with masonry.
6. Section 081113 "Hollow Metal Door Frames" for hollow metal frames set in masonry walls.
7. Section 084113 "Aluminum Framed Entrance" for aluminum door frames set in masonry wall.
8. Section 085113 "Aluminum Storefront Windows" for aluminum window frames set masonry walls.
9. Section 099113 "Painting" masonry walls painting.

1.3 DEFINITIONS

A. CMU(s): Concrete masonry unit(s).

B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 SUBMITTALS

A. Product Data: For each type of product.

1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
2. Masonry ties and reinforcing steel.

3. Fabricated In-wall and thru-wall flashing.
4. Mortar and grout materials including additives.
5. Mortar and grout mix compositions.
6. Masonry control joint accessories.

B. Submit laboratory test results for mortar and masonry units including design data for grout mixes when grout is to be pumped.

C. Samples for Verification: For each type and color of the following:

1. Split-faced block.
2. Pigmented and colored-aggregate mortar. Make Samples using same sand and mortar ingredients to be used on Project.

D. Qualification Data: For testing agency.

E. Material Certificates: For each type and size of the following:

1. Masonry units: Include data on material properties
2. Cementitious materials. Include name of manufacturer, brand name, and type.
3. Mortar admixtures.
4. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
5. Grout mixes. Include description of type and proportions of ingredients.
6. Reinforcing bars.
7. Joint reinforcement.
8. Anchors, ties, and metal accessories.

F. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91/C 91M for air content.
2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.

G. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to TMS 602/ACI 530.1/ASCE 6.

H. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.5 CODES AND STANDARDS

A. In addition to complying with all pertinent codes and regulations, comply with:

1. Standards of masonry installation described in the recommendations of:

a. National Concrete Masonry Association (NCMA).
b. Masonry Standards Joint Committee (MSJC) Spec. (ACI 530.1/ASCE 6/TMS 602).

1.6 QUALITY ASSURANCE

A. Sources of Supply: Obtain each kind of masonry units from one manufacturer, of uniform texture and color or uniform blend in the variation thereof, for each kind required, for each continuous area or visually related areas.

B. Coordination: Coordinate with concrete installers with respect to installation of bar reinforcement in concrete foundations to be extended up into reinforced masonry walls.

C. Sample Panels: Build sample panels to verify selections made under Sample submittals and to demonstrate aesthetic effects.

1. Build sample panels for typical exterior wall in sizes approximately 48 inches long by 48 inches high by full thickness.
    a. Include a sealant-filled joint at least 16 inches long.
    b. Include through-wall flashing installed for a 24-inch length.
2. Where masonry is to match existing, build panels adjacent and parallel to existing surface.
3. Protect approved sample panels from the elements with weather-resistant membrane.
4. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.
    a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless Architect specifically approves such deviations in writing.
5. Subject to compliance with requirements, approved sample panel may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.8 FIELD CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches down both sides of walls, and hold cover securely in place.

B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.

C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.

E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

C. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.

2.2 SPLIT-FACED CONCRETE BLOCK

A. Type: Conforming to ASTM C 90, including a total linear drying shrinkage less than .045%, manufactured from normal weight aggregates complying with ASTM C 33.

1. Moisture Limits:

a. Units shall be cured in a moisture-controlled atmosphere so that when delivered to job site the weight of water contained in the units shall not exceed 35% of the fully saturated capacity of the block.
b. Moisture content of units stored at the site shall be maintained so as to not exceed 35% of block saturation capacity when tested by Owner's testing laboratory.

2. Size and Shape:

a. 8" x 16" nominal face size, 4" thicknesses.
b. Provide special shapes where shown on drawings.

3. Water Repellant Admixture: Units shall be manufactured with W.R. Grace **"**Dry-Block**"** integral water repellant admixture in amounts recommended by repellant manufacturer.

B. Manufacturer and Make:

1. CMU-1: Rockford Cement Products; "Wheatfield: Split-Faced.
2. CMU-2: Rockford Cement Products; "306 Brown".
3. CMU-3: Rockford Cement Products; "Wheatfield: Smooth-Faced.

2.3 CONCRETE MASONRY UNITS

A. CMU-4: Concrete Masonry Units, except as otherwise indicated:

1. Type: Standard hollow and solid load bearing units made with ASTM C 33 aggregates to conform to ASTM C 90, including a total linear drying shrinkage less than .045%.
2. Sizes and Shapes: 8" x 16" nominal face size; thicknesses as indicated.

a. Provide bullnose block on external corner and jamb units and other special conditions as shown. Furnish same square cornered units for sills and heads (installed on-end).
b. Provide special shapes where shown and where required for lintels, bond beams and other special conditions.

3. Texture: Face textures of each type of block shall match each other.
4. Cores: 2-core or 3-core block may be used.

a. Provide solid block, where required, with core area not exceeding 25% of gross cross sectional area.

5. Moisture Limits: Units shall be cured in a moisture-controlled atmosphere so that when delivered to job site the weight of water contained in the units shall not exceed 35% of the fully saturated capacity of the block.

a. Moisture content of units stored at the site shall be maintained so as to not exceed 35% of block saturation capacity when tested by Owner's testing laboratory.

2.4 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, non-staining, Type I or Type III (as required for cold weather conditions), natural gray.

B. Masonry Cement: Not permitted.

C. Hydrated Lime: Conforming to ASTM C 207, Type S.

D. Sand: Conforming to ASTM C 144, except that 100% shall pass the #8 sieve and 15% - 30% shall pass the #50 sieve.

E. Grout Aggregate: Gravel or crushed stone well graded from 3/8" to #16 and conforming to ASTM C 404. When fine aggregates are required, conform to ASTM C 404.

F. Additives: Not allowed, including calcium chloride or other chloride bearing formulations, as well as any air entraining agents except for Water Repellent Additive: W.R. Grace “Dry-Block Mortar Additive” or equal approved by Architect.

G. Water: Clean, potable, free from oil, soluble salts, acids, alkalis, organic impurities and other deleterious materials.

2.5 MORTAR AND GROUT MIXES

A. Mortar Mix Properties:

1. Mortar (lime-cement mortar) per ASTM C 270: Proportion portland cement, damp loose sand, and hydrated lime, by volume to achieve average, in-field, not lab compression strength of 2100 psi at 28 days. Refer to drawings for mortar type.
2. Submit specimens for testing when directed by Architect.

B. Grout Mix Proportions:

1. For Embedment of Reinforcing Bars: Coarse Grout per ASTM C 476.
2. For Filling Hollow Metal Door Frames: Use mortar, the same as used for adjacent masonry. Where hollow metal frames abut solid construction and filling must be done through a funnel, add sufficient water to mortar to produce a soupy consistency. Fill frames with grout after the frames have been installed.

C. Mixing:

1. Measurements: Measure ingredients precisely.
    a. Keep water-cement ratio precise from batch to batch.
    b. Accurately measure sand in damp, loose condition; measurement of sand by shovelful will NOT be allowed. Allow for contraction and expansion of sand’s volume as it dries out and it gains moisture.
2. Mortar: Mix mortar in a motorized mechanical batch mixer. Ingredients shall be thoroughly mixed according to ASTM C 270 procedures for at least 3 minutes but not more than 5 minutes after all material is in the mixer. Mix only as much mortar as needed for immediate use.

a. Cold Weather: When air temperature is 40°F or below, keep water warmed to above 70°F but do not allow it to exceed 160°F. When heating sand, heat slowly and evenly. Scorched sand shall be discarded.
b. Exterior Mortar: Add color pigments as required to match the sample selected by Architect.

3. Grout: Mix grout thoroughhly in a mechanical batch mixer according to ASTM C 476 procedures; hand mixing not allowed without approval. Grout may be premixed and delivered per ASTM C 94. Use only enough water to produce a workable consistency, except that for placement by pump more water may be added.

a. Cold Weather: When air temperature is 40°F or below, mix grout according to cold weather restrictions for mortar, and deliver at 70°F-120°F.

4. Admixtures: Do not use admixtures except as specifically allowed by Architect and approved by Owner.
5. Pre-Mixed Mortars: Truck delivered batch mixing shall conform to ASTM C 1142. In addition to regular motorized mixers, Spec-Mix systems may be used. "SILO-MIX" WILL NOT BE ALLOWED.

6. Mortar Mixers, Boxes and Tools: Keep clean; thoroughly clean equipment and tools between batches and at end of each day's work.

D. Retempering:

1. Partially hardened mortar may be re-tempered to replace water lost through evaporation.
2. Do not retemper mortars out of mixer for more than 2-1/2 hours; but, rather, dispose of such mortar.
3. Repointing mortar shall be used within 30 minutes of final mixing; do not retemper or use partially hardened repointing mix.

2.6 REINFORCEMENT AND TIES

A. Acceptable Manufacturers: Subject to compliance with requirements of Specifications and Drawings, provide products by one of the following:

1. AA Wire Products.
2. Dur-O-Wal.
3. Heckman Building Products.
4. Hohmann & Barnard.
5. National Wire Products.
6. Masonry Reinforcing Corp. of America (Wire-Bond)

B. Corners and Intersections for Horizontal Joint Reinforcement: Factory fabricated matching "L" and "T" units only. Field fabricated corner units and lapped units at corners and intersections NOT allowed.

C. Bar Reinforcement:

1. Reinforcing Bars: Deformed new billet steel bars conforming to ASTM A 615, Grade 60.

2. Reinforcing Bar Positioners: Prefabricated units formed from #9 galvanized steel wire, specifically fabricated for holding steel reinforcing bars in proper relationship to block cores.

2.7 TIES AND ANCHORS

A. General: Ties and anchors shall extend at least 1-1/2 inches into masonry but with at least a 5/8-inch cover on outside face.

B. Ties Anchoring New Masonry to Old Construction: Detail on the drawings.

2.8 EMBEDDED FLASHING MATERIALS

A. Metal Drip: Stainless steel sheet metal strip fabricated with hemmed drip edge, equal to "Partial Edge" by Dur-O-Wal or "Drip Edge" by Polyguard.

B. Setting Mastic For Metal Drip: Same mastic as used for repair of flashing membrane.

2.9 MISCELLANEOUS MASONRY ACCESSORIES

A. Expansion and Control Joint Accessories:

1. Bond Breaker Strips: No. 15 asphalt roofing felt conforming to ASTM D 226, or No. 15 coal tar roofing felt conforming to ASTM D 227.
2. Pre-molded Control Joint Strips for Concrete Block: Solid rubber strips with a Shore A durometer hardness of 60 to 80, designed to fit standard sash block and maintain lateral stability in masonry wall, size and configuration as indicated.

B. Compressible Joint Filler: Fire rated mineral fiber insulation, full width and thickness of joint.

C. Cavity Wall Insulation:

1. Rigid Polyisocyanurate Boards: Foil Faced, 48" wide complying with ASTM C 1289, Type 1, Class 2. boards shall have a minimum R-value of 6.5 per 1" thickness at 40°F, and minimum compressive strength of 25 psi, as well as a maximum water absorption of 0.10% by volume: Acceptable product and manufacturer; Thermax Sheathing by Dow Chemical Co. or comparable product as approved by Architect.
2. Thickness: 3" unless specified otherwise.
3. Joint Tape: 3M's **"**Contractor Sheathing Tape 8086 or as recommended by Insulation board manufacturer**"**

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
2. Verify that foundations are within tolerances specified.
3. Verify that reinforcing dowels are properly placed.

4. Verify that substrates are free of substances that would impair mortar bond.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Build chases and recesses to accommodate items specified in this and other Sections.

B. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch.
2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet, or 1/2-inch maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.
5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2-inch maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.

3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch.

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4 inches. Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

F. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.

G. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

3.5 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:

1. Bed face shells in mortar and make head joints of depth equal to bed joints.
2. Bed webs in mortar in all courses of piers, columns, and pilasters.
3. Bed webs in mortar in grouted masonry, including starting course on footings.
4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.

B. Lay solid CMUs with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Tool exposed joints to match existing when thumbprint hard.

3.6 MASONRY-JOINT REINFORCEMENT

A. Horizontal Joint Reinforcement: Reinforce concrete block walls as follows:

1. Typical Spacing: Install wire reinforcement in horizontal joints, spaced 16" o.c. vertically.
2. Tops and Bottoms of Walls: Place joint reinforcement continuous in first and second joint above bottom of walls and below top of walls.
3. Openings: Place masonry joint reinforcement in first and second horizontal joints above and below openings greater than 1'-0" wide, extending reinforcement at least 16" beyond each side of opening.
4. End Laps: Lap joint reinforcement ends a minimum of 6", placing a cross wire of each piece within the lap.
5. Intersections and Corners: Use only preformed welded units at corners and intersections, extending at least 18" each way; do not lap straight units at "T" intersections nor cut and bend joint reinforcement at "L" corners.
6. Mortar Coverage: Fully embed longitudinal side rods in mortar for their entire length: minimum cover of 5/8" on exterior side of walls after tooling and 1/2" at other locations.
7. Control and Expansion Joints: Break reinforcement at control joints. Do not bridge control or expansion joints with reinforcing except at wall openings.

3.7 BAR REINFORCED MASONRY

A. Concrete Block Placement:

1. Set block webs in full mortar beds to maintain leak-free cells. Fill end joints to the full depth of face shell thickness.
2. Maintain grout spaces free of excess mortar and debris.

B. Bond Beam Reinforcement:

1. Make bond beams continuous. Step bond beams as required in field.
2. Reinforce bond beam with two No. 4 bars placed 1" from bottom web when not indicated otherwise.
3. Place reinforcement in accordance with ACI 315. Return bars around corners a minimum of 8". Do not use defective bars or bars bent incorrectly.
4. Lap the splices to provide at least a Class A splice per ACI 318.

C. Grouting:

1. Remove loose rust and scale from reinforcing bars and remove rust, ice, water and dirt from cavity bottoms before pouring grout.
2. Grout walls using low-lift grouting technique in lifts not more than 5ft high, allowing at least 24 hours to pass between successive lifts.
3. Place grout continuously; do not interrupt pouring of grout for more than one hour. Do not disturb reinforcement while placing grout.
4. Consolidate grout 5 to 10 minutes after pouring. Puddle and rod the grout.

3.8 CONTROL AND EXPANSION JOINTS

A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

B. Form control joints in concrete masonry using one of the following methods:

1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout, and rake out joints in exposed faces for application of sealant.
2. Install preformed control-joint gaskets designed to fit standard sash block.
3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar, or rake out joint for application of sealant.
4. Install temporary foam-plastic filler in head joints, and remove filler when unit masonry is complete for application of sealant.

3.9 LINTELS

A. Install steel lintels furnished under Section 055000 "Metal Fabrications".

B. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

3.10 FLASHING

A. General: Install embedded flashing at ledges and other obstructions to downward flow of water in wall where indicated.

B. Locations: Install thru-wall flashings at the following masonry locations, whether shown or not:

1. At base of exterior masonry walls.
2. Over all exterior lintels.

C. Wall Flashing Fabrication: Form typical wall flashings by adhering self-adhesive flashing membrane to a stainless steel edge drip, adhering membrane all across the top of the sheet metal. Trim membrane at edge of metal drip.

1. Install the metal edge drip to make continuous runs. Make “dollar” lap joints, overlapping joints 6"; or lap the metal joints 1" and fill with the mastic used to set the edge drip. Trim the metal length to match the width of the flashing except at lintels, where the length of metal shall be cut to match the width of the door/window opening.

D. Wall Flashing Installation:

1. Comply with flashing membrane manufacturer’s temperature limitations.
2. Install in one piece to the extent practicable. Lap flashing 6” at joints and seal joint edges continuously.
3. Lintel Flashings: Extend flashings past ends of lintel and fold flashing up into first head joints beyond end of lintel to form a positive end dam.
4. Step Flashings: At the end of each section of flashing, fold flashing at least 1" up into a head joint so as to form a positive end dam.

3.11 MORTAR JOINT FINISHING

A. Flush Joints: Strike interior wall joints flush where masonry is to be covered by other materials.

B. Tooled Joints: Tool all joints not concealed by other work.

1. At time of laying, strike masonry joints flush.
2. When mortar in joints becomes thumbprint hard, tool to a hard, concave finish, using sled-type jointer at least 16" long, with diameter 1/8" to 1/4" larger than joint.
3. Jointing tools shall be same diameter for each type of masonry.

C. Caulked Joints: Rake out joints 1/2" deep where caulking is required.

3.12 FITTING AND PATCHING

A. Do all cutting and patching of masonry for the Work required by other trades.

B. Replace damaged masonry. Spot patching of exposed units with mortar must be inconspicuous.

C. Cut and fit for chases, pipes, conduits, sleeves, etc. Cooperate with other trades to provide correct size, shape and location. Avoid cutting and patching to accommodate work under other Sections by coordinating masonry work with other trades.

3.13 REPAIR AND FINAL POINTING

A. At completion of the work, cut out and repoint all holes, cracks and defective joints, using mortar colored to match after it dries. Cut out hardened mortar to a depth of 1/2" and dampen the hardened mortar before patching.

B. Retool and reclean joint patches to match adjacent work. Leave exterior walls watertight.

3.14 CLEANING

A. Remove excess mortar and droppings as work progresses, avoiding stains and smears. Do not allow excess mortar lumps or smears to harden on finish surfaces.

B. Clean the interior masonry before application of floor finishes is started.

C. Concrete Block: When concrete masonry unit placement is complete, rub masonry with carborundum brick to remove all sharp edges and then clean work with stiff bristle brushes, or other approved method, removing loose granules, building dust, etc. Comply with recommendations of NCMA TEK Bulletin 28.

3.15 PROTECTION

A. At day's end and when precipitation is anticipated, cover tops of unfinished walls with plastic sheeting to prevent moisture infiltration.

B. Protect exposed external corners that may be damaged by construction activities.

C. Brace and shore masonry constructions until they are able to withstand ambient wind loads.

D. Do not allow uniform structural loads to be applied to unbraced or unshored masonry for at least 12 hours after construction. Protect from concentrated loads for at least 3 days after construction.

3.16 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

B. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

SECTION 072726
FLUID APPLIED MEMBRANE AIR BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Fluid-applied, vapor-retarding membrane air barriers.

B. Related Requirements:

1. Section 042000 "Unit Masonry" for exterior walls with fluid applied membrane air barrier.

1.3 DEFINITIONS

A. Air-Barrier Material: A primary element that provides a continuous barrier to the movement of air.

B. Air-Barrier Accessory: A transitional component of the air barrier that provides continuity.

C. Air-Barrier Assembly: The collection of air-barrier materials and accessory materials applied to an opaque wall, including joints and junctions to abutting construction, to control air movement through the wall.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review air-barrier requirements and installation, special details, mockups, air-leakage and bond testing, air-barrier protection, and work scheduling that covers air barriers.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include manufacturer's written instructions for evaluating, preparing, and treating substrate; technical data; and tested physical and performance properties of products.

B. Shop Drawings: For air-barrier assemblies.

1. Show locations and extent of air barrier. Include details for substrate joints and cracks, counterflashing strips, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.
2. Include details of interfaces with other materials that form part of air barrier.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer. Include list of ABAA-certified installers and supervisors employed by the Installer, who work on Project.

B. Product Certificates: From air-barrier manufacturer, certifying compatibility of air barriers and accessory materials with Project materials that connect to or that come in contact with the barrier.

C. Product Test Reports: For each air-barrier assembly, for tests performed by a qualified testing agency.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1. Installer shall be licensed by ABAA according to ABAA's Quality Assurance Program and shall employ ABAA-certified installers and supervisors on Project.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Remove and replace liquid materials that cannot be applied within their stated shelf life.

B. Protect stored materials from direct sunlight.

1.9 FIELD CONDITIONS

A. Environmental Limitations: Apply air barrier within the range of ambient and substrate temperatures recommended by air-barrier manufacturer.

1. Protect substrates from environmental conditions that affect air-barrier performance.
2. Do not apply air barrier to a damp or wet substrate or during snow, rain, fog, or mist.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Source Limitations: Obtain primary air-barrier materials and air-barrier accessories from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. General: Air barrier shall be capable of performing as a continuous vapor-retarding air barrier and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration. Air-barrier assemblies shall be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, penetrations, tie-ins to installed waterproofing, and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits.

B. Air-Barrier Assembly Air Leakage: Maximum 0.04 cfm/sq. ft. of surface area at 1.57 lbf/sq. ft. (0.2 L/s x sq. m of surface area at 75 Pa), when tested according to ASTM E 283 or ASTM E 2357.

2.3 VAPOR-RETARDING MEMBRANE AIR BARRIER

A. Fluid-Applied, Vapor-Retarding Membrane Air Barrier: Elastomeric, modified bituminous membrane.

1. Elastomeric, Modified Bituminous Membrane:

   a. Barriseal S by Carlisle Coatings & Waterproofing Inc.
   b. Air-Bloc 06 WB by Henry Company.
   c. Textroflash Liquid by Holmann & Barnard, Inc.
   d. Air-Shield LM by W.R. Meadows.
   e. ExoAir 120SP/R by Tremco Inc.

2. Physical and Performance Properties:

   a. Air Permeance: Maximum 0.004 cfm/sq. ft. of surface area at 1.57-lbf/sq. ft. pressure difference; ASTM E 2178.
   b. Vapor Permeance: Maximum 0.1 perm (5.8 ng/Pa x s x sq. m); ASTM E 96/E 96M.
   c. Ultimate Elongation: Minimum 500 percent; ASTM D 412, Die C.

2.4 ACCESSORY MATERIALS

A. General: Accessory materials recommended by air-barrier manufacturer to produce a complete air-barrier assembly and compatible with primary air-barrier material.

B. Primer: Liquid waterborne primer recommended for substrate by air-barrier material manufacturer.

C. Counterflashing Strip: Modified bituminous, 40-mil- (1.0-mm-) thick, self-adhering sheet consisting of 32 mils (0.8 mm) of rubberized asphalt laminated to an 8-mil- (0.2-mm-) thick, cross-laminated polyethylene film with release liner backing.

D. Butyl Strip: Vapor retarding, 30 to 40 mils (0.76 to 1.0 mm) thick, self-adhering; polyethylene-film-reinforced top surface laminated to layer of butyl adhesive with release liner backing.

E. Modified Bituminous Strip: Vapor retarding, 40 mils (1.0 mm) thick, smooth surfaced, self-adhering; consisting of 36 mils (0.9 mm) of rubberized asphalt laminated to a 4-mil- (0.1-mm-) thick polyethylene film with release liner backing.

F. Joint Reinforcing Strip: Air-barrier manufacturer's glass-fiber-mesh tape.

G. Substrate-Patching Membrane: Manufacturer's standard trowel-grade substrate filler.

H. Adhesive and Tape: Air-barrier manufacturer's standard adhesive and pressure-sensitive adhesive tape.

I. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, 0.0187 inch (0.5 mm) thick, and Series 300 stainless-steel fasteners.

J. Modified Bituminous Transition Strip: Vapor retarding, 40 mils (1.0 mm) thick, smooth surfaced, self-adhering; consisting of 36 mils (0.9 mm) of rubberized asphalt laminated to a 4-mil- (0.1-mm-) thick polyethylene film with release liner backing.

K. Adhesive-Coated Transition Strip: Vapor-permeable, 17-mil- (0.43-mm-) thick, self-adhering strip consisting of an adhesive coating over a permeable laminate with a permeance value of 37 perms (2145 ng/Pa x s x sq. m).

L. Elastomeric Flashing Sheet: ASTM D 2000, minimum 50- to 65-mil- (1.3- to 1.6-mm-) thick, cured sheet neoprene with manufacturer-recommended contact adhesives and lap sealant with stainless-steel termination bars and fasteners.

M. Preformed Silicone-Sealant Extrusion: Manufacturer's standard system consisting of cured low-modulus silicone extrusion, sized to fit opening widths, with a single-component, neutral-curing, Class 100/50 (low-modulus) silicone sealant for bonding extrusions to substrates.

1. Product: Subject to compliance with requirements, provide one of the following:

a. 123 Silicone Seal by Dow Corning Corp.
b. US11000 UltraSpan by Momentive Performance Materials.
c. Sil-Span by Pecora Corp.
d. Spectrem Simple Seal by Tremco Inc.

N. Joint Sealant: ASTM C 920, single-component, neutral-curing silicone; Class 100/50 (low modulus), Grade NS, Use NT related to exposure, and, as applicable to joint substrates indicated, Use O. Comply with Section 079200 "Joint Sealants."

O. Termination Mastic: Air-barrier manufacturer's standard cold fluid-applied elastomeric liquid; trowel grade.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.

1. Verify that substrates are sound and free of oil, grease, dirt, excess mortar, or other contaminants.
2. Verify that concrete has cured and aged for minimum time period recommended by air-barrier manufacturer.

3. Verify that concrete is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
4. Verify that masonry joints are flush and completely filled with mortar.

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

3.2 SURFACE PREPARATION

A. Clean, prepare, treat, and seal substrate according to manufacturer's written instructions. Provide clean, dust-free, and dry substrate for air-barrier application.

B. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.

C. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.

D. Remove fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, and other voids in concrete with substrate-patching membrane.

E. Remove excess mortar from masonry ties, shelf angles, and other obstructions.

F. At changes in substrate plane, apply sealant or termination mastic beads at sharp corners and edges to form a smooth transition from one plane to another.

G. Cover gaps in substrate plane and form a smooth transition from one substrate plane to another with stainless-steel sheet mechanically fastened to structural framing to provide continuous support for air barrier.

3.3 TRANSITION STRIP INSTALLATION

A. General: Install strips, transition strips, and accessory materials according to air-barrier manufacturer's written instructions to form a seal with adjacent construction and maintain a continuous air barrier.

1. Coordinate the installation of air barrier with installation of roofing membrane and base flashing to ensure continuity of air barrier with roofing membrane.
2. Install modified bituminous strip on roofing membrane or base flashing so that a minimum of 3 inches (75 mm) of coverage is achieved over each substrate.

B. Apply primer to substrates at required rate and allow it to dry. Limit priming to areas that will be covered by fluid air-barrier material on same day. Reprime areas exposed for more than 24 hours.

C. Connect and seal exterior wall air-barrier material continuously to roofing-membrane air barrier, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.

D. At end of each working day, seal top edge of strips and transition strips to substrate with termination mastic.

E. Apply joint sealants forming part of air-barrier assembly within manufacturer's recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

F. Wall Openings: Prime concealed, perimeter frame surfaces of windows, curtain walls, storefronts, and doors. Apply modified bituminous transition strip, adhesive-coated transition strip, elastomeric flashing sheet or preformed silicone-sealant extrusion so that a minimum of 3 inches (75 mm) of coverage is achieved over each substrate. Maintain 3 inches (75 mm) of full contact over firm bearing to perimeter frames with not less than 1 inch (25 mm) of full contact.

1. Modified Bituminous Transition Strip: Roll firmly to enhance adhesion.
2. Adhesive-Coated Transition Strip: Roll firmly to enhance adhesion.
3. Elastomeric Flashing Sheet: Apply adhesive to wall, frame, and flashing sheet. Install flashing sheet and termination bars, fastened at 6 inches (150 mm) o.c. Apply lap sealant over exposed edges and on cavity side of flashing sheet.
4. Preformed Silicone-Sealant Extrusion: Set in full bed of silicone sealant applied to walls, frame, and air-barrier material.

G. Seal strips and transition strips around masonry reinforcing or ties and penetrations with termination mastic.

H. Seal top of through-wall flashings to air barrier with an additional 6-inch- (150-mm-) wide, modified bituminous or counterflashing strip.

I. Seal exposed edges of strips at seams, cuts, penetrations, and terminations not concealed by metal counterflashings or ending in reglets with termination mastic.

J. Repair punctures, voids, and deficient lapped seams in strips and transition strips. Slit and flatten fishmouths and blisters. Patch with transition strips extending 6 inches (150 mm) beyond repaired areas in strip direction.

3.4 FLUID AIR-BARRIER MEMBRANE INSTALLATION

A. General: Apply fluid air-barrier material to form a seal with strips and transition strips and to achieve a continuous air barrier according to air-barrier manufacturer's written instructions. Apply fluid air-barrier material within manufacturer's recommended application temperature ranges.

1. Apply primer to substrates at required rate and allow it to dry.
2. Limit priming to areas that will be covered by fluid air-barrier material on same day. Reprime areas exposed for more than 24 hours.

B. Membrane Air Barriers: Apply a continuous unbroken air-barrier membrane to substrates according to the following thickness. Apply air-barrier membrane in full contact around protrusions such as masonry ties.

1. Vapor-Retarding Membrane Air Barrier: Total dry film thickness as recommended in writing by manufacturer to meet performance requirements, but not less than 40-mil (1.0-mm) dry film thickness, applied in two equal coats.

C. Apply strip and transition strip a minimum of 1 inch (25 mm) onto cured air-barrier material] or strip and transition strip over cured air-barrier material overlapping 3 inches (75 mm) onto each surface according to air-barrier manufacturer's written instructions.

D. Do not cover air barrier until it has been tested and inspected by Owner's testing agency.

E. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air-barrier components.

F. Remove masking materials after installation.

3.5 FIELD QUALITY CONTROL

A. Inspections: Air-barrier materials, accessories, and installation are subject to inspection for compliance with requirements. Inspections may include the following:

1. Continuity of air-barrier system has been achieved throughout the building envelope with no gaps or holes.
2. Continuous structural support of air-barrier system has been provided.
3. Masonry and concrete surfaces are smooth, clean, and free of cavities, protrusions, and mortar droppings.
4. Site conditions for application temperature and dryness of substrates have been maintained.
5. Maximum exposure time of materials to UV deterioration has not been exceeded.
6. Surfaces have been primed, if applicable.
7. Laps in strips and transition strips have complied with minimum requirements and have been shingled in the correct direction (or mastic has been applied on exposed edges), with no fishmouths.
8. Termination mastic has been applied on cut edges.
9. Strips and transition strips have been firmly adhered to substrate.
10. Compatible materials have been used.
11. Transitions at changes in direction and structural support at gaps have been provided.
12. Connections between assemblies (air-barrier and sealants) have complied with requirements for cleanliness, surface preparation and priming, structural support, integrity, and continuity of seal.
13. All penetrations have been sealed.

B. Tests: As determined by Owner's testing agency.

C. Air barriers will be considered defective if they do not pass tests and inspections.

1. Apply additional air-barrier material, according to manufacturer's written instructions, where inspection results indicate insufficient thickness.
2. Remove and replace deficient air-barrier components for retesting as specified above.

D. Repair damage to air barriers caused by testing; follow manufacturer's written instructions.

3.6 CLEANING AND PROTECTION

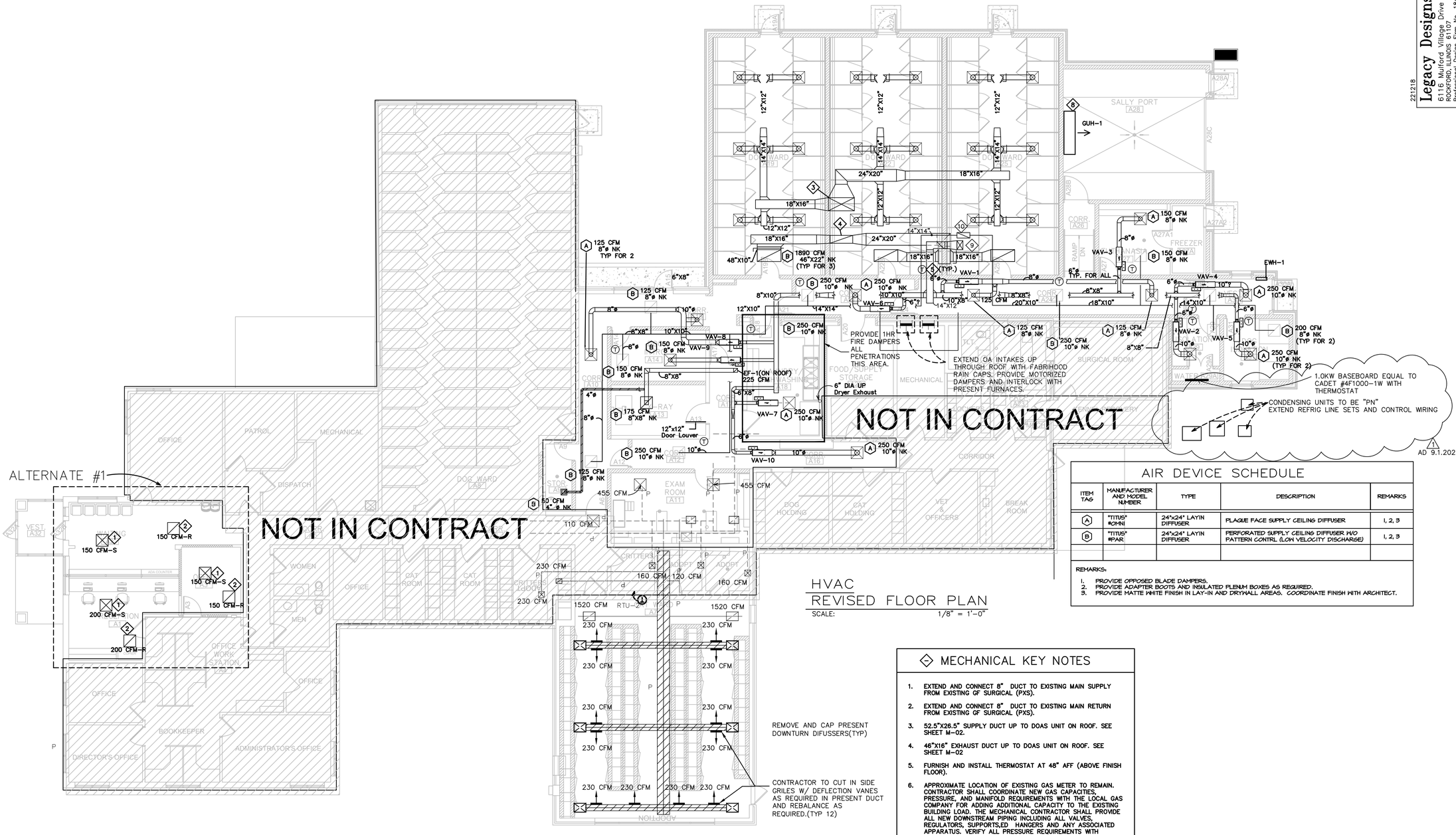
A. Protect air-barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.

1. Protect air barrier from exposure to UV light and harmful weather exposure as required by manufacturer. If exposed to these conditions for more than 30 days, remove and replace air barrier or install additional, full-thickness, air-barrier application after repairing and preparing the overexposed membrane according to air-barrier manufacturer's written instructions.
2. Protect air barrier from contact with incompatible materials and sealants not approved by air-barrier manufacturer.

B. Clean spills, stains, and soiling from construction that would be exposed in the completed work using cleaning agents and procedures recommended by manufacturer of affected construction.

C. Remove masking materials after installation.

END OF SECTION 072726



AIR DEVICE SCHEDULE

ITEM TAG	MANUFACTURER AND MODEL NUMBER	TYPE	DESCRIPTION	REMARKS
A	"TITUS" #OMNI	24"x24" LAYIN DIFFUSER	PLAQUE FACE SUPPLY CEILING DIFFUSER	1, 2, 3
B	"TITUS" #PAR	24"x24" LAYIN DIFFUSER	PERFORATED SUPPLY CEILING DIFFUSER W/O PATTERN CONTRL (LOW VELOCITY DISCHARGE)	1, 2, 3

REMARKS:
1. PROVIDE OPPOSED BLADE DAMPERS.
2. PROVIDE ADAPTER BOOTS AND INSULATED PLENUM BOXES AS REQUIRED.
3. PROVIDE MATTE WHITE FINISH IN LAY-IN AND DRYWALL AREAS. COORDINATE FINISH WITH ARCHITECT.

HVAC REVISED FLOOR PLAN

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

MECHANICAL KEY NOTES

1. EXTEND AND CONNECT 8" DUCT TO EXISTING MAIN SUPPLY FROM EXISTING GF SURGICAL (PXS).
2. EXTEND AND CONNECT 8" DUCT TO EXISTING MAIN RETURN FROM EXISTING GF SURGICAL (PXS).
3. 52.5"X26.5" SUPPLY DUCT UP TO DOAS UNIT ON ROOF. SEE SHEET M-02.
4. 46"X16" EXHAUST DUCT UP TO DOAS UNIT ON ROOF. SEE SHEET M-02
5. FURNISH AND INSTALL THERMOSTAT AT 48" AFF (ABOVE FINISH FLOOR).
6. APPROXIMATE LOCATION OF EXISTING GAS METER TO REMAIN. CONTRACTOR SHALL COORDINATE NEW GAS CAPACITIES, PRESSURE, AND MANIFOLD REQUIREMENTS WITH THE LOCAL GAS COMPANY FOR ADDING ADDITIONAL CAPACITY TO THE EXISTING BUILDING LOAD. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL NEW DOWNSTREAM PIPING INCLUDING ALL VALVES, REGULATORS, SUPPORTS,ED HANGERS AND ANY ASSOCIATED APPARATUS. VERIFY ALL PRESSURE REQUIREMENTS WITH MANUFACTURER'S EQUIPMENT SPECIFICATIONS.
7. FOR CONTINUATION SEE SHEET M-02.
8. EXTEND AND CONNECT GAS PIPING TO NEW GAS UNIT HEATER WITH UNION, GAS COCK AND DIRT LEG. EXTEND CONNECT FLUE AND VENT TO NEW GAS FURNACE UNIT.
9. 18"X12" SUPPLY DUCT UP TO RTU-4 ON ROOF. SEE SHEET M-02.
10. 26"X12" RETURN DUCT UP TO RTU-4 ON ROOF. SEE SHEET M-02.

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ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

HVAC REVISED FLOOR PLAN

PROJECT INFORMATION

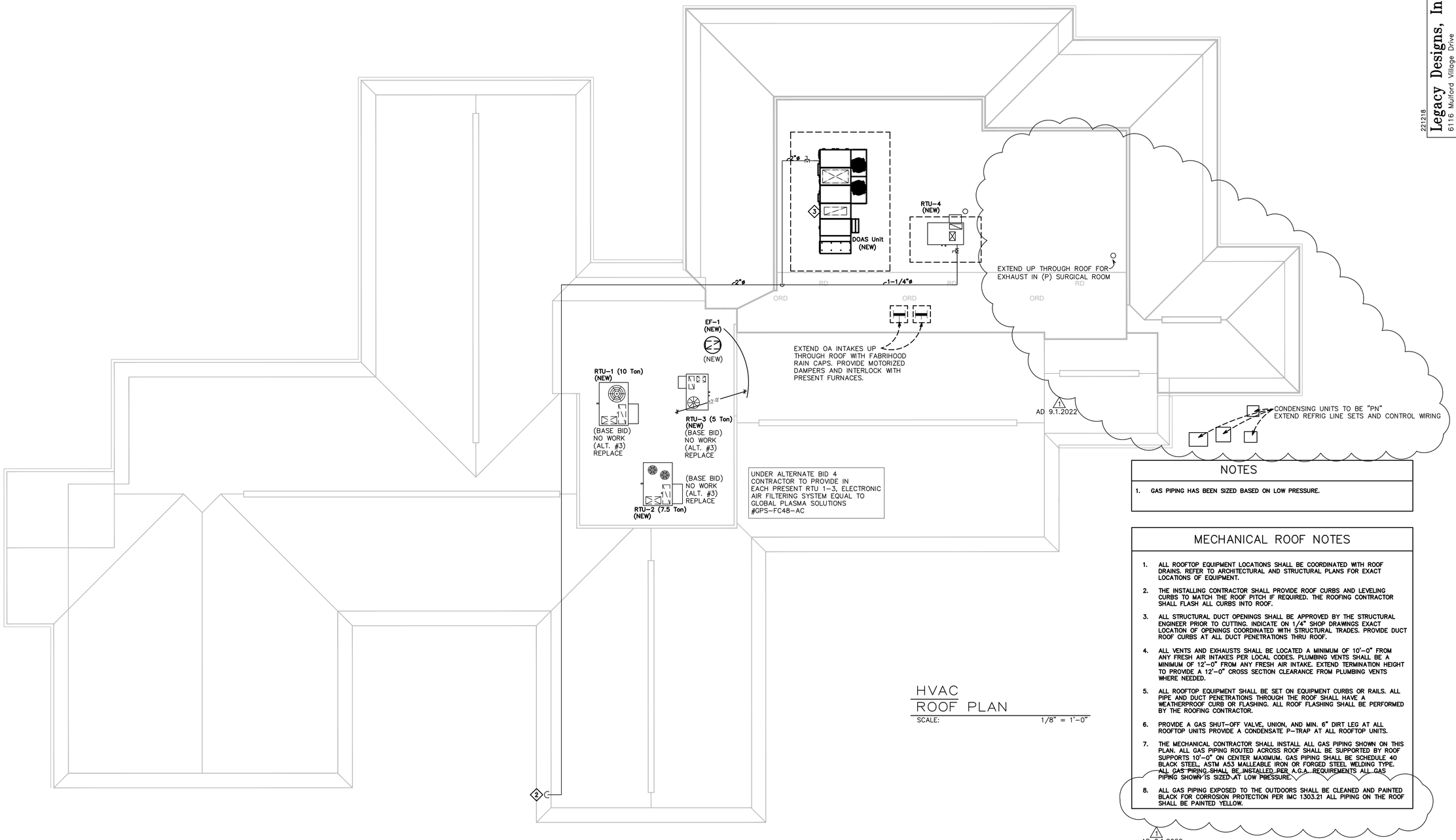
Date	August 16, 2022
Rev. Date	Sept. 1, 2022
RLJA Proj	2022-020

SHEET NUMBER

M1
OF
6

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
STATE OF ILLINOIS
EXP 11-30-23

221218



HVAC
ROOF PLAN
SCALE: 1/8" = 1'-0"

NOTES

1. GAS PIPING HAS BEEN SIZED BASED ON LOW PRESSURE.

MECHANICAL ROOF NOTES

1. ALL ROOFTOP EQUIPMENT LOCATIONS SHALL BE COORDINATED WITH ROOF DRAINS. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT LOCATIONS OF EQUIPMENT.
2. THE INSTALLING CONTRACTOR SHALL PROVIDE ROOF CURBS AND LEVELING CURBS TO MATCH THE ROOF PITCH IF REQUIRED. THE ROOFING CONTRACTOR SHALL FLASH ALL CURBS INTO ROOF.
3. ALL STRUCTURAL DUCT OPENINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CUTTING. INDICATE ON 1/4" SHOP DRAWINGS EXACT LOCATION OF OPENINGS COORDINATED WITH STRUCTURAL TRADES. PROVIDE DUCT ROOF CURBS AT ALL DUCT PENETRATIONS THRU ROOF.
4. ALL VENTS AND EXHAUSTS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKES PER LOCAL CODES. PLUMBING VENTS SHALL BE A MINIMUM OF 12'-0" FROM ANY FRESH AIR INTAKE. EXTEND TERMINATION HEIGHT TO PROVIDE A 12'-0" CROSS SECTION CLEARANCE FROM PLUMBING VENTS WHERE NEEDED.
5. ALL ROOFTOP EQUIPMENT SHALL BE SET ON EQUIPMENT CURBS OR RAILS. ALL PIPE AND DUCT PENETRATIONS THROUGH THE ROOF SHALL HAVE A WEATHERPROOF CURB OR FLASHING. ALL ROOF FLASHING SHALL BE PERFORMED BY THE ROOFING CONTRACTOR.
6. PROVIDE A GAS SHUT-OFF VALVE, UNION, AND MIN. 6" DIRT LEG AT ALL ROOFTOP UNITS PROVIDE A CONDENSATE P-TRAP AT ALL ROOFTOP UNITS.
7. THE MECHANICAL CONTRACTOR SHALL INSTALL ALL GAS PIPING SHOWN ON THIS PLAN. ALL GAS PIPING ROUTED ACROSS ROOF SHALL BE SUPPORTED BY ROOF SUPPORTS 10'-0" ON CENTER MAXIMUM. GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL, ASTM A53 MALLEABLE IRON OR FORGED STEEL WELDING TYPE. ALL GAS PIPING SHALL BE INSTALLED PER A.G.A. REQUIREMENTS ALL GAS PIPING SHOWN IS SIZED AT LOW PRESSURE.
8. ALL GAS PIPING EXPOSED TO THE OUTDOORS SHALL BE CLEANED AND PAINTED BLACK FOR CORROSION PROTECTION PER IMC 1303.21 ALL PIPING ON THE ROOF SHALL BE PAINTED YELLOW.

AD 9.1.2022

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OF
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LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
ILLINOIS
EXP:11-30-23

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AIR HANDLING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	SUPPLY FAN						OUTDOOR CFM	COOLING COIL						HEATING COIL				EER	FILTERS		ELECTRICAL				OPERATING WEIGHT	REMARKS
			CFM	HP	BHP	RPM	ESP (IN W.G.)	TSP (IN W.G.)		TOTAL MBH	SENSIBLE MBH	EDB (DEG F)	EWB (DEG F)	LDB (DEG F)	LWB (DEG F)	MBH INPUT	MBH OUTPUT	EDB (DEG F)	LDB (DEG F)		FILTER EFF	ESP PD (in w.g.)	V	PH	MCA	MOP		
RTU-1	CARRIER	48FCTM12D6A5-6W0C0	4000		3.00	2050	1.2	1.4	1200	128.63	96.3	80.5	67.2	57.6	57.0	250	205	46	95	11	13	<0.1	208	3	51	60	815	1,3-12
RTU-2	CARRIER	48FCTM08D6A5-6W0C0	3000		2.13	1801	1.2	1.3	900	92.61	66.3	80.5	67.2	59.5	57.5	224	181	46	103	11.2	13	<0.1	208	3	40	50	743	1,3-12
RTU-3	CARRIER	48FCTA06D3A5-6W0C0	2000		1.62	2491	1.1	1.2	600	60.21	44.0	80.5	67.2	59.6	57.8	150	120	46	103	14	13	<0.1	208	3	28	40	635	1,3-12
RTU-4	CARRIER	48LCRB07D2A5-1N1C0	2400		1.25	828	1.0	1.1	420	74.52	57.8	78.6	65.9	56.3	55.9	125	103	56	96	13	13	<0.1	208	3	35	45	1314	1-11

REMARKS:
1. BASED ON CARRIER, TRANE AND LENNOX APPROVED EQUAL.
2. FURNISH WITH STANDARD 14" KNOCK DOWN ROOF CURB WITH WOOD NAILERS.
3. ECONOMIZER, COMP ENTHALPY 0-100% WITH BAROMETRIC RELIEF, LOW LEAK DAMPERS.
4. FURNISH WITH UNPOWERED 120V CONVENIENCE OUTLET.
5. FURNISH WITH ELECTRICAL DISCONNECT SWITCH.
6. FURNISH WITH TWO STAGE NATURAL GAS BURNER, STANDARD HX.
7. PROVIDE SECUREAIRE SLIMLINE ELECTROSTATIC FILTER.
8. PROVIDE FACTORY INSTALLED FILTER STATUS SWITCH.
9. WALL MOUNT THERMOSTAT WHERE SHOWN ON PLANS AT 48"A.F.F.
10. PROVIDE FACTORY INSTALLED SUPPLY & RETURN SMOKE DETECTORS.
11. FURNISH WITH NETWORK DDC INTERFACE CARD FOR CONNECTION TO ALPHA BMS SYSTEM, AND FURNISH DISCHARGE AIR TEMPERATURE SENSOR.
12. DIRECT REPALCEMENT OF EXISTING UNIT, NO CURB ADAPTER REQUIRED, MC TO VERIFY DIMENSIONS.

1 AD 9.1.2022

BASE BID:
RTU-1,RTU-2,RTU-3 - DUCT MODIFICATIONS ONLY

ALT. #3
RTU-1,RTU-2,RTU-3 - REPLACE WITH NEW UNITS

ALT. #4
RTU-1,RTU-2,RTU-3 - DUCT MODIFICATIONS AND PROVIDE ELECTRONIC FILTERS FOR UNITS AS SPECIFIED ON SHEET M1

VARIABLE AIR VOLULE (VAV) BOX SCEHDULE

GENERAL DATA			CFM		INLET SIZE (IN)	NOTES
TAG	AREA SERVED	MANUFACTURER /MODEL NUMBER	UAX.	MIN.		
VAV-1	CORRIDOR A24	TITUS DESV	250	75	6	1 TO 4
VAV-2	CAT ISOLATION A29	TITUS/DESV	200	60	6	1 TO 4
VAV-3	EUTHANASIA	TITUS/DESV	150	50	6	1 TO 4
VAV-4	VESTIBULE A30	TITUS/DESV	250	75	6	1 TO 4
VAV-5	DOG ISOLATION A31	TITUS/DESV	250	75	6	1 TO 4
VAV-6	CORRIDOR A21	TITUS/DESV	250	75	6	1 TO 4
VAV-7	LAUNDRY/DISHWASHING	TITUS/DESV	250	75	6	1 TO 4
VAV-8	CORRIDOR A15	TITUS/DESV	250	75	6	1 TO 4
VAV-9	DOG INTRO A14	TITUS/DESV	150	50	6	1 TO 4
VAV-10	CORRIDOR A16	TITUS/DESV	250	75	6	1 TO 4

NOTES:
1. PROVIDE THERMOSTAT WITH DISPLAY PANEL FOR EACH TERMINAL UNIT.
2. PROVIDE WITH AIRFLOW CROSS SENSOR FOR CFM MEASUREMENT.
3. PROVIDE WITH CLASS II, 24V CONTROL TRANSFORMER.
4. ACCEPTABLE MANUFACTURERS: TTTUS, PRTCE INDUSTRIES, CARRIER.

GAS UNIT HEATER SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL	SUPPLY FAN		HEATING		VOLTAGE	PHASE	MOCP	REMARKS
				CFM	HP	MBH INPUT	MBH OUTPUT				
GUH-1	WAREHOUSE	REZNOR	UDZ-30	456	0.06	30	24.6	115	1	15	1,2,3,4

REMARKS:
1. INSTALL PER MANUFACTURER'S REQUIREMENTS.
2. PROVIDE WITH NON-FUSED DISCONNECT SWITCH.
3. FURNISH WITH SINGLE STAGE THERMOSTAT, WALL/COLUMN-MOUNTED AT 48" A.F.F.
4. PROVIDE 8" DIAMETER CONCENTRIC VENT/INLET AIR PIPE.

ELECTRIC UNIT HEATER

MARK	SERVICE	MANUFACTURER	MODEL	KW	ELECTRICAL			NOTES
					AMPS	VOLTS	PH	
EWH-1	VESTIBULE	MERKEL	F30522T2DWB	1		208	1	*1-5

NOTES:
1. INSTALL PER MANUFACTURER'S REQUIREMENTS.
2. WALL MOUNT 8" FROM FINISHED FLOOR .
3. FURNISH WITH DISCONNECT SWITCH.
4. FURNISH WITH INTEGRATED THERMOSTAT.
5. COORDINATE COLOR WITH ARCHITECT

EXHAUST FAN

MARK	SERVICE	MANUFACTURER	MODEL	TYPE	DRIVE TYPE	ESP (IN-WG)	ELECTRICAL			WEIGHT (LBS)	NOTES
							HP	VOLTS	PH		
EF-1	A13 X-RAY	GREENHECK	G-095-D	CENTRIFUGAL	DIRECT	0.5	0.125	115	1	51	*1-5

NOTES:
1. BASED ON GREENHECK, LOREN COOK APPROVIDE EQUAL.
2. NAME PLATE SHALL INCLUE DESIGNATION AND AREA SERVED BY FAN.
3. FURNISH WITH ELECTRICAL DISCONNECT.
4. PROVIDE FAN WITH UNIT MOUNTED SPEED CONTROL SWITCH FOR AIR FLOW ADJUSTMENT.
5. PROVIDE FAN WITH MINIMUM 14" HIGH INSULATED ROOF CURB AND GRAVITY BACKDRAFT DAMPE

ENERGY RECOVERY UNIT SCHEDULE

MARK	LOCATION	SERVICE	MANUFACTURER	MODEL	SUPPLY						EXHAUST						SUMMER OPERATION									WINTER OPERATION									DX COOLING						INDIRECT GAS HEATING				ELECTRICAL					OPERATING WEIGHT	REMARKS
					TSP	ESP	MOTOR			RPM	TSP	ESP	MOTOR			RPM	SUPPLY AIR			OUTSIDE AIR			EXHAUST AIR			SUPPLY		OUTSIDE AIR		EXHAUST AIR			EDB	EWB	LDB	LWB	FACE VELOCITY	COOLING LOAD (BTUH)		TEMP RISE	EDB	INPUT MBH	OUTPUT MBH	V	PH	Hz	MCA	MOP		
							QTY	HP	BHP				QTY	HP	BHP		CFM	LDB	LWB	CFM	EDB	EWB	CFM	EDB	EWB	CFM	LDB	CFM	EDB	CFM	EDB	EWB						TOTAL	SENSIBLE											
DOAS-1	ROOF	DOG WARD	TRANE	HORIZON OAD	2.74	1.00	1	5.0	3.61	1,003	2.24	1.00	1	5	3.30	1643	5,770	80	68	5,990	94	74	5,990	87.9	69.5	5,700	49.8	5,990	-1.7	5,990	30.4	30.2	79.8	68.1	54.5	54.2	328	247.9	159.3	65	49.8	500.0	400	208	3	60	100.2	125	4,289	1 TO 20

REMARKS:
1. FURNISH WITH DOWN DISCHARGE SUPPLY AND RETURN. MOUNT ON INSULATED 24" CURB.
2. FURNISH WITH SINGLE ZONE VAV FAN CONTROL.
3. 2-STAGE COOLING.
4. FURNISH WITH FULL SENSIBLE ECONOMIZER.
5. FURNISH WITH DIRECT DRIVE VFD FOR SUPPLY AND EXHAUST FAN.
6. FURNISH WITH ELECTRICAL DISCONNECT SWITCH.
7. FURNISH WITH MODULATING NATURAL GAS BURNER, STAINLESS STEEL HEAT EXCHANGER. PROVIDE WITH STAINLESS STEEL DRAIN PAN.
8. 2" PLEATED FILTERS, MERV 8.
9. UNIT TO HAVE TOTAL ENTHALPY WHEEL COMPLETE WITH BY-PASS DAMPERS AND FROST CONTROL.
10. FURNISH WITH POWERED 120V CONVENIENCE OUTLET.
11. WALL MOUNT THERMOSTAT WHERE SHOWN ON PLANS AT 48"A.F.F.
12. FURNISH WITH HOT GAS REHEAT COIL.
13. PROVIDE DUCT SMOKE DETECTOR IN BOTH THE SUPPLY AND RETURN DUCTS.
14. PROVIDE WITH AN INTERNALLY LINED DROP PLENUM WITH 4-WAY DRUM LOUVER DISTRIBUTION.
15. ERV PURGE REQUIRD TO LIMIT CROSS CONTAMINATION TO LESS THAN .04% CROSSOVER AIR
16. ERV WHEEL TO HAVE VFD, BYPASS DAMPERS FOR FROST PREVEION AND ECONOMIZER SEQUENCE.
17. PROVIDE SLIDE OUT FANS, SLIDE OUT ERV WHEEL, AND 6" GAP BETWEEN COILS FOR EASE OF SERVICABILITY
18. ACTIVE HEAD PRESSURE CONTROL ON THE CONDENSER FANS TO ENSURE REHEAT PERFORMANCE
19. PROVIDE 1ST YEAR PARTS AND LABOR WARRANTY ON THE ENTIRE UNIT, 5 YEAR COMPRESSOR WARRANTY AND 25 YEAH HEAT EXCHANGER WARRANTY
20. FURNISH WITH NETWORK DDC INTERFACE CARD FOR CONNECTION TO APLPHA BMS SYSTEM, AND FURNISH DISCHARGE AIR TEMPERATURE SENSOR.

Additional Schedule items:
~~ERV Total Summer/Winter Capacity: 149.25 MBH/375.88~~
ERV Sensible Summer/Winter Capacity: 79.53/259.52 MBH and 66% Efficiency
ERV Latent Summer/Winter Capacity: 64.7/116.36 MBH and 62% Efficiency
EER : 18.3
MRE : 5.79 lb/kwh
MRC : 111.86.lb/h

1 AD 9.1.2022

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OF ILLINOIS
EXP:11-30-23

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ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
HVAC SCHEDULES

PROJECT INFORMATION
Date: August 16, 2022
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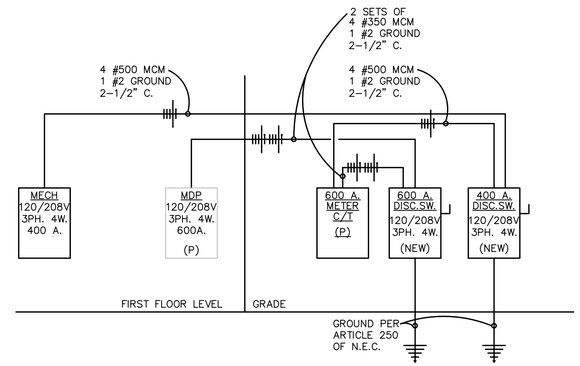
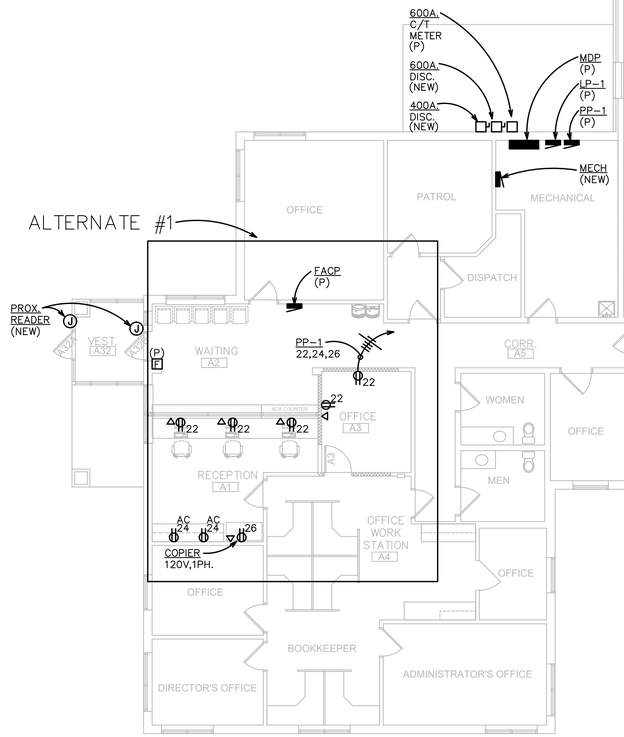


ELECTRICAL RISER DIAGRAM

NO SCALE PURELY DIAGRAMMATIC



PANEL DESIGNATION			MECH			PROJECT NO.		
120 / 208 VOLT						LOCATION/ROOM:		
3 PHASE 400 AMP MAIN			BREAKER			SURFACE MOUNTED		
4 WIRE			FAULT CURRENT RATING			AIC.		
			WATTS					
CCT PH	H AMP/ POLE	REMARKS	LEFT	RIGHT	REMARKS	AMP/ POLE	CCT PH	
1	A 125 /	DOAS 100MCA	12008	4203	RTU-4 35MCA	45 /	2	A
3	B /	" "	12008	4203	" "	/	4	B
5	C / 3	" "	12008	4203	" "	/ 3	6	C
7	A 20/1	EF-1	200	540	RECEPTACLES	20/1	8	A
9	B 20/1	GWH-1	500	500	EWH-1	20 /	10	B
11	C 70 /	X-RAY	8406	500	" "	/ 2	12	C
13	A /	" "	8406	1000	FREEZER	/	14	A
15	B / 3	" "	8406	1000	" "	/ 2	16	B
17	C 20/1	RECEPTACLES	720	720	RECEPTACLES	20/1	18	C
19	A 20/1	RECEPTACLES	540	540	RECEPTACLES	20/1	20	A
21	B 20/1	RECEPTACLES	720	720	RECEPTACLES	20/1	22	B
23	C 20/1	CLEAN SOLUTION	180	200	EF-1	20/1	24	C
25	A 20/1	SPACE	0	1500	EWH	20/1	26	A
27	B 20/1	SPACE	0	0	SPACE	20/1	28	B
29	C 20/1	SPACE	0	0	SPACE	20/1	30	C
31	A 20/1	SPACE	0	0	SPACE	20/1	32	A
33	B 20/1	SPACE	0	0	SPACE	20/1	34	B
35	C 20/1	SPACE	0	0	SPACE	20/1	36	C
37	A 20/1	SPACE	0	0	SPACE	20/1	38	A
39	B 20/1	SPACE	0	0	SPACE	20/1	40	B
41	C 20/1	SPACE	0	0	SPACE	20/1	42	C
PHASE A =		28937			TOTAL CONNECTED			
PHASE B =		28057			LOAD (WATTS) =			
PHASE C =		26937			83931			

POWER & SYSTEMS
REVISED FLOOR PLAN

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

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ADDITION & RENOVATIONS AT
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ROCKFORD, ILLINOIS

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NOTE: SEE MECHANICAL AND PLUMBING DRAWINGS FOR EQUIPMENT CONNECTION REQUIREMENTS TO PROVIDE A COMPLETE OPERATING SYSTEM.

POWER & SYSTEMS
REVISED ROOF PLAN
SCALE: 1/8" = 1'-0"

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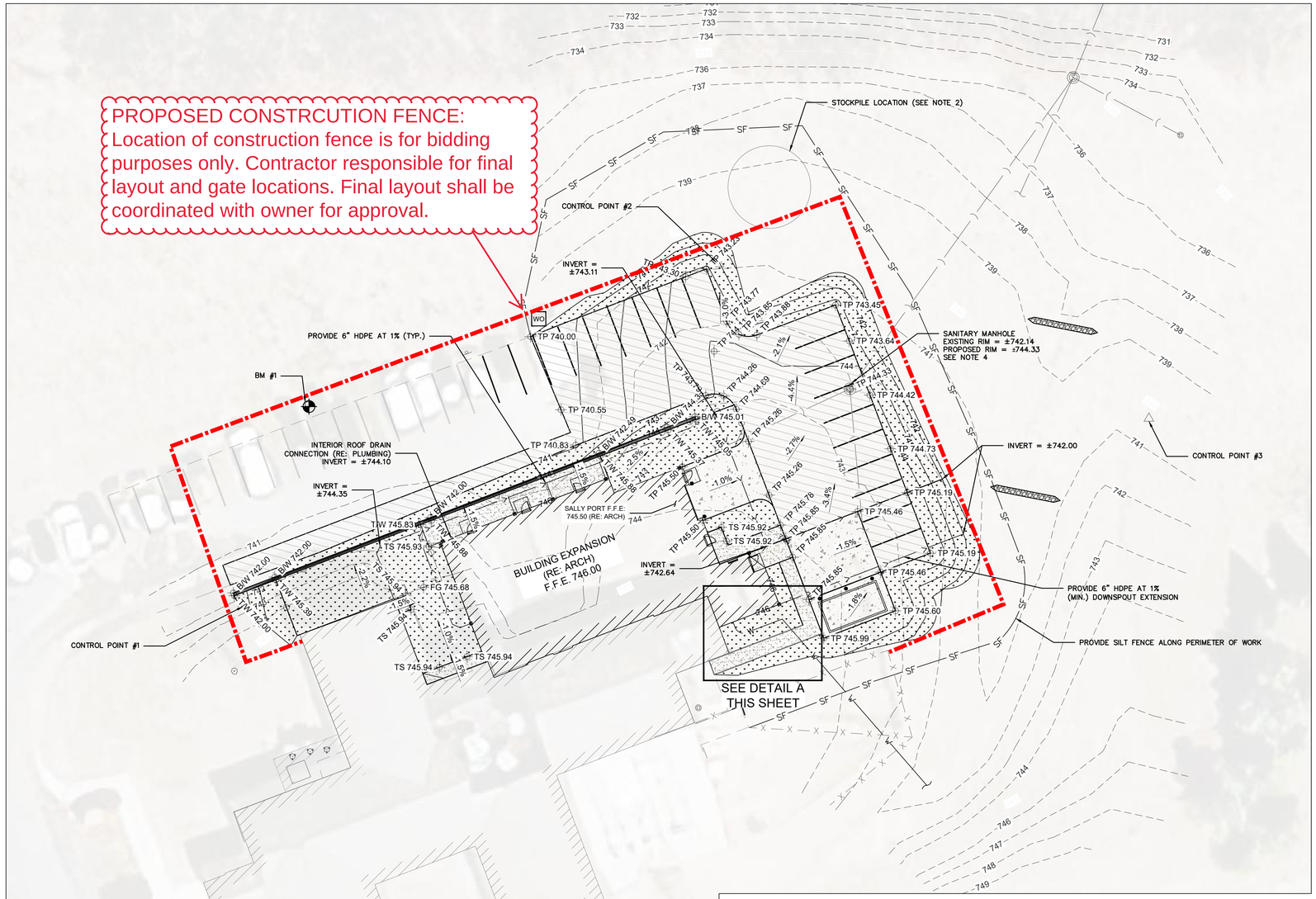
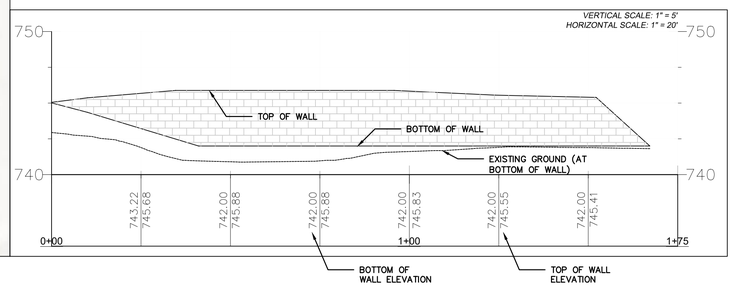
LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
ILLINOIS
EXP 11-30-23

221218

PROPOSED CONSTRCUTION FENCE:
Location of construction fence is for bidding purposes only. Contractor responsible for final layout and gate locations. Final layout shall be coordinated with owner for approval.



RETAINING WALL PROFILE



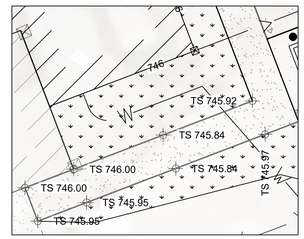
LEGEND

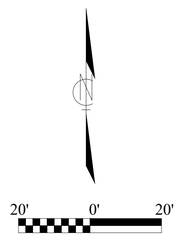
800	EXISTING CONTOUR
800	PROPOSED CONTOUR
	PROPOSED GRADE BREAK LINE
	PROPOSED STORM SEWER
	DOWNSPOUT
TP XXX.X	TOP OF PAVEMENT ELEVATION
TW XXX.X	TOP OF SIDEWALK ELEVATION
FG XXX.X	FINISHED GRADE ELEVATION
T/W XXX.X	TOP OF WALL ELEVATION
B/W XXX.X	BOTTOM OF WALL ELEVATION
X%	PROPOSED SLOPE
SF	SILT FENCE
	BENCHMARK
	CONTROL POINT
WO	CONCRETE WASHOUT (PER IUM CODE 954)
	CHECK DAM

NOTES

1. BENCHMARK DATA:
   BENCHMARK 1: SET CHISELED SQUARE ON TOP SOUTH SIDE OF CONCRETE LIGHT FOUNDATION LOCATED AT NORTH SIDE OF NORTH PARKING LOT
   ELEVATION: 740.88
2. CONTROL POINT DATA (STATE PLANE IL WEST):
   CONTROL POINT 1:
   NORTHING: 2062907.28
   EASTING: 2591370.80
   CONTROL POINT 2:
   NORTHING: 2063022.39
   EASTING: 2591532.04
   CONTROL POINT 3:
   NORTHING: 2062970.06
   EASTING: 2591677.57
3. STOCKPILES, WASHOUTS, AND OTHER EROSION CONTROL MEASURES SHALL BE LOCATED WITHIN PERIMETER SILT FENCE.
4. ADJUSTMENT TO SANITARY MANHOLE SHALL BE COMPLETED AS FOLLOWS:
   4.1. REMOVE EXISTING FRAME AND COVER.
      4.1.1. FRAME AND COVER MAY BE REUSED IF IN ACCEPTABLE CONDITION (THE CONTRACTOR SHALL VERIFY THE CONDITION WITH THE ENGINEER PRIOR TO REINSTALLATION).
   4.2. REMOVE CONE SECTION.
   4.3. CONSTRUCT ADDITIONAL MANHOLE RISER (1-24" OR 2-12" RISERS).
   4.4. CONSTRUCT NEW CONE SECTION.
   4.5. CONSTRUCT NEW FRAME AND COVER, INCLUDING ADJUSTMENT RINGS.
      4.5.1. ADJUSTMENT RINGS SHALL HAVE A MINIMUM HEIGHT OF 2" AND MAXIMUM HEIGHT OF 12".
      4.5.2. THE TOTAL HEIGHT OF ALL ADJUSTMENT RINGS SHALL NOT EXCEED 12".

DETAIL A (SCALE: 1" = 10')





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ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
GRADING AND EROSION CONTROL PLAN

PROJECT INFORMATION	
Date	Aug. 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
C104