



ROANOKE COUNTY

FINANCE & MANAGEMENT SERVICES DEPARTMENT PURCHASING DIVISION

INVITATION FOR BID

IFB # 2023-011

Public Services Storage Building Renovations & Change of Use

OPENING DATE: August 8, 2022
OPENING TIME: 2:00 P.M.

The Invitation to Bid and related documents may be obtained during normal business hours from the Purchasing Division, at the Roanoke County Administration Building, 5204 Bernard Drive, Suite 300F, Roanoke, VA 24018. This document may be viewed and/or downloaded from the County of Roanoke Purchasing Division's website at <https://www.roanokecountyva.gov/bids.aspx>. If you have any problems accessing the documents, you may contact Purchasing at (540) 772-2061.

A non-mandatory pre-bid conference will be held at 2:00 PM on July 15, 2022 at the project site (5285 Hollins Road, Roanoke VA 24019).

**THIS PUBLIC BODY DOES NOT DISCRIMINATE
AGAINST FAITH-BASED ORGANIZATIONS**

DATE of IFB: July 8, 2022

INVITATION FOR BID (IFB)

IFB No. 2023-011

Issue Date: July 8, 2022

Title: Public Services Storage Building Renovations & Change of Use

Issued By: **County of Roanoke**
Roanoke County Administration Building
Purchasing Division
5204 Bernard Drive, SW, Suite 300-F
Roanoke, VA 24018-0798
Phone (540) 772-2061
Email: KHoyt@roanokecountyva.gov

Sealed Bids will be received on or before **2:00 P.M., August 8, 2022** for furnishing the services and/or items described herein. The time of receipt shall be determined by the time clock stamp in the Purchasing office.

All questions must be submitted before 5:00 p.m., **August 1, 2022**. If necessary, an addendum will be issued and posted to the County website on the Current Bids/RFP Requests tab at <https://www.roanokecountyva.gov/bids.aspx>.

If proposals are hand delivered or mailed, send directly to the Purchasing Division at the address listed above. If the Roanoke County Administration Building is closed for business at the time scheduled for the proposal opening, the sealed proposal will be accepted and opened on the next business day of the County, at the originally scheduled hour.

THIS PUBLIC BODY DOES NOT DISCRIMINATE AGAINST FAITH-BASED ORGANIZATIONS.

The County reserves the right to cancel this IFB and/or reject any or all proposals and to waive any informalities in any proposal.

This section is to be completed by the Offeror and this page must be returned with the bid. In compliance with this Invitation For Bid and subject to all terms and conditions imposed herein, which are hereby incorporated herein by reference, the undersigned offers and agrees to furnish the services and/or items requested in this solicitation if the undersigned is selected as the successful Bidder. No Bid may be withdrawn within a period of sixty (60) days after Bid opening except for clerical errors, as set forth in part (1) of Section 2.2-4330(B), Virginia Code, 1950, as amended. Notices of bid withdrawal must be submitted in writing to the Purchasing Division.

My signature certifies that the bid as submitted complies with all requirements specified in this Invitation for Bid ("IFB"). If this Bid is accepted by the County, to provide the services and/or items in accordance with this Invitation for Bid and to execute a Contract/Purchase Order substantially similar to the attached Contract/Purchase Order Terms and Conditions for such services and/or items. My signature also certifies that by submitting a bid in response to this IFB, the Bidder represents that in the preparation and submission of this bid, the Bidder did not, either directly or indirectly, enter into any combination or arrangement with any person or business entity, or enter into any agreement, participate in any collusion, or otherwise take any action in the restraining of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1) or Sections 59.1-9.1 through 59.1-9.17 or Sections 59.1-68.6 through 59.1-68.8 of the Code of Virginia.

I hereby certify that I am authorized to sign as a legal representative for the business entity submitting this bid.

Legal Name and Address of Firm:

Date: _____

By: _____
(Signature in Ink)

Name: _____
(Please Print)

Zip: _____ Title: _____

Phone: _____ FAX: _____

Email: _____ Business License# _____

Virginia State Corporation Commission Identification Number: _____

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COUNTY OF ROANOKE, VIRGINIA
INVITATION FOR BID NO. 2023-011
Public Services Storage Building Renovations and Change of Use

SECTION 1. PURPOSE

The purpose of this Invitation for Bid (IFB) is the procurement of a contract for the renovation and change-of-use of the Roanoke County Public Services storage building located at 5285 Hollins Road, Roanoke VA 24019.

The County of Roanoke invites any qualified Bidder to respond to this IFB by submitting a Bid for such work, service, and/or items consistent with the terms and conditions herein set forth.

SECTION 2. BACKGROUND

Not used.

SECTION 3. SERVICES AND/OR ITEMS REQUIRED

A description and/or listing of the services and/or items that the Successful Bidder will be required to provide to the County under this IFB are those that are set forth below and/or referred to in any way in the sample contract, any terms and conditions, and/or any attachments referred to in this IFB. Each Bidder should carefully read and review all such documents.

The following are the services and/or items that the Successful Bidder shall provide to the County of Roanoke:

- A. Renovation and change-of-use of the storage building located at 5285 Hollins Road, per the scope and specifications of the project plans included as Attachment E to this IFB 2023-011.
 - a. An Asbestos and Lead Inspection Report is provided as Attachment F to this IFB 2023-011.

SECTION 4. REQUIRED QUALIFICATIONS FOR BIDDERS

Not used.

SECTION 5. TERM OF CONTRACT OR TIME OF PERFORMANCE

- A. The Successful Bidder shall start the performance of any resultant Contract as fixed by a notice to proceed given by the County to the Successful Bidder and fully and completely perform the Contract within 180 consecutive calendar days after such date, all in accordance with the Contract provisions.

- B. Project completion time may be negotiated and adjusted as necessary due to material lead times.
- C. All terms and conditions shall remain in force for the term of the Contract and for any renewal period unless modified by mutual agreement of both parties. Prices shall not be increased during the initial term of the Contract. Prices for any renewal periods will be subject to the mutual agreement of both parties.

SECTION 6. PAYMENT FOR SERVICES

Payment(s) to the Successful Bidder shall be made in accordance with the provisions of the resultant Contract, subject to final approval by the County.

SECTION 7. GENERAL INSTRUCTIONS TO BIDDERS

- A. Bids, to be considered, must be received by the County of Roanoke Purchasing Division, at the Roanoke County Administration Building, 5204 Bernard Drive, Suite 300F, Roanoke, VA 24018, at or before 2:00 p.m., local time, on **August 8, 2022**, at which time all Bids received will be publicly opened and read. **Bids received after 2:00 p.m. will NOT be accepted or considered.** The time of receipt shall be determined by the time clock stamp in the Purchasing Office, or if it is not working, such time shall be determined by the Purchasing official who is to open the bids.

Each Bid, **one (1) original, marked as such** and **one (1) copy, marked as such**, must be appropriately signed by an authorized representative of the Offeror, and must be submitted in a **SEALED** envelope or package. A removable media storage device containing two (2) digital copies of the proposal, one as submitted, and one **redacted to remove all confidential and proprietary material**, must be included in the proposal packet. The notation "**Public Services Storage Building**", **IFB No. 2023-011**, and the specified opening time and date must be clearly marked on the front of that sealed envelope or package.

FAXED OR E-MAILED BIDS ARE NOT ACCEPTABLE.

The Invitation for Bid and related documents may be obtained during normal business hours from the Purchasing Division, at the Roanoke County Administration Building, 5204 Bernard Drive, Suite 300F, Roanoke, VA 24018. This document may be viewed and/or downloaded from the County of Roanoke Purchasing Division's website at <https://www.roanokecountyva.gov/bids.aspx>.

If you have any problems accessing the documents, you may contact Purchasing at (540) 772-2061.

If proposals are hand delivered or mailed, send directly to the Purchasing Division at the address listed above. If the Roanoke County Administration Building is closed for business at the time scheduled for the Bid opening, the sealed bid will be accepted and opened on the next business day of the County, at the originally scheduled hour.

All questions must be submitted *in writing* before 5:00 P.M. on August 1, 2022. If necessary, an addendum will be issued and posted to the County website on the Current Bids/RFP Requests tab at <https://www.roanokecountyva.gov/bids.aspx>.

A non-mandatory pre-bid conference will be held at 2:00 PM on July 15, 2022, at the project site: 5285 Hollins Road, Roanoke, VA 24019.

- B. If you download this IFB from the County website and intend to submit a proposal, you should notify Purchasing that you have done so. However, each Bidder is solely responsible for ensuring that such Bidder has the current, complete version of the IFB documents, including any addenda, before submitting a bid. Receipt by the bidder of such addendum should be acknowledged on the Bid Form and/or addendum. The County Purchasing Division or its designee will issue Addenda that will be posted to the County website on the Current Bid Opportunities tab at <https://www.roanokecountyva.gov/bids.aspx>.

C. **IMPORTANT NOTICE - ADDENDUMS AND NOTICES OF AWARD**

Vendors may visit <http://roanokecountyva.gov/list.aspx> to sign up to receive emails or text message notices about bids, proposals, addendums, bid tabulation and awards. Vendors can sign up to receive notification in selected commodity/service categories. It is the vendor's responsibility to keep information current in the system in order to receive the notifications. The sign up only requires an email address and/or a cell phone number for receiving text messages (if your phone is capable) and your choice of categories.

Although '**Notify Me**' will be the only way to receive automatic notification, all BIDS/RFP Information will continue to be posted on our website, and can be picked up at the Purchasing Division, 5204 Bernard Drive, Suite 300F, Roanoke, VA 24018. Phone # (540) 772-2061.

The County is not responsible for any IFB obtained from any source other than the County. Contact Kate Hoyt, by phone at 540-283-8149, or by email at KHoyt@roanokecountyva.gov.

- D. Payment terms and delivery date(s) must be shown on the submitted Bid, if applicable.
- E. All Bids are to be submitted in accordance with all terms, conditions, rules, regulations, requirements and specifications identified in and by this IFB.
- F. Bids are to be on the Form as provided with **OR as otherwise specified** in this IFB. If a Bid Form is provided, **no changes are to be made to the Bid Form**. Any changes to Bid amounts must be initialed.
- G. All Bids shall be signed by a person on behalf of the responding Bidder who is appropriately authorized to do so. The printed name of that authorized person should be shown as well. Any Bid submitted should be in the complete legal name of the Bidder responding. No Bid will be considered from any Bidder not properly licensed as may be required by law.

- H. Except in cases of emergency, all bids for construction contracts shall be accompanied by a bid bond from a surety company selected by the bidder, which is legally authorized to do business in Virginia.
1. A bid, payment or performance bond for contracts for goods or services other than construction may be required if provided in the Invitation for Bid.
 2. The amount of the bid bond shall not exceed five percent (5%) of the total amount of the bid.
 3. In lieu of a bid bond, a bidder may furnish a certified check or cash escrow in the face amount required for the bond.
 4. Upon award of any public construction contract exceeding \$100,000 awarded to any prime contractor, such contractor shall furnish:
 - a. Performance bond in the sum of the contract amount.
 - b. Payment bond in the sum of the contract amount.
 5. Performance and/or payment bonds may be required for construction contracts below \$100,000 at the discretion of the County.
 6. In cases of emergency performance bonds/payment bonds are required within ten (10) calendar days of notice to proceed or project commencement.
- I. Bids that have been appropriately opened cannot be changed, adjusted, corrected or modified in any way other than complete withdrawal. The County's procedures for withdrawal of bids (whether construction or other than construction) is that set forth in Code of Virginia, §2.2-4330(A)&(B)(1), which allows withdrawal of a Bid due to an error such as an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a Bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the Bid. Withdrawal must be requested within two days of the Bid opening by delivering to the County original work papers, documents, and materials used in preparation of the Bid.
- J. All Bids, appropriately received, will be evaluated by considering the requirements set forth in the IFB, the quality, workmanship, economy of operation, suitability for intended purpose, delivery, payment terms and price of product or service being requested in this Bid.
- K. Bids are to be submitted on the type, brand, make, and/or kind of product and/or service requested or its approved equal, to be solely determined by the County, unless otherwise specified. Should a Bid be for a product and/or service as an equal, the name, make, model and type of that which is being Bid must be clearly stated. The Bid must also be accompanied by descriptive literature of the product or service Bid to allow for evaluation. Failure to provide this information may result in the Bid being considered non-responsive and may not be considered.

It is not the intent of the specifications to be proprietary, nor to exclude any manufacturer or dealer. Deviations will be given consideration if they are considered to be suitable and acceptable for comparison. Any deviations must be submitted, in writing, with your bid. Deviations discovered after bid award or material receipt, not stated in your bid, shall be grounds for disqualification and nullification of order. It is the responsibility of the Offeror to prove that the deviation is equal to the product/service specified. The

County of Roanoke will make the final determination as to whether the product is equivalent.

- L. If an award is made for the item(s) and/or services requested, a notice of award will be made which will be posted for public review on the County of Roanoke Purchasing Division's website under Current Bid Opportunities at <https://www.roanokecountyva.gov/bids.aspx> or you may contact Purchasing directly at (540) 772-2061 to request a copy of the award notification.

Upon completion of the Contract, payment will be made only to the Successful Bidder at the address as shown on the Contract. If the remittance address is other than the address on the Bid, it must be clearly noted and explained in the Bid. Contract/Purchase Order(s) will be paid only when the items and/or services have been supplied to and approved by the County.

- M. All items, identified in this IFB, are to be quoted and provided **F.O.B. DESTINATION-INSIDE DELIVERY**, unless otherwise stated in this IFB. All furniture items, if any, are to be put together and set in place.
- N. The County reserves the right to cancel this IFB or reject any or all Bids, to waive any informalities in any Bid and to purchase any whole or part of the items and/ or services listed in the IFB.
- M. Each Bidder is to notify in writing the Purchasing Division if any of Bidder's owners, officers, employees, or agents, or their immediate family members, is currently or has been in the past year, an employee of the County of Roanoke or has any responsibility or authority with the County that might affect the procurement transaction or any claim resulting therefrom. If so, please provide the Purchasing Division with the complete name and address of each such person and their connection to the County of Roanoke. Each Bidder is advised that the Ethics in Public Contracting and Conflicts of Interests Act of the Code of Virginia, as set forth in this IFB, apply to this IFB. Such information should be provided in writing before the Bid opening date or may also be provided with the Bid response.
- N. **The attention of each Bidder is directed to VA Code Sections 54.1-1100 et seq. which requires certain licenses for contractors, tradesmen and others. Each Bidder is required to determine which license, if any, it is required to have under such sections. Each Bidder shall so state on the Bid Form, or in its response, if no Bid Form is provided, whether it has a VA license under such sections and, if so, the type of license and/or license number. Failure to include this information may result in the Bid being rejected as non-responsive.**
- O. **Bid Submittals shall include:**

1. Pages 2-3, Invitation for Bid
2. Attachment A: The Bid Form (Prices shall include all labor, material, delivery costs, overhead and profit.)
3. Required Attachments: B, C.
4. Signed copies of any Addenda issued.

Failure to do so may result in the Bid being determined as non-responsive.

Questions or concerns may be addressed by contacting Kate Hoyt by email at KHoyt@roanokecountyva.gov.

- P. Ethics in Public Contracting. The provisions, requirements, and prohibitions as contained in Sections 2.2-4367 through 2.2-4377, of the Virginia Code, pertaining to bidders, offerors, contractors, and subcontractors are applicable to this IFB.
- Q. Conflict of Interests Act. The provisions, requirements, and prohibitions as contained in Sections 2.2-3100, et seq., of the Virginia Code are applicable to this IFB.
- R. The procurement provisions of the Virginia Public Procurement Act as well as the County Procurement Manual, apply to this RFP, unless specifically modified herein. The County's Procurement Manual can be reviewed on the County's electronic procurement website.
- S. The County may request clarification from any of the Bidders after review of the Bids received.
- T. The County is not liable for any costs incurred by any Bidder in connection with this IFB or any response by any Bidder to this IFB. The expenses incurred by a Bidder in the preparation, submission, and presentation of the Bid are the sole responsibility of the Bidder and may not be charged to the County.
- U. General and/or technical questions regarding the Scope of Services and/or items required, or procurement questions under this IFB may be directed *in writing* to Kate Hoyt, Buyer, at KHoyt@roanokecountyva.gov.
- V. Each Bidder is required to state if it has ever been debarred, fined, had a contract terminated, or found not be a responsible bidder or Offer or by any federal, state, or local government and/or private entity. If so, please give the details of each such matter and include this information with Bidder's response.
- W. **Data on Convictions for Certain Crimes and Child Abuse and Neglect Certification of Contractor:** The Consultant certifies that none of the persons who will provide services requiring direct contact with students on school property during school hours or during school-sponsored activities has been convicted of any of the following felony or misdemeanor offenses: felony sex or violence offenses, other felony offenses or misdemeanor sex offenses within the past ten years.

The Consultant further understands and acknowledges (1) that if he makes a materially false statement regarding any of the above offenses, he will be guilty of a Class 1 misdemeanor and may forfeit profits derived from the contract. Further, the Consultant understands and acknowledges that before any person is permitted to provide such services subsequent to this certification, he must complete a new certification regarding such person in a form satisfactory to Roanoke County and the Roanoke County School Board. **Data and Convictions information will be requested before the County of Roanoke/Schools enters into a contract when required.**

- X. Each Bidder who is a stock or Nonstock Corporation, Limited Liability Company, business trust, or a limited partnership or other business entity shall be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity if required by law. Each such Bidder shall include in its bid response the Identification

Number issued to it by the Virginia State Corporation Commission (SCC) and should list its business entity name as it is listed with the SCC. Any Bidder that is not required to be authorized to transact business in the Commonwealth as a domestic or foreign business entity as required by law shall include in its bid response a statement describing why the Bidder is not required to be so authorized. (See Va. Code Section 2.2-4311.2).

- Y. Direct contact with any County employee without the permission of the Purchasing Manager or her designated representative, on the subject of this bid, is strictly forbidden. Violation of this Instruction may result in disqualification of Bid.

SECTION 8. MISCELLANEOUS

- A. Ownership of all data, materials, and documentation originated and prepared for the County pursuant to the IFB shall belong exclusively to the County and be subject to public inspection in accordance with the *Virginia Freedom of Information Act*. The trade secrets or proprietary information submitted by the Bidder shall not be subject to public disclosure under the *Freedom of Information Act*, unless otherwise required by law or a court. **However, the Bidder must invoke the protection of Section 2.2-4342(F) of the Code of Virginia, in writing, either before or at the time the data or other material is submitted.** The written notice must SPECIFICALLY identify the data or materials to be protected and state the reason why protection is necessary. The proprietary or trade secret material submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secret or proprietary information. The classification of an entire proposal document, line item prices, and/or total proposal prices as proprietary, or trade secrets, is NOT ACCEPTABLE and may result in REJECTION of the Bid.
- B. All Bidders shall be solely responsible for making sure that they have the most current and complete version of this IFB and all addenda that may have been issued for this IFB and that such Bidder has examined all such documents and data. Any interpretation, correction, or change of the IFB will be made by an addendum. Interpretations, corrections or changes of this IFB made in any other manner will not be binding and Bidders must not rely upon such interpretations, corrections, or changes. The County Purchasing Division or its designee will issue Addenda that will be posted to the County website on the Current Bid Opportunities tab at <https://www.roanokecountyva.gov/bids.aspx>.
- C. No Bidder shall confer on any public employee having official responsibility for a purchasing transaction any payment, loan, subscription, advance, deposit or money, service, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is exchanged.
- D. The County may make investigations to determine the ability of the Bidder to perform the work and/or provide the services and/or items as described in this IFB. The County of Roanoke reserves the right to reject any Bid if the Bidder fails to satisfy the County of Roanoke that it is qualified to carry out the obligations and requirements requested in this IFB.
- E. The Successful Bidder must comply with the nondiscrimination provisions of Virginia Code Section 2.2-4311, which are incorporated herein by reference.
- F. The Successful Bidder must comply with the drug-free workplace provisions of Virginia Code Section 2.2-4312, which are incorporated herein by reference.

- G. It is the policy of the County of Roanoke to maximize participation whenever possible by minority and women owned business enterprises in all aspects of County contracting opportunities.
- H. The Successful Bidder shall comply with all applicable County, State, and Federal laws, codes, provisions, and regulations. The successful Bidder shall not during the performance of any resultant contract knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- I. Providers of any outside services and/or items shall be subject to the same conditions and requirements as the Successful Bidder in regards to law, code, or regulation compliance. The County reserves the right of approval for any subcontract work, including the costs thereof.

SECTION 9. EVALUATION FOR LOWEST RESPONSIVE AND RESPONSIBLE BIDDER

To determine the lowest responsive and responsible Bidder with respect to this Bid, the following factors, among such others as will protect and preserve the interest of the County may be considered:

- A. Base Bid cost, and add alternate cost, as set forth on the Bid Form.
- B. The specified terms and discounts, if any, of the Bid;
- C. The ability, capacity and skill of the Bidder to perform the Contract and/or provide the services and/or items required;
- D. Whether the Bidder can perform the Contract and/or perform the services and/or provide the items promptly, or within the time specified, without delay or interference;
- E. The character, integrity, reputation, judgment, experience and efficiency of the Bidder;
- F. The quality of performance on previous contracts or services;
- G. The previous and existing compliance by the Bidder with laws and ordinances relating to other contracts, purchase orders, items and/or services provided by Bidder in other matters;
- H. The equipment and facilities available to the Bidder to perform the Contract and/or provide the services and/or items requested in the IFB;
- I. The sufficiency of the financial resources and ability of the Bidder to perform the Contract and/or provide the services and/or items requested in the IFB;
- J. The quality, availability, and adaptability of the supplies, materials, equipment and/or services the Bidder can provide for the particular use and/or work requested in the IFB; and

- K. The ability of the Bidder to provide future maintenance, parts, and service for the items requested in the IFB.

SECTION 10. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

Successful Bidder, and any of its subcontractors, shall, at its sole expense, obtain and maintain during the life of the resulting Contract the insurance policies and/or bonds required. Any required insurance policies and/or bonds shall be effective prior to the beginning of any work or other performance by Successful Bidder, or any of its subcontractors, under any resultant Contract. All such insurance shall be primary and noncontributory to any insurance or self-insurance the County may have. The policies and coverages required are those as may be referred to in the sample contract and/or the terms and conditions attached to this IFB, but shall include workers' compensation coverage regardless of the number of employees, unless otherwise approved by the County's Risk Manager.

SECTION 11. NEGOTIATIONS WITH LOWEST RESPONSIVE AND RESPONSIBLE BIDDER

If the bid by the lowest responsive and responsible bidder exceeds available funds, the County reserves the right to negotiate with the apparent lowest responsible bidder pursuant to County Code Chapter 17 (Ord. No. 3350, S2-30,12-14-82). State Code 2.2.4318. The conditions and procedures under which such negotiation may be undertaken are that the appropriate County officials shall determine that the lowest responsive and responsible bid exceeds available funds and notify such bidder in writing of its desire to negotiate. Thereafter, negotiations with the apparent low bidder may be held to obtain a Contract within available funds involving discussions of reduction of quantity, quality, or other cost saving mechanisms. Any such negotiated Contract shall be subject to final approval of the County, in the sole discretion of the County.

SECTION 12. BID AWARD

If an award of a Contract is made, it will be awarded to the lowest responsive and responsible bidder. If an award of a contract is made, notification of such award will be posted for public review on the County of Roanoke Purchasing Division's website under Current Bid Opportunities at <https://www.roanokecountyva.gov/bids.aspx> or you may contact Purchasing directly at (540) 772-2061 to request a copy of the award notification.

SECTION 13. FAITH BASED ORGANIZATIONS

Pursuant to Virginia Code Section 2.2-4343.1, be advised that the County does not discriminate against faith-based organizations.

SECTION 14. HOLD HARMLESS AND INDEMNITY

Successful Bidder shall indemnify and hold harmless the County and its officers, agents, and employees against any and all liability, losses, damages, claims, causes of action, suits of any

nature, costs, and expenses, including reasonable attorney's fees, resulting from or arising out of Successful Bidder's or its employees, agents, or subcontractors actions, activities, or omissions, negligent or otherwise, on or near County's property or arising in any way out of or resulting from any of the work or items to be provided under the Contract, and this includes, without limitation, any fines or penalties, violations of federal, state, or local laws or regulations, personal injury, wrongful death, or property damage claims or suits. Successful Bidder agrees to and shall protect, indemnify, and hold harmless all the parties referred to above from any and all demands for fees, claims, suits, actions, causes of action, settlement or judgments based on the alleged or actual infringement or violation of any copyright, trademark, patent, invention, article, arrangement, or other apparatus that may be used in the performance of the Contract.

SECTION 15. PROTESTS

Any Bidder who wishes to protest or object to any award made or other decisions Pursuant to this IFB may do so only in accordance with the provisions of Sections 2.2-4357, 4358, 4359, 4360, 4363, and 4364 of the Code of Virginia, and only if such is provided for in such Code section. Any such protest or objection must be in writing signed by a representative of the entity making the protest or objection and contain the information required by the applicable Code Sections set forth above. Such writing must be delivered to the County Manager within the required time period.

SECTION 16. COOPERATIVE PROCUREMENT

Not Used.

SECTION 17. INFORMATION ON CONTRACT/PURCHASE ORDER TO BE AWARDED

The Sample Contract marked as Attachment E to IFB No. 2023-011 contains terms and conditions that the County will include in any Contract that may be awarded, but such terms and conditions may be added to, deleted, or modified as may be agreed to between the County and the Successful Bidder. However, if a Bidder has any objections to any of the terms or conditions set forth in the Sample or any changes or additions thereto that the Bidder wants to discuss before submitting a bid, the Bidder should set forth such objections, changes, or additions in written correspondence to the Purchasing Division at least five (5) business days before the bid opening date for this IFB. Otherwise, submission of a bid by a Bidder will obligate such Bidder, if it is the Successful Bidder, to enter into a Contract containing the same or substantially similar terms and conditions as contained in such Attachment, and to comply with such terms and conditions. Also, such terms and conditions, together with the requirements of this IFB, shall be deemed to be a part of any resultant Contract/Purchase Order that may be issued by the County to the Successful Bidder.

END.

IFB # 2023-011
ATTACHMENT A: Bid Form/ Specifications

County of Roanoke
Purchasing Division
5204 Bernard Drive, SW, Suite 300-F
Roanoke, VA 24018-0798

The County reserves the right to add, delete, or adjust quantities as deemed necessary by the County.

Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the bid, or irregularities of any kind, may be rejected by the County as being nonresponsive. No changes are to be made to the Bid Form. Any changes to a Bid Amount must be initialed by the person signing the Bid Form.

I/We hereby propose to furnish and provide renovations and change-of-use for the Public Services storage building, in accordance with the enclosed general terms, conditions and specifications contained in IFB No. 2023-011. The Bid Form must be completed in blue or black ink. Discrepancies in the multiplication of units of work and the unit prices will be resolved in favor of the correct multiplication of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. My/Our prices are as follows:

PRICES QUOTED SHALL BE FOB DESTINATION. Freight charges shall be included in the bid price.

Base Bid Cost: _____
(per plans included as Attachment E to this IFB)

Add Alternate 1: _____
(gym space, ref. sheet A3.1 of project plans)

Completion time: _____
(calendar days after date of NTP)

Payment terms are: Net 30. If Bidder offers a cash discount for prompt payment, it will only be considered in determining the lowest responsible Bidder if the Bidder allows at least twenty (20) days for the prompt payment after the goods or services are received or after the invoice is rendered, whichever is later.

To aid in the evaluation of bids, bidders must submit the original Bid Form and one copy of the Bid Form, Attachments, and detailed specification sheets, if applicable. If you fail to do so, your bid may be considered non-responsive and rejected.

Have you complied with this requirement? ☐ Yes / ☐ No.

Indicate whether your business _____ IS or _____ IS NOT located in Roanoke County. If it is, please include a copy of your Roanoke County business license with your bid.

I/We acknowledge the receipt of:

Addendum No. _____ Dated _____.

Addendum No. _____ Dated _____.

Addendum No. _____ Dated _____.

Addendum No. _____ Dated _____.

ATTACHMENT B: Virginia State Corporation Commission (SCC) Registration Information

The attention of each Bidder is directed to VA Code sections 54.1-1100, et seq. which requires certain licenses for contractors, tradesmen, and others. Each Bidder is required to determine which license, if any, it is required to have under such sections. Complete the following:

Bidder ___ does have or ___ does not have a Virginia Contractor's License. (Check appropriate block)

If Bidder has a Virginia Contractor's License, circle the class Bidder has and list the number.

Licensed "Class A", "Class B", or "Class C" Virginia Contractor Number: _____

If Bidder has another type of Virginia License, please list the type and number:

Type of license: _____ and number: _____.

Bidder is a ___ resident or ___ nonresident of Virginia. (Check appropriate blank.) See VA Code Sections 54.1-1100, et seq.

The attention of each Bidder is directed to Virginia Code Section 2.2-4311.2 which requires a bidder organized or authorized to transact business in the Commonwealth of Virginia pursuant to Title 13.1 or Title 50 of the Code of Virginia, as amended, or as otherwise required by law, shall include in its bid the Identification Number issued to such bidder by the Virginia State Corporation Commission (SCC). Furthermore, any bidder that is not required to be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity under Title 13.1 or Title 50 or as otherwise required by law shall include in its bid a statement describing why the bidder is not required to be so authorized. Please complete the following by checking the appropriate line that applies and providing the requested information:

A. _____ Bidder is a Virginia business entity organized and authorized to transact business in Virginia by the SCC and such bidder's/offeree's Identification Number issued to it by the SCC is: _____.

B. _____ Bidder is an out-of-state (foreign) business entity that is authorized to transact business in Virginia by the SCC and such bidder's Identification Number issued to it by the SCC is: _____.

C. _____ Bidder does not have an Identification Number issued to it by the SCC and such bidder is not required to be authorized to transact business in Virginia by the SCC for the following reason(s):

Please attach additional sheets of paper if you need more space to explain why such bidder is not required to be authorized to transact business in Virginia.

Signature page required with submittal of bid

ATTACHMENT C: Notice of Proprietary Information Form

Confidentiality References Protection in Accordance with the Code of Virginia, Section 2.2-4342

Section Title	Page #	Reason(s) for Withholding from Disclosure

INSTRUCTIONS: Identify the data or other materials to be protected and state the reasons by using the codes listed below. Indicate the specific words, figures, or paragraphs that constitute trade secrets or proprietary materials. The classification of an entire bid or proposal document, line item prices, and/or total bid or proposal prices as proprietary or trade secret is not acceptable and will result in rejection of the bid or proposal.

- A) This page contains information relating to "trade secrets", and "proprietary information" including processes. Operations, style of work, or apparatus. Identify confidential statistical data. Amount or source of any income...of any person (or) partnership. See Virginia Public Procurement Act. Section 2.2-4342. Unauthorized disclosure of such information would violate the Trade Secrets Act 18 U.S.C. 1905.
- B) This page contains proprietary information including confidential, commercial or financial information, which was provided to the Government on a voluntary basis and is of the type that would not customarily release to the public. See Virginia Public Procurement Act, Section 2.2-4342; 5 U.S.C. 552 (b) (4); 12 C.F.R. 309.5(c) (4).
- C) This page contains proprietary information including confidential, commercial or financial information. The disclosure of such information would cause substantial harm to competitive position and impair the Government's ability to obtain necessary information from contractors in the future. 5 U.S.C. See Virginia Public Procurement Act. Section 2.2-4342; 552 (b) (4)12 C.F.R. 309.5(c) (4).

ATTACHMENT D: Sample Contract and Terms or Conditions



**COUNTY OF ROANOKE, VIRGINIA
SAMPLE CONTRACT BETWEEN COUNTY OF ROANOKE AND**

FOR PUBLIC SERVICES STORAGE BUILDING RENOVATION & CHANGE-OF-USE

This Contract # 2023-011 is dated July 8, 2022, between the County of Roanoke, Virginia, hereinafter referred to as the “County” or “Owner”, and

(legal name and address of contractor)

hereinafter referred to as the “Contractor.”

WITNESSETH:

WHEREAS, Contractor has been awarded this nonexclusive Contract by the County for furnishing all equipment, materials, goods, labor, and services necessary for the Public Services storage building renovation and change-of-use and associated work in accordance with this Contract and the documents referred to herein, all such items or services also being referred to hereinafter as the Work or Project.

NOW, THEREFORE, THE COUNTY AND THE CONTRACTOR AGREE AS FOLLOWS:

SECTION 1. WORK TO BE PERFORMED AND DOCUMENTS.

For and in consideration of the money hereinafter specified to be paid by the County to the Contractor for the Work provided for in this Contract to be performed by the Contractor, the Contractor hereby covenants and agrees with the County to fully perform the services, provide any materials called for to construct, and complete the Work called for by this Contract in a good and workmanlike manner in accordance with this Contract and the documents referred to herein in order to fully and properly complete this Contract within the time stipulated, time being made of the essence for this Contract. It is also agreed by the parties hereto that the documents to this Contract consist of this Contract and the following documents listed below (Contract Documents), all of which are and constitute a part of this Contract as if attached hereto or set out in full herein, viz:

1. Insurance Requirements (Exhibit 1).
2. Scope of Work/Fee Schedule (Exhibit 2).
3. Bid Form Completed by Contractor and dated _____ (Exhibit 3). (To be provided after selection of Successful Bidder.)
4. Invitation for Bid No. 2023-011, which is incorporated herein by reference.

The parties agree that if there are any differences between the provisions of the above referenced documents, the provisions of the County documents and this Contract will control over any Contractor supplied documents or information.

SECTION 2. CONTRACT AMOUNT.

The County agrees to pay the Contractor for the Contractor's complete and satisfactory performance of the Work, in the manner and at the time set out in this Contract, but the total amount for all such requests will not exceed \$ _____, as provided for in this Contract and that this Contract amount may be increased or decreased by additions and/or reductions in the Work as may be authorized and approved by the County, and the Contract amount may be decreased by the County's assessment of any damages against the Contractor, as may be provided for in this Contractor or by law, and the County retains the right of setoff as to any amounts of money the Contractor may owe the County. However, Contractor further acknowledges and agrees that any request for Contractor to perform Work under this Contract is in the sole discretion of the County and that there is no guarantee of any minimum amount of Work that may be requested by the County and that no Work may be requested.

SECTION 3. TERM OF CONTRACT.

All terms and conditions shall remain in force for the term of this Contract and for any renewal period unless modified by mutual agreement of both parties. Prices shall not be increased during the initial term of this Contract.

SECTION 4. TIME OF PERFORMANCE.

The Contractor shall commence the Work to be performed under this Contract on such date as is established and fixed for such commencement by written notice (which may be initially given verbally in an emergency situation) to proceed given by the County representative to the Contractor, and the Contractor covenants and agrees to fully construct, perform, and complete the Work and/or provide the goods called for by this Contract established by such notice. The Contractor further agrees that the Work shall be started promptly upon receipt of such notice and shall be prosecuted regularly, diligently, and uninterruptedly at a rate of progress that will ensure full completion thereof in the shortest length of time consistent with the Contract Documents and that Contractor will cooperate and coordinate with the other County contractors or employees doing other work or using the area where Contractor is working.

SECTION 5. PAYMENT.

- A. The County and Contractor agree that the County will only pay the Contractor for time actually spent and materials actually provided on the Project requested and accepted by the County. Invoices for services rendered and accepted shall be submitted by Contractor directly to the payment address of the requesting County department/division. Payment of such invoices shall be the responsibility of the department/division.
- B. The County agrees to pay Contractor for the Contractor's complete and satisfactory performance of the Work, in the manner and at the time set out in this Contract. The County retains the right to setoff as to any amounts of money Contractor may owe the County. A written progress report may be requested by the County to accompany payment request and, if so, such progress report shall detail the work completed. Also, sufficient documentation of all costs, expenses, materials supplies, and/or hours worked may be requested by the County and, if so, may be required prior to the processing of any such request for payment. Payment will only be made for work actually performed, services actually supplied, and/or materials or goods furnished to the County, all of which need to

be approved and accepted by the County prior to such payment, unless otherwise provided for in the Contract documents. Once a payment request has been received the County, the County will process such payment request. If there are any objections or problems with the payment request, the County will notify the Contractor of such matters. If the payment request is approved and accepted by the County, payment will be made by the County to the Contractor not more than 30 days after such request has been approved.

- C. The services the Contractor may be requested to provide the County are those items set forth in Exhibit 2 (Scope of Work) and/or Exhibit 3 (Bid Form), which list of services may be amended by the mutual agreement of the parties. The prices to be paid to the Contractor for such services provided to and accepted by the County under the provisions of this Contract shall be the current price(s) as set forth in Exhibit 3 (Bid Form). Unless otherwise stated in this Contract, the price(s) shall include all applicable charges such as pick up, delivery, printing, packaging, shipping, and other charges.

SECTION 6. SALES TAX EXEMPTION.

The County is exempt from payment of State Sales and Use Tax on all tangible personal property purchased or leased for the County's use or consumption. The Virginia Sales and Use Tax Certificate of Exemption number is 217-074292-9.

SECTION 7. FREE ON BOARD, RISK OF LOSS, AND TITLE.

All prices include F.O.B Destination, inside delivery, unless otherwise noted in this Contract. The risk of loss from any casualty, regardless of cause, shall be on the Contractor until the items have been delivered to County personnel making the request and accepted by the County. The risk of loss shall also be on the Contractor during the return of any items to the Contractor. Title to the items shall pass to the County upon receipt and acceptance of such items by the County.

SECTION 8. INSPECTION.

The County shall have a reasonable time after receipt of items and before payment to inspect all items for conformity to this Contract. If all or some of the items delivered to the County do not fully conform to the provisions hereof, the County shall have the right to reject and return such nonconforming items, at the sole cost of the Contractor.

SECTION 9. WARRANTY OF MATERIAL AND WORKMANSHIP.

Contractor agrees that all items provided to the County will be new, or if an item is refurbished or remanufactured, such item will meet the industry standards for such item and the item shall be clearly labeled as refurbished or remanufactured, and that all such items include such warranties as may be provided by Virginia law together with any warranties provided by the manufacturer of the item. Contractor shall use reasonable commercial efforts to assist the County in processing warranty claims against a manufacturer. Contractor also agrees that the services provided under this Contract shall be completed in a professional, good and workmanlike manner, with the degree of skill and care that is required by like contractors in Virginia. Further, Contractor warrants that such services shall be completed in accordance with the applicable requirements of this Contract and shall be correct and appropriate for the purposes contemplated in this Contract. Contractor agrees that Contractor shall repair or replace, at Contractor's sole expense, and to the satisfaction

of the County, any items, material, equipment, or part of the item that is found by the County to be defective or not in accordance with the terms of this Contract.

- A. The Contractor warrants that, unless otherwise specified, all material and equipment incorporated in the Work under the Contract shall be new, in first class condition, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents and shall be performed by persons qualified at their respective trades.
- B. Work not conforming to these warranties shall be considered defective.
- C. These warranties of material and workmanship are separate and independent from and in addition to any of the Contractor's other guarantees or obligations in this Contract or that may arise by law.
- D. The Design-Builder agrees to assign to Roanoke County at the time of final completion of the Work all manufacturer's warranties relating to equipment, materials, and labor used in the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturer's warranties. If necessary as a matter of law, the Design-Builder may retain the right to enforce directly any such manufacturers' warranties during the one-year period following the date of Substantial Completion.

SECTION 10. PAYMENTS TO OTHERS BY CONTRACTOR.

The Contractor agrees that Contractor will comply with the requirements of Section 2.2-4354 of the Virginia Code regarding Contractor's payment to other entities and the Contractor will take one of the two actions permitted therein within 7 days after receipt of amounts paid to Contractor by the County. Contractor further agrees that the Contractor shall indemnify and hold the County harmless for any lawful claims resulting from the failure of the Contractor to make prompt payments to all persons supplying the Contractor equipment, labor, tools, or material in connection with the work provided for in the Contract. In the event of such claims, the County may, in the County's sole discretion, after providing written notice to the Contractor, withhold from any payment request or final payment the unpaid sum of money deemed sufficient to pay all appropriate claims and associated costs in connection with the Contract and make such payment, if the County determines it to be appropriate to do so.

SECTION 11. HOLD HARMLESS AND INDEMNIFY.

Contractor shall indemnify and hold harmless the County and its officers, agents, and employees against any and all liability, losses, damages, claims, causes of action, suits of any nature, costs, and expenses, including reasonable attorney's fees, resulting from or arising out of Contractor's or its employees, agents, or subcontractors actions, activities, or omissions, negligent or otherwise, on or near County's property or arising in any way out of or resulting from any of the work or items to be provided under this Contract, and this includes, without limitation, any fines or penalties, violations of federal, state, or local laws or regulations, personal injury, wrongful death, or property damage claims or suits. Contractor agrees to and shall protect, indemnify, and hold harmless all the parties referred to above from any and all demands for fees, claims, suits, actions, causes of action, settlement or judgments based on the alleged or actual infringement or violation

of any copyright, trademark, patent, invention, article, arrangement, or other apparatus that may be used in the performance of this Contract.

SECTION 12. COMPLIANCE WITH LAWS AND REGULATIONS, PERMITS, AND IMMIGRATION LAW.

- A. **Regulations:** The Contractor shall fully comply with all local, state, and federal ordinances, laws, and regulations, including without limitation all applicable building and fire code sections of the Occupational Safety and Health Act (OSHA), and the Virginia Uniform Statewide Building Code, and obtain all required licenses and permits, including business license, building permits, and pay all charges and expenses connected therewith. Contractor further agrees that Contractor does not, and shall not during the performance of this Contract; knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- B. **Permits and Licenses:** The Contractor shall, at its sole cost, obtain all required permits and license from the appropriate authorities, including the County of Roanoke. This includes, but is not limited to, all permits for any excavations in any public right-of-way. No delay or extension of time or any claim for additional compensation of any type shall be granted for failure to obtain any required permits.
- C. **Litter:** In accordance with the Virginia Anti-Litter Law, receptacles sufficient to contain employees' litter and construction wastes capable of being spread by wind or water shall be located on the construction site. The number and size of receptacles required shall be determined by the Contractor.
- D. **Asbestos License:** The Contractor, if not licensed as an asbestos abatement contractor or a Roofing, Flooring, and Siding (RFS) contractor in accordance with Section 54.1-514, of the Code of Virginia, shall have all asbestos related work performed by subcontractors who are duly licensed as asbestos contractors or RFS contractors as appropriate for the work required.

SECTION 13. INDEPENDENT CONTRACTOR.

The relationship between Contractor and the County is a contractual relationship. It is not intended in any way to create a legal agency or employment relationship. Contractor shall, at all times, maintain its status as an independent contractor and both parties acknowledge that neither is an agent, partner or employee of the other for any purpose. Contractor shall be responsible for causing all required insurance, workers' compensation (regardless of number of employees) and unemployment insurance to be provided for all of its employees and subcontractors. Contractor will be responsible for all actions of any of its subcontractors, and that they are properly licensed.

SECTION 14. REPORTS, RECORDS, AND AUDIT.

Contractor agrees to maintain all books, records, electronic data, and other documents relating to this Contract for a period of five (5) years after the end of each fiscal year included in this Contract. The County, its authorized employees, agents, representatives, and/or state auditors shall have full access to and the right to request, examine, copy, and/or audit any such materials during the term of the Contract and such retention period, upon prior written notice to

Contractor. This includes the County's right to audit and/or examine any of the Contractor's documents and/or data as the County deems appropriate to protect the County's interests.

SECTION 15. INSURANCE REQUIREMENTS.

Contractor and any of its subcontractors involved in this Contract shall maintain the insurance coverage's set forth in Exhibit 1 to this Contract and provide the proof of such insurance coverage as called for in Exhibit 1, including workers' compensation coverage regardless of the number of Contractor's employees. Such insurance coverage shall be obtained at the Contractor's sole expense and maintained during the life of the Contract and shall be effective prior to the beginning of any work or other performance by the Contractor under this Contract. Additional insured endorsements, if required, must be received by the County within 30 days of the execution of this Contract or as otherwise required by the County's Risk Manager.

SECTION 16. DEFAULT.

If Contractor fails or refuses to perform any of the terms of this Contract, including poor services, work or materials, the County may, by written notice to Contractor, terminate this Contract in whole or in part. In addition to any right to terminate, the County may enforce any remedy available at law or in equity in connection with such default, and Contractor shall be liable for any damages to the County resulting from Contractor's default. The County further reserves the right to immediately obtain such work or services from other entities in the event of Contractor's default.

SECTION 17. NONWAIVER.

Contractor agrees that the County's waiver or failure to enforce or require performance of any term or condition of this Contract or the County's waiver of any particular breach of this Contract by the Contractor extends to that instance only. Such waiver or failure is not and shall not be a waiver of any of the terms or conditions of this Contract or a waiver of any other breaches of the Contract by the Contractor and does not bar the County from requiring the Contractor to comply with all the terms and conditions of the Contract and does not bar the County from asserting any and all rights and/or remedies it has or might have against the Contractor under this Contract or by law.

SECTION 18. FORUM SELECTION AND CHOICE OF LAW.

This Contract shall be governed by, and construed in accordance with, the laws of the Commonwealth of Virginia, without application of Virginia's conflict of law provisions. Venue for any litigation, suits, and claims arising from or connected with this Contract shall only be proper in the Roanoke County Circuit Court, or in the Roanoke County General District Court if the amount in controversy is within the jurisdictional limit of such court, and all parties to this Contract voluntarily submit themselves to the jurisdiction and venue of such courts, regardless of the actual location of such parties. The provisions of this Contract shall not be construed in favor of or against either party, but shall be construed according to their fair meaning as if both parties jointly prepared this Contract.

SECTION 19. SEVERABILITY.

If any provision of this Contract, or the application of any provision hereof to a particular entity or circumstance, shall be held to be invalid or unenforceable by a court of competent jurisdiction,

the remaining provisions of this Contract shall not be affected and all other terms and conditions of this Contract shall be valid and enforceable to the fullest extent permitted by law.

SECTION 20. NONDISCRIMINATION.

- A. During the performance of this Contract, Contractor agrees as follows:
- i. Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - ii. Contractor in all solicitations or advertisements for employees placed by or on behalf of Contractor will state that Contractor is an equal opportunity employer.
 - iii. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- B. Contractor will include the provisions of the foregoing Section A (i, ii, and iii) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

SECTION 21. DRUG-FREE WORKPLACE.

- A. During the performance of this Contract, Contractor agrees to (i) provide a drug-free workplace for Contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of Contractor that Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- B. For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

SECTION 22. FAITH BASED ORGANIZATIONS.

Pursuant to Virginia Code Section 2.2-4343.1, be advised that the County does not discriminate against faith-based organizations.

SECTION 23. DATA ON CONVICTIONS FOR CERTAIN CRIMES

The Contractor certifies that none of the persons who will provide services requiring direct contact with students on school property during school hours or during school-sponsored activities has been convicted of any of the following felony or misdemeanor offenses: felony sex or violence offenses; other felony offenses or misdemeanor sex offenses within the past ten years.

The Contractor further understands and acknowledges (1) that if he or his agents make a materially false statement regarding any of the above offenses, he will be guilty of a Class 1 misdemeanor and may forfeit profits derived from the contract. Further, the Contractor understands and acknowledges that before any person is permitted to provide such services subsequent to this certification, he must complete a new certification regarding such person in a form satisfactory to Roanoke County and the Roanoke County School Board. Data and Conviction information will be requested before the County of Roanoke/Schools enters into a contract / when required.

SECTION 24. ASSIGNMENT.

Contractor may not assign or transfer this Contract in whole or in part except with the prior written consent of the County. If consent to assign is given, no such assignment shall in any way release or relieve the Contractor from any of the covenants or undertakings contained in this Contract and the Contractor shall remain liable for the Contract during the entire term thereof.

SECTION 25. CONTRACTUAL DISPUTES.

Contractual claims, whether for money or for other relief, including any disputes as to change orders or extra work, shall be submitted, in writing, no later than sixty (60) calendar days after final payment or payment designated as a final payment; however, written notice of the Contractor's intention to file such claim must be given at the time of the occurrence or beginning of the work upon which the claim is based. Such notice is a condition precedent to the assertion of any such claim by the Contractor. A written decision upon any such claims will be made by the Board of Supervisors or its designee (hereafter "BOS"). The Contractor may not institute legal action prior to receipt of the County's decision on the claim unless the BOS fails to render such decision within ninety (90) calendar days from submittal of its claim. The decision of the BOS shall be final and conclusive unless the Contractor within six (6) months of the date of the final decision on a claim or from expiration of the 90 day time limit, whichever occurs first, initiates legal action as provided in Section 2.2-4364 of the Code of Virginia. Failure of the County to render a decision within said ninety (90) calendar days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The sole result of the County's failure to render a decision within said ninety (90) calendar days shall be Contractor's right to immediately institute legal action. No administrative appeals procedure pursuant to Section 2.2-4365 of the Code of Virginia has been established for contractual claims under this Contract.

SECTION 26. SUCCESSORS AND ASSIGNS.

The terms, conditions, provisions, and undertakings of this Contract shall be binding upon and inure to the benefit of each of the parties hereto and their respective successors and assigns.

SECTION 27. HEADINGS.

The captions and headings in this Contract are for convenience and reference purposes only and shall not affect in any way the meaning and interpretation of this Contract.

SECTION 28. COUNTERPART COPIES.

This Contract may be executed in any number of counterpart copies, each of which shall be deemed an original, but all of which together shall constitute a single instrument.

SECTION 29. AUTHORITY TO SIGN.

The persons who have executed this Contract represent and warrant that they are duly authorized to execute this Contract on behalf of the party for whom they are signing.

SECTION 30. NOTICES.

All notices must be given in writing and shall be deemed valid if sent by certified mail, return receipt requested, or by a nationally recognized overnight courier, with a receipt, addressed as follows (or any other address that the party to be notified may have designated to the sender by like notice):

To County:	County of Roanoke General Services 5235 Hollins Road Roanoke, VA 24019 @roanokecountyva.gov
Copy to:	County of Roanoke Purchasing Division Attn: Kate Hoyt 5204 Bernard Drive, SW, Suite 300-F Roanoke, Virginia 24018 KHoyt@roanokecountyva.gov
If to Contractor:	_____ Attn: _____, President/CEO _____ _____
Email Address:	_____
Phone:	_____

Notices shall be deemed to be effective one day after sending if sent by overnight courier or three (3) days after sending it by certified mail, return receipt requested.

SECTION 31. PROTECTING PERSONS AND PROPERTY.

- A. **Protection on Site:** The Contractor expressly undertakes both directly and through its Subcontractor(s), to take every reasonable precaution at all times for the protection of all persons and property which may come on the jobsite or be affected by the Contractor's operation in connection with the Work.

- B. **Safety and Health Precautions:** The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety and health precautions and programs in connection with the Work, including but not limited to provision of appropriate sanitation facilities, if applicable.
- C. **Protecting the Public:** The Contractor shall in all cases protect the public and the Work, during its execution, by posting and maintaining, at its expense, appropriate signs, barricades, barriers, lights, flagmen, and other safety devices in accordance with the current edition of the "Virginia Work Area Protection Manual".
- D. **Protecting the Work and Adjacent Property:** The Contractor shall continuously maintain adequate protection of all the Work from damage and shall protect the County's property from injury or loss arising in connection with this Contract. The Contractor shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights, and other facilities for protection required by public authority, local conditions, any of the Contract Documents or erected for the fulfillment of its obligations for the protection of persons and property.
- E. **Emergencies:** In an emergency affecting the safety or life of persons or of the Work, or of the adjoining property, the Contractor, without special instruction or authorization from County, shall act, at Contractor's discretion, to prevent such threatened loss or injury. Also, should Contractor, to prevent threatened loss or injury, be instructed or authorized to act by County, Contractor shall so act immediately, without appeal.

SECTION 32. CONTRACT SUBJECT TO FUNDING.

This Contract is subject to funding and/or appropriations from federal, state, and/or local governments and/or agencies. If any such funding is not provided, withdrawn, or otherwise not made available for this Contract, the Contractor agrees that the County may terminate this Contract on seven (7) days written notice to Contractor, without any penalty or damages being incurred by the County. Contractor further agrees to comply with any applicable requirements of any grants and/or agreements providing such funding.

SECTION 33. SUSPENSION OR TERMINATION OF CONTRACT BY COUNTY.

The County, at any time, may order Contractor to immediately stop work on this Contract, and/or by seven days (7) written notice may terminate this Contract, with or without cause, in whole or in part, at any time. Upon receipt of such notice, the Contractor shall immediately discontinue all services affected (unless the notice directs otherwise), and deliver to the County all data (including electronic data), drawings, specifications, reports, project deliverables, estimates, summaries, and such other information and materials as may have been accumulated by the Contractor in performing this Contract whether completed or in process (unless otherwise directed by the notice).

- A. If the termination or stop work order is due to the failure of the Contractor to fulfill any of its Contract obligations, the County may take over the Work and prosecute the same to completion by contract or otherwise. In such case, the Contractor shall be liable to the

County for any damages allowed by law, and upon demand of County shall promptly pay the same to County.

- B. Should the Contract be terminated or work is stopped not due in any way to the fault of the Contractor, the Contractor shall only be entitled to compensation for services actually performed and materials actually supplied prior to notice of termination or to stop work and which are approved by the County and any applicable federal or state approving agency. No profit, overhead, or any other costs of any type are allowed after the date of such notice of termination or stop work order.
- C. The rights and remedies of the County provided in this Section are in addition to any other rights and remedies provided by law or under this Contract and County may pursue any and all such rights and remedies against Contractor as it deems appropriate.

SECTION 34. ETHICS IN PUBLIC CONTRACTING.

The provisions, requirements, and prohibitions as contained in Sections 2.2-4367 through 2.2-4377, of the Va. Code, pertaining to bidders, offerors, contractors, and subcontractors are applicable to this Contract.

SECTION 35. COMPLIANCE WITH STATE LAW; FOREIGN AND DOMESTIC BUSINESSES AUTHORIZED TO TRANSACT BUSINESS IN THE COMMONWEALTH OF VIRGINIA.

Contractor shall comply with the provisions of Virginia Code Section 2.2-4311.2, as amended, which provides that a contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 or as otherwise required by law. Contractor shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the Contract. The County may void the Contract if the Contractor fails to remain in compliance with the provisions of this section.

SECTION 36. OWNERSHIP OF REPORTS AND DOCUMENTS.

Contractor agrees that all reports and any other documents (including electronic data) prepared for, obtained in connection with, and/or required to be produced in connection with this Contract shall be delivered by the Contractor to the County and all such items shall become the sole property of the County. The Contractor agrees that the County shall own all rights of any type in and to all such items, including but not limited to copyrights and trademarks, and the County may reproduce, copy, and use all such items as the County deems appropriate, without any restriction or limitation on their use and without any cost or charges to the County from Contractor. Contractor hereby transfers and assigns all such rights and items to the County. Contractor further agrees Contractor will take any action and execute any documents necessary to accomplish the provisions of this Section. The Contractor also warrants that Contractor has good title to all materials, equipment, documents, and supplies which it uses in the Work or for which it accepts payment in whole or in part.

SECTION 37. DEFINITIONS.

Whenever used in these General Conditions or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof, and where applicable to any other legal entity such as a corporation, partnership, limited liability company, etc.

The section and paragraph headings are inserted for convenience only.

Architect, Engineer, Architect/Engineer or A/E: The term used to designate the Architect and/or the Engineer who contracts with the County to provide the Architectural and Engineering services for the project. The Architect/Engineer is a separate Contractor and is referred to herein as the Architect/Engineer or abbreviated as A/E. The term includes any associates or consultants employed by the firm to assist in providing the A/E services.

Bidder: The person, firm, corporation, or other entity interested in submitting a bid for the Work to be performed.

Change Order: A document issued by County on or after the effective date of the Contract which is agreed to by the Contractor and approved by the County, and which authorizes an addition, deletion, or revision in the Work, including any adjustment in the Contract Price and/or the Contract Time.

County or Owner: The County of Roanoke, Virginia, (Includes any Agency that is represented by Roanoke County and sometimes also referred to as Buyer) or its authorized representative.

County Code: Refers to the Code of the County of Roanoke, as amended.

County Designee: The County of Roanoke's authorized representative.

Board of Supervisors: The County Board of Supervisors or authorized representative.

Code of Virginia: Refers to the Code of Virginia (1950), as amended. (Sometimes referred to as Va. Code or Virginia Code.)

Contract Documents: These documents include, but are not limited to, the Project Manual, Invitation to Bid, the Instructions to Bidders, the Bid Form, the Contract, the Bonds or other Bid Security, the Escrow Agreement, the General Conditions, Supplementary General Conditions, Special Conditions, the Specifications, Addenda or Change Orders, the Plans and Drawings, any Supplemental Drawings, and any additional documents incorporated by reference in the above.

Contract: The written agreement between the parties concerning the performance of the Work and consisting of the Contract Documents.

Contractor: The person, firm, corporation, or other entity entering into a contractual agreement with the County to perform the Work.

Defect, Defective, or Deficient: An adjective or noun which when modifying or referring to the word Work refers to Work or any part thereof that is unsatisfactory, faulty, or does not conform to the Contract Documents, or does not meet the requirements of any inspections, standards, tests, or approvals referred to in the Contract Documents.

Document(s): This term includes, but is not limited to: writings, drawings, items on which words, symbols, or marks are recorded; electronic data of any type; videotapes, recordings, photographs and negatives, digital or otherwise; and any other form of data, writing, or information compilation, however recorded or stored, and regardless of physical form or characteristics.

Final Acceptance: The County's acceptance of the project from the Contractor upon confirmation from County and the Contractor that the project is apparently complete in accordance with the Contract requirements.

Notice: All written notices, demands, instructions, claims, approvals, and disapprovals required to obtain compliance with the Contract requirements. Any written notice by either party to the Contract shall be sufficiently given if delivered to or at the last known business address of the person, firm, or corporation constituting the party to the Contract, or to his, her, their, or its authorized agent, representative, or officer.

Notice to Proceed: A written notice given by the County at the County's discretion to the Contractor fixing the date on which the Contract time will commence for the Contractor to begin the Work in accordance with the requirements of the Contract Documents.

Project Inspector: One or more individuals employed by the County to inspect the Work and/or to act as Resident Inspector to the extent required by the County. The County shall notify the Contractor of the appointment of such Project Inspector(s).

Provide: Shall mean to furnish and install ready for its intended use.

Subcontractor: A person, firm, partnership, corporation, or other entity having a direct contract with the Contractor or with any other Subcontractor for the performance of the Work. It includes one who provides on-site labor, but does not include one who only furnishes or supplies material for the project.

Submittals: All drawings, diagrams, illustrations, brochures, schedules, samples, electronic data and other data required by the Contract Documents which are specifically prepared by or for the Contractor, Subcontractor, or Supplier, and submitted by the Contractor to illustrate the material, equipment, or layouts, or some other portion of the Work.

Substantial Completion: The date certified by County when construction is sufficiently complete, in accordance with the Contract Documents, so the County can occupy or utilize the Work or designated portion thereof for the purposes for which it is intended.

Successful Bidder: The bidder to whom the County makes an award.

Supplier: A manufacturer, fabricator, distributor, material man, or vendor who provides only material or supplies for the project, but does not provide on-site labor.

Work or Project: The entire completed construction or the various separately identifiable parts thereof as required by the Contract Documents. Work is the result of performing services, furnishing labor, and furnishing and incorporating material and equipment into the construction.

SECTION 38. INDEMNITY PROVISION.

- A. **Indemnity:** Contractor shall indemnify and hold harmless County and its officers, agents, and employees against any and all liability, losses, damages, claims, causes of action, suits of any nature, costs, and expenses, including reasonable attorney's fees, resulting from or arising out of Contractor's or its employees', agents', or subcontractors' actions, activities, or omissions, negligent or otherwise, on or near County's property or easement, or arising in any way out of or resulting from any of the work to be provided under this Contract. This provision includes, without limitation, any fines or penalties, violations of federal, state, or local laws or regulations, personal injury, wrongful death,

or property damage claims or suits, breach of contract claims, indemnity claims, and any other damages, losses, and/or claims of any type.

- B. **Hazardous Material:** While on County's property or easement and in its performance of this Contract, Contractor shall not transport, dispose of or release any hazardous substance, material, or waste, except as necessary in performance of its Work under this Contract and in any event Contractor shall comply with all federal, state, and local laws, rules, regulations, and ordinances controlling air, water, noise, solid wastes, and other pollution, and relating to the storage, transport, release, or disposal of hazardous material, substances or waste. Regardless of County's acquiescence, Contractor shall indemnify and hold County, its officers, agents, and employees harmless from all costs, claims, damages, causes of action, liabilities, fines or penalties, including reasonable attorney's fees, resulting from Contractor's violation of this paragraph and agrees to reimburse County for all costs and expenses incurred by County in eliminating or remedying such violations. Contractor also agrees to reimburse County and hold County, its officers, agents, and employees harmless from any and all costs, expenses, attorney's fees and all penalties or civil judgments obtained against the County as a result of Contractor's use or release of any hazardous substance or waste onto the ground, or into the water or air from or upon County's premises.
- C. **Patents:** The Contractor shall protect, indemnify, and hold harmless the County, its officers, agents and employees from any and all demands for fees, claims, suits, actions, causes of action, or judgments based on the alleged infringement or violation of any patent, invention, article, trademark, arrangement, or other apparatus that may be used in the performance of the Contract or the Work.

SECTION 39. EMPLOYMENT AND CONDUCT OF PERSONNEL.

- A. **Employee Qualifications:** Only skilled and reliable workers shall be employed for the Work. Should any person employed on the Work by the Contractor appear to County to be incompetent, unable to perform the Work, or disorderly, such person shall be removed from the Work immediately upon proper notice to the Contractor from County and such person shall not again be used for this Contract.
- B. **Superintendence:** The Contractor shall have a competent foreman or superintendent, subject to County's approval, which shall not be unreasonably withheld, on the jobsite at all times during the progress of the Work. The Contractor shall notify the County, in writing, of any proposed change in the foreman or superintendent including the reason therefore prior to making such change.
- C. **Drug-free Workplace:** During the performance of this Contract, the Contractor agrees to (i) provide a drug-free workplace for the Contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on

behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order over \$5,000, so that the provisions will be binding upon each subcontractor or vendor.

- a. For the purpose of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the Contract.

The Contractor shall post a copy of the policy in a conspicuous place at the jobsite and assure that all Contractor, subcontractor, and supplier personnel entering the jobsite are informed of the policy.

SECTION 40. SUBCONTRACTORS.

- A. **Licensure:** The Contractor shall comply with Title 54.1, Chapter 11, of the Code of Virginia, with respect to licensure of itself and all subcontractors employed to work on the project. The Contractor represents that it has verified that all subcontractors hold all required state and local licenses, including State Contractor's license and County business license. The Contractor shall verify that any additional subcontractors employed to work on the project, subsequent to the initial verification, hold all required state and local licenses, including State Contractor's license and County business license. The Contractor is required to submit the Contractor's Certification as to Licensure of Subcontractors Form to County. This constitutes a material part of the Contractor's Contract with the County.
- B. **Change of Subcontractors:** Subcontractors shall not be changed without the written approval of County.
- C. **Responsibility for Subcontractors:** The Contractor shall not employ for the project any subcontractor that the County may, within a reasonable time, object to as unsuitable. The Contractor further agrees that it is as fully responsible to the County for the acts and omissions of its subcontractors, suppliers, and invitees on the jobsite and of persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by it.

SECTION 41. CONDITIONS AT SITE.

- A. **Existing Conditions:** The Contractor shall have visited the site prior to bidding and is responsible for having ascertained pertinent local conditions such as location, accessibility, and general character of the site, and the character and extent of existing improvements and work within or adjacent to the site. Claims as a result of failure to have done so will not be considered by the County and will be the sole responsibility of the Contractor.
- B. **Hidden Conditions:** If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions than those ordinarily encountered or inherent in work of this nature, or if

subsurface or latent conditions at the site are found which are materially different from those frequently present in the locality, from those indicated in the Contract Documents, or from those inherent in work of the character required by the Contract, the Contractor must report such conditions to County before the conditions are disturbed. Upon such notice, or upon his own observation of such conditions, County will make such changes in the Contract Documents as he finds necessary to conform to the different conditions. Any change in the cost of the Work or the time needed for completion must be requested pursuant to Section 19 of these General Conditions.

- C. **Suspected Hazardous Material:** If the Contractor, during the course of the project, observes the existence of any material which it suspects or knows to be hazardous to human health or the environment, the Contractor shall promptly notify County. County will provide the Contractor with instructions regarding the situation. The Contractor shall not perform any work involving the material or any work causing the material to be less accessible prior to receipt of special instructions from County.

SECTION 42. SURVEYS AND LAYOUT.

- A. **Surveying Services:** All necessary drawings showing the location of property lines, buildings, and other appropriate information shall be furnished to the Contractor through the drawings and specifications. The Contractor shall provide competent surveying and engineering services to verify the given information and to execute the Work in accordance with the Contract requirements and shall be responsible for the accuracy of Contractor's surveying and engineering services. The Contractor shall immediately notify County of any discrepancies and confirm such notice in writing within five (5) calendar days.
- B. **Survey Control:** Such general reference points and bench marks on the building site as will enable the Contractor to proceed with the Work will be established in the drawings and specifications. If the Contractor finds that any previously established reference points have been lost or destroyed, Contractor shall promptly notify County.
- C. **Damage to Survey Control:** The Contractor shall protect and preserve the established bench marks and monuments and shall make no changes in locations without written notice to and approval from County. Any of these which may be lost or destroyed or which require shifting because of necessary changes in grades or locations shall, subject to prior approval from County, be replaced and accurately located by the Contractor.

SECTION 43. DRAWINGS AND SPECIFICATIONS.

- A. **Drawings and Specifications:** The general character and scope of the Work are illustrated by the drawings and specifications. Where on any of the drawings a portion of the Work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to all other like portions of the Work. If the Contractor deems additional detail or information to be necessary, Contractor may request the same in writing from County. The Contractor shall carry out the Work in accordance with the drawings and specifications and any additional detail drawings and instructions as issued by County. However, Contractor shall immediately notify County of any discrepancies in such

drawings and/or specifications and confirm such notice in writing within five (5) calendar days.

- B. **Discrepancies in Drawings:** In case of difference between small and large scale drawings, the large scale drawings shall govern, unless otherwise directed in writing by County.
- C. **"Similar":** Where the word "similar" appears on the drawings, it shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.
- D. **Division of Specifications:** The specifications are divided into several parts for convenience only, since the entire specifications must be considered as a whole. The divisions of the specifications are not intended to control the Contractor in dividing the work among subcontractors or to limit the work performed by any trade. The Contractor shall be responsible for the coordination of the trades, subcontractors, and vendors engaged upon this Work.
- E. **Dimension Accuracy:** Measurements or dimensions shown on the drawings for site features, utilities, and structures shall be verified at the site by the Contractor. The location of underground utilities indicated on the plans is diagrammatic, plotted from available records and field survey information, and shall be considered approximate only, and the County makes no representations with regard to their accuracy. The Contractor shall not scale measurements or dimensions from the drawings. Where there are discrepancies, County shall be consulted. Where new work is to connect to, match with, or be provided for existing work, the Contractor shall verify the actual existing conditions and related dimensions prior to ordering or fabrication, so that such new work will properly fit with existing work.
- F. **As-Built Drawings:** The Contractor shall maintain at the site for the County one copy of all drawings, specifications, addenda, approved shop or setting drawings, change orders, field deviations, and other documents or modifications (referred to herein as "As-Built Drawings") in good order and marked to record all changes as they occur during construction. These shall be available to County, the Project Inspector, and the County's testing personnel. These "As-Built Drawings" shall be neatly and clearly marked in color during construction to record all variations from the drawings made during construction. The representation of such variations shall include such supplementary notes, symbols, legends, documents, and details as may be necessary to clearly show the as-built construction.
- G. **Record Drawings:** Upon completion of the Work and prior to Final Acceptance, the Contractor shall deliver to County, for preparation of the Record Drawings, one complete set of "As-Built Drawings" and documents referred to in Section 10.6.

SECTION 44. SCHEDULE OF THE WORK.

- A. **Scheduling:** The Contractor is responsible for the sequencing, scheduling, and coordinating of the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. The Contractor is responsible for coordinating Contractor's work on the Project with any other work being carried on by the County or by other County consultants or contractors at the site or for the Project. The Contractor shall prepare and submit to County a schedule for accomplishing the Work based upon the completion time stated in the Contract and submit such to County at the pre-construction conference. No progress payments will be made to the Contractor until after Contractor has submitted a schedule which is acceptable to County. All schedules under Section 11 shall be in both paper and electronic form unless otherwise directed by County.
- B. **Progress:** The Contractor shall review the progress of the Work not less than each month, but as often as necessary to properly manage the project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the schedule monthly to finish within the contractually allowed time. The Contractor shall submit the updated schedule with each progress payment request. The scheduled completion date shall be within the period of time allowed by the Contract for completion of construction, except as amended by any Change Orders.
- C. **Delay and Recovery Schedule:** Should there be any delay; County may require the Contractor to prepare, at no extra cost to the County, a plan of action and a recovery schedule for completing the Work by the contractual completion date.
- i. The plan of action and recovery schedule shall set forth how the Contractor intends to comply with the original schedule. The plan of action and recovery schedule, when required, shall be submitted and approved by County prior to Contractor's submission of the next monthly construction estimate. The County may withhold progress payments until such schedule is submitted and approved.

SECTION 45. CONSTRUCTION SUPERVISION.

The Contractor shall be solely responsible to supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor is solely responsible to the County that the finished Work complies with the Contract Documents. The Contractor shall be solely responsible for health and safety precautions and programs for its workers, and subcontractors, agents and assigns with the Work. No inspection by, knowledge on the part of, or acquiescence by the County, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or responsibility for health and safety programs and precautions.

SECTION 46. STANDARDS FOR MATERIAL INSTALLATION AND WORKMANSHIP.

- A. Material and Equipment:** Unless otherwise specifically provided in this Contract, all equipment, material, and accessories incorporated in the Work are to be new and in first class condition. The Contractor shall furnish to County for approval the name of the manufacturer, the model number, and other identifying data and information respecting the performance, capacity, nature, and rating of the machinery and mechanical and other equipment which the Contractor contemplates incorporating in the Work. Machinery, equipment, material, and articles installed or used without required approval may be subject to subsequent rejection by the County.
- B. Hazardous Substances:** Unless specifically approved by the County or required by the specifications, the Contractor shall not incorporate any material into the Work that contains asbestos or any material known by the Contractor to contain a substance known to be hazardous to health when the building and/or site is occupied by the County. If the Contractor becomes aware that a material required by the specifications contains asbestos or other hazardous substances, it shall notify the County and County immediately and shall take no further steps to acquire or install any such material without first obtaining County approval. (See also Sections 2.2 and 8.3 of these General Conditions.)
- C. Workmanship:** The workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by workers skilled in the particular task to which they are assigned. In the acceptance or rejection of work, no allowance will be made for lack of skill on the part of workers. Poor or inferior workmanship (as determined by County, or other inspecting authorities) shall be removed and replaced to conform to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of the County, or other inspecting authority, at the Contractor's sole expense.
- D. Instructions for Installation:** Under the various sections of the specifications, where specified items are supplied with the manufacturer's printed instructions, recommendations, or directions for installation, or where such instructions, recommendations, or directions are available, installation of the specified items shall be in strict accordance with the manufacturer's printed instructions unless those instructions contradict the drawings or specifications, in which case County will be notified by Contractor for an interpretation and decision.
- E. Installation Procedures Without Instructions:** Where neither the manufacturer's printed instructions are available for installation of specific items, nor are specific code or standards given by reference to govern the installation of specific items; and where there is doubt concerning the installation procedures to be followed or the quality of workmanship to be maintained in the installation of specific items, the Contractor shall consult County for approval of the installation procedures Contractor proposes to follow or the specific standards governing the quality of workmanship Contractor proposes to maintain during the installation of the items in question.

- F. **Codes and Standards:** Under the various sections of the specifications, where reference is made to specific codes or standards governing the installation of specified items, installation shall in all cases be in strict accordance with the referenced codes and standards. Where no reference is made to specific codes or standards, installation shall conform to the generally recognized applicable standards for first-class installation of the specific item to be installed. Contractors are expected to be proficient and skilled in their respective trades and knowledgeable of the National Fire Protection Association (NFPA), the current edition of the Virginia Uniform Statewide Building Code (USBC) and its referenced technical codes and standards, Occupational Safety and Health Act (OSHA) and other codes and standards applicable to installations and associated work by its trade and/or that are applicable to the Work.

SECTION 47. SUBMITTALS.

- A. **General:** The Contractor shall submit for the approval of County all documents and/or materials required by the solicitation or requested by County. All such submissions shall be made with such promptness as to cause no delay in this or any other part of the project, and to allow reasonable time for checking, correcting, resubmitting, and re-correcting. No part of the Work dealt with by a submittal shall be fabricated by the Contractor, save at Contractor's own risk, until such approval has been given. The Contractor shall maintain one (1) set of approved submittals at the jobsite at all times.
- B. **Format:** Submissions shall be made in such number of copies that two (2) approved copies may be retained by County. Each submission shall be accompanied by a letter of transmittal listing the contents of the submission and identifying each item by reference to specification section or drawings. All submittals shall be clearly labeled with the name of the project and other necessary information. Catalog plates and other similar material that cannot be so labeled conveniently, shall be bound in suitable covers bearing the identifying data.
- C. **Supporting Material:** Submissions shall be accompanied by all required certifications and other such supporting material and documents, and shall be submitted in such sequence or in such groups that all related items may be checked together. When submittals cannot be checked because the submission is not complete, or because submittals on related items have not been received, then such submittals will be returned without action or will be held, not checked, until the material which was lacking is received.
- D. **Coordination:** Contractor shall review and coordinate with all other related or affected work before they are submitted for approval, and shall bear the Contractor's certification that it has checked and approved them as complying with the information given in the Contract Documents. Submittals made without such certification and coordination will be returned to the Contractor without action, and will not be considered a formal submission. The Contractor shall be responsible for checking all dimensions and coordinating all material and trades to ensure that the material proposed will fit in the space available and be compatible with other material provided.

- E. **Variations:** If the submissions show variations from the Contract Documents because of standard shop practice or other reasons, the Contractor shall make specific mention of such variation in Contractor's letter of transmittal so that, if acceptable, suitable action may be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the Work in accordance with the Contract Documents even though such submittals have been approved.
- F. **"Or Equal":** The drawings and/or specifications may indicate that County designed or detailed a portion of the plans around a particular product (most commonly a piece of equipment). Should a different product be proposed by the Contractor and accepted, all modifications, rerouting, relocations, and variations required for proper installation and coordination to comply with the design concept and requirements of the Contract Documents shall be the sole responsibility of the Contractor and shall be made at no extra cost to the County. This naming of a particular product, around which the plans were designed or detailed, is not intended to preclude the use of other products or favor the product named when a "brand name or equal" specification has been used. (See also Section 10 of Instructions to Bidders.) Rather it is only intended to acknowledge the reality that in many instances County must design around the dimensions and characteristics of a particular product.
- G. **Review by County:** County will review and respond to the submittals within a reasonable time. Checking and/or approval of submittals will be for general conformance with the design concept of the project and compliance with the information given in the Contract Documents, and will not include verification of quantities, detailed dimensions, nor adjustments of dimensions to actual field conditions. Approval shall not be construed as permitting any departure from Contract requirements, authorizing any increase in price or time for completion or relieving the Contractor of the responsibility for any error in details, dimensions, or otherwise that may exist.
- H. The Work shall be in accordance with approved submittals.

SECTION 48. INSPECTION AND INDEPENDENT TESTING.

- A. **Inspection and Testing:** All material and workmanship shall be subject to inspection, examination, and testing by County at any and all times during manufacture and/or construction. County shall have authority to reject defective material and workmanship and require its correction. Rejected workmanship shall be corrected to the satisfaction of the County, and rejected material shall be replaced with proper material that is satisfactory to the County, without charge therefore, and the Contractor shall promptly segregate and remove the rejected material from the premises. If the Contractor fails to proceed at once with replacement of rejected material and/or the correction of defective workmanship, the County may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, and/or may terminate the right of the Contractor to proceed as provided in Sections 26 or 27 of these General Conditions, the Contractor and surety being liable for any damage to the same extent as provided for in those Sections.

B. Payment for Inspection, Testing, and Certification:

- i. Jobsite inspections, tests conducted on site, or tests of material gathered on site which the Contract requires to be performed by independent testing entities shall be contracted and paid for by the County. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor, and material necessary for making such tests. Except as provided in Section 15.3 below, whenever such examination and testing finds defective material, equipment, or workmanship, the Contractor shall reimburse the County for the cost of reexamination and retesting.
- ii. Although conducted by independent testing entities, the County will not contract and pay for tests or certifications of material, manufactured products or assemblies which the Contract, codes, standards, etc. require to be tested and/or certified for compliance with industry standards by entities such as Underwriters Laboratories, Factory Mutual or ASTM. If there are any fees to be paid for such tests and certifications, they shall be paid by the Contractor.
- iii. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires it to perform or pay, together with any inspections and tests which it chooses to perform for its own quality control purposes.

C. Examination of Completed Work: Should it be considered necessary or advisable by County at any time before final acceptance of the entire Work to examine any part of the Work already completed, by removing or tearing out portions of the Work, the Contractor shall on request promptly furnish all necessary facilities, labor, and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of the Contractor or its Subcontractors, Contractor shall pay for all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of the Contractor's labor and material necessarily involved in uncovering the Work, the cost of examination and testing and Contractor's cost of material and labor necessary for replacement shall be paid to the Contractor and it shall, in addition, if completion of the Work has been delayed thereby, be granted a suitable extension of time.

D. Suspension of Work: The County may suspend the Work when in its judgment the drawings and specifications are not being followed. Any such suspension shall be issued in writing and continued only until the matter in question is resolved to the satisfaction of the County. The cost of any such Work stoppage shall be borne by the Contractor unless it is later determined that no fault existed in the Contractor's Work.

E. Project Inspector: Failure of the Project Inspector to note or require correction of improper or defective work does not relieve the Contractor from its responsibility to correct such improper or defective work. The Project Inspector has no authority to and shall not:

- i. Enter into the area of responsibility of the Contractor's superintendent;

- ii. Issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work;
- iii. Authorize or suggest that the County occupy the project, in whole or in part; or
- iv. Issue a certificate for payment.

SECTION 49. USE OF PREMISES AND REMOVAL OF DEBRIS

Jobsite Coordination: The Contractor shall perform the Contract in such a manner as not to interrupt or interfere with the operation of any existing activity on the premises or with the work of any other contractor.

Storage of Material: The Contractor shall store apparatus, material, supplies, and equipment in such orderly fashion at the site of the Work as will not unduly interfere with the progress of its Work or the work of any other contractor.

Jobsite Appearance: The Contractor expressly undertakes, either directly or through its Subcontractor(s), to clean up frequently all refuse, rubbish, scrap material, and debris caused by his operations, to the end that at all times the jobsite shall present a neat, orderly, and workmanlike appearance. No such refuse, rubbish, scrap material, and debris shall be left within the completed Work nor buried on the building site, but shall be properly protected and removed from the site and properly disposed of in a licensed landfill or otherwise as required by law.

Final Cleaning: The Contractor expressly undertakes, either directly or through its Subcontractor(s), before final payment, to remove all surplus material, false work, temporary structures, including foundations thereof, and debris of every nature resulting from its operations and to put the site in a neat, orderly condition, to thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the Contract; and to thoroughly clean all glass installed under the Contract including the removal of all paint and mortar splatter and other defacements. If a Contractor fails to clean up at the completion of the Work, the County may do so and charge for costs thereof to the Contractor in accordance with these General Conditions.

Erosion Control: During and at completion of the Work, the Contractor shall prevent site soil erosion, the runoff of silt and/or debris carried by water from the site, and the blowing of dust or debris off the site in accordance with the applicable requirements and standards of the Virginia Erosion and Sediment Control Handbook, latest edition, and of the Contract Documents.

SECTION 50. DAMAGES TO THE WORK AREA

A. **Damage to the Work:** The Contractor shall have charge of and be solely responsible for the entire Work and be liable for all damages to the Work including, but not limited to any of the damages hereafter mentioned, and to any property in the vicinity of the Work, until its completion and acceptance by County.

- i. Where the work involves alterations, renovations, or modifications to any existing building, the Contractor shall familiarize itself with the structural condition of such building before proceeding with any work. It shall be the Contractor's responsibility to take all necessary safeguards to protect and maintain all parts of

- the building in a safe condition at all times during the process of construction and to protect from damage those portions of the building that are to remain.
- ii. Under no condition shall any load be placed on any part of a building, whether new or existing, in excess of the load the structure will safely support, and no structural member(s) shall be cut or altered without the written consent of County.
 - iii. The Contractor shall conduct all operations in such a manner as to avoid damage to existing work and surfaces within any existing building that are to remain. Any and all damaged work and surfaces shall be repaired, replaced, or restored to their original condition at the time when this work was started, and the expense of such work shall be borne by the Contractor.
- B. Damage to Utilities:** The respective Utility Company shall be given a minimum of forty-eight (48) hours' notice prior to any adjustment of utilities, and the Contractor shall comply with the provisions of the Virginia Underground Utilities Damage Prevention Act, Section 56-265.14 et seq., of the Code of Virginia.
- a. Damages that may occur to the utilities during the Work shall be the sole responsibility of the Contractor.
- C. Relocation of Utilities:** Should any utilities require adjustment during the Work, it shall be the Contractor's responsibility to have such utilities relocated as a part of the Work and to contact and cooperate with the respective Utility Company in performance of such operations.
- D. Damage to Other Work and Existing Structures:** The Contractor shall take into account all other work which shall be done by other parties on the jobsite, either now known or which may become necessary during the progress of the Work, and shall be responsible for any damage done to the other work. Damage to concrete curbs, gutters, sidewalks, or any existing facility that may occur during the construction shall be repaired or replaced by the Contractor, at its sole expense, as directed by and to the satisfaction of County.
- E. Weather Damage:** Damage with respect to the Work caused by the weather shall be the responsibility of the Contractor.
- F. Blasting:** Any damage that may occur due to blasting shall be the sole responsibility of the Contractor.

SECTION 51. CHANGES IN THE WORK

- A. Changes in Drawings and Specifications:** The County reserves the right to make such changes in the drawings and specifications and in the character of the Work as may be necessary or desirable to ensure completion in the most satisfactory manner, provided such changes do not materially alter the original plans and specifications or change the general nature of the Work as a whole. Such changes shall not be considered as waiving or invalidating any condition or provision of the Contract and Bonds. Such changes shall be issued in writing, by County to Contractor.

- B. Changes in Quantities:** The County reserves the right to make changes in the quantities of the Work, as may be considered necessary or desirable and such changes shall not be considered as waiving or invalidating any conditions or provisions of the Contract or Bonds. The Contractor shall perform the Work as altered, whether increased or decreased, and no allowances shall be made for anticipated profits. Payment to the Contractor for the changes in the quantities of work shall be made only for the actual quantities of work performed and material furnished at the unit prices set forth in the Contract, except as provided below.
- i. When the quantity of work to be done or of material to be furnished under any item of the Contract is more than 125 percent of the quantity stated in the Contract, either party to the Contract, upon demand, shall be entitled to negotiate for revised consideration on the portion of work above 125 percent of the quantity stated in the Contract.
 - ii. When the quantity of work to be done or of material to be furnished under any item of the Contract is less than 75 percent of the quantity stated in the Contract, then either party to the Contract, upon demand, shall be entitled to negotiate for revised consideration on the Work performed.
 - iii. Any consideration after that as set forth above shall be paid for as is hereinafter provided under Section 19.7. The foregoing notwithstanding, the quantity of work to be done or of material to be furnished under any item of the Contract, or the total original Contract shall not be increased more than 25 percent or reduced by more than 25 percent without the written consent of the Contractor and County.
- C. Changes in the Work:** No change with respect to the Work, except in an emergency situation threatening life or property, shall be made by the Contractor without the prior written approval of the County. The Contractor shall deliver any request for a change in the Work, Contract price, and/or completion time in writing to County within ten (10) calendar days of the occurrence requiring the change. The Contractor shall be required to certify the cause of the change order and, if appropriate, length of time involved. Payment for such changes approved by County shall be as set forth in Section 19.7. This written request is a condition precedent to the consideration of any such request by the County.
- D. Delays:**
- i. In the event a delay is caused by the County, any other separate contractor employed by the County, or any party for whom the Contractor deems the County responsible, or the agents and employees of any of them, the Contractor shall inform the County immediately at the time of the occurrence by the fastest means available and shall give written notice within a reasonable time, not to exceed ten (10) calendar days. The Contractor's notice to County shall specify the nature of the delay claimed by the Contractor, the cause of the delay, and the impact of the delay on the Contractor's work schedule to the fullest extent possible. The County will, within a reasonable time, not to exceed ten (10) calendar days, respond to the Contractor's notice with a resolution, remedy, or direction to alleviate the delay or with a notice rejecting the claim for delay alleged to be caused by the County or parties for whom the County is responsible. If the delay is not then resolved, the

Contractor may then submit a request for change order in accordance with Sections 19.3 and 19.5. In the event of other delays, the Contractor shall give the County written notice within ten (10) calendar days of the occurrence causing the delay.

- ii. No extension of time or compensation shall be allowed for a delay if the Contractor failed to give notice in the manner and within the time prescribed in Subsection 19.4 (a). Furthermore, no extension of time shall be given or additional compensation allowed for any delay unless a claim is made in writing to the County, within ten (10) calendar days of the occurrence causing the delay. The claim shall state the cause of the delay, the number of days of extension requested, and any compensation requested by the Contractor. The Contractor shall report the resumption of work to the County not less than ten (10) calendar days after work resumes. Failure to give notice of either the inception or the termination of the cause of delay or failure to present a claim for extension of time and/or monetary compensation within the times prescribed are conditions precedent to the assertion of any such claims by Contractor and shall constitute a waiver by Contractor of any such claims for compensation or extension based upon that cause.
- iii. Requests for compensation for delays must be substantiated by itemized data and records clearly showing that the work delayed was progressing according to the approved schedule and that the costs are directly attributable to the delay in the Work claimed. The Contractor shall provide written schedules demonstrating how the Work being delayed affects the approved schedule.
- iv. No extension of time, additional compensation, or change in the Contract price shall be allowed for any delays caused in whole or in part by the Contractor, any subcontractors, or any supplier. (For unavoidable justified delays, see Section 19.9 of these General Conditions.)

E. **Change Orders:** All change orders must indicate that the Contract Time for Completion is not changed or is either increased or decreased by a specific number of days. Any change or requested change in the Contract price shall also be included in the change order. The Contractor must provide written justification for an extension of the Time for Completion to County and to the County. The written justification must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior change orders or amendments to the Contract, not just an increase or decrease in the time needed to complete some portion of the total Work. When a Critical Path Method (CPM) schedule is required by the Contract, or is used for the convenience of the Contractor, no increase to the Time for Completion shall be allowed unless, and then only to the extent that, the additional or changed Work increases the length of the critical path. Approved increases in time required to complete the Work shall be added to the Time for Completion. Decreases in time as a result of the change order shall be demonstrated by a decrease in the critical path of the work if CPM scheduling is properly used and updated by the Contractor. If not, the County shall determine the appropriate decrease by the best means possible. Approved decreases in the time needed to complete the Work shall be deducted from the Contract completion date. The change to time or Contract price allowed by each change order shall include all time

and monetary impacts of the change, whether the change order is considered alone or with all other changes during the course of the project. Failure to include a change to time and/or Contract price in a change order shall waive any claims the Contractor may have for any change to the time and/or Contract price unless the parties mutually agree in writing to postpone a determination of the change to time and price resulting from the change order. Such a determination may be postponed not more than forty-five (45) calendar days to give the Contractor an opportunity to demonstrate a change in the time and/or price needed to complete the Work. However, the Contractor shall continue with the Work as may be directed by County and shall not stop work on the Project unless directed to do so by County.

- F. **Extra Work:** The County reserves the right to make alterations or changes in the Work as the Work progresses. When any work is necessary to the proper completion of the project which was not provided for in the Contract, the Contractor shall do such work, but only when and as ordered in writing by County. Payment for such extra work shall be made as hereinafter provided in Section 19.7.
- G. **Payment Methods for Extra Work:** The extra work done by the Contractor as authorized and approved by County shall be paid for in the manner hereinafter described; and the compensation thus provided shall be accepted by the Contractor as payment in full for all labor, material, tools, equipment, incidentals, all superintendents' and timekeepers' services, all insurance, bonds, and all other reasonable overhead expenses incurred in the performance of the extra work. Payment for extra work may be made by one of the following methods, as agreed on in writing by County and the Contractor before said extra work is commenced, subject to all other conditions of the Contract:
- i. Unit prices; or
 - ii. Lump sum price; or
 - iii. The cost of change in work plus ten percent (10%) of allowable costs. Allowable costs for purposes of this paragraph shall only include labor, material, sales tax, the rental of power tools and equipment actually used, or a reasonable price for the use of power tools and equipment owned by the Contractor based upon their life expectancy and purchase price, utilities, pro rata charges for foremen, and all payroll charges such as employer's FICA contribution, Public Liability and Workers' Compensation Insurance, but only if all such costs are incurred as the direct result of the changes in the Work. The change in cost for labor and material bonds and for performance bonds relative to the value of the extra work shall be allowable cost but shall not be marked up. If any subcontractor at any tier does all or part of the Work, the subcontractor's markup on that Work shall be fixed at fifteen percent (15%) of the allowable cost as defined herein.
- H. **Disputed Claims for Extra Work:** If one of the payment methods set forth in Section 19.7 is not agreed on by County, the County may retain either an independent contractor to perform such extra work or use its own forces to perform such extra work and the Contractor shall cooperate fully with the independent contractor or County in its performance of the extra work. However, County may also direct Contractor to perform

such extra work and any dispute will be handled as set forth in Section 31 of these General Conditions.

- I. **Change in Contract Time or Contract Price:** The Contractor may request an extension of time or change in the Contract price should the Work be obstructed or delayed by any justified unavoidable delays not caused in whole or in part by the Contractor, any subcontractor, or suppliers. However, delays caused by weather conditions will not be considered justified unavoidable delays unless they are caused by unusual weather as set forth in Section 4.2 of the Instructions to Bidders, in which case only an extension of time may be considered by County, but no additional compensation will be allowed for unusual weather. Furthermore, Contractor agrees that for any delays not caused by the County or any delays beyond the control of the County, no additional compensation will be due the Contractor and no change in the Contract price will be allowed by the County, only an extension of the Contract time will be considered by the County. The Contractor shall deliver requests for changes in the Contract price and/or completion time in writing to County within ten (10) calendar days of the occurrence requiring the change. Approved changes that alter the time of the Contract shall extend the completion time by a period equivalent to the certified time lost by such occurrence. No change in Contract price and/or completion time shall be allowed if the above notice has not been properly given, such notice being a condition precedent to any such request by the Contractor. However, the Contractor shall continue with the Work as may be directed by County and shall not stop work on the Project unless directed to do so by County.

SECTION 52. PAYMENT FOR WORK

- A. **Monthly Construction Estimates:** Monthly construction estimates shall be submitted to County, no more than once every thirty (30) calendar days.
- B. **Preparing Progress Payment Requests:** In preparing construction estimates, the Contractor may request a progress payment based on the actual percentage of work completed during the preceding month. The estimate shall contain a breakdown of the total Contract amount; to include a separate breakdown of all approved change orders, into principal items of construction, showing the estimated quantity, unit price, and total for each item. In preparing progress payment requests, the material delivered on the site and preparatory work done may be taken into consideration, if properly documented, or as may be required by County so that quantities can be verified. In addition to material delivered on the site, material such as large pieces of equipment and items purchased specifically for the project, but stored off the site, may be considered for payment, provided prior written approval is given by County.
- C. **Progress Payments:** The County will make a progress payment to the Contractor on the basis of a duly certified and approved progress payment request for the work performed under the Contract. In the event that the County disagrees with the monthly construction progress payment request submitted by the Contractor, or in the event the As-Built Drawings are not being kept current, the County may withhold all or a portion of the progress payment until such dispute is resolved to the satisfaction of the County. If there

are any objections or problems with the progress payment request, the County will notify the Contractor of such matters. If the progress payment request is approved by the County, payment will be made by the County to the Contractor not more than thirty (30) calendar days after such request has been approved. However, if there is an objection or problem with a progress payment request, the Contractor shall continue with the Work as may be directed by County and shall not stop work on the Project unless directed to do so by County. Any such disputes shall be handled as set forth in Section 31 of these General Conditions.

- D. **Retainage:** To ensure proper performance of the Contract, the County shall retain, unless stipulated otherwise, five percent (5%) of each progress payment until Final Acceptance of all work covered by the Contract. The Contractor may request that such retainage be paid into an escrow account on certain Contracts, pursuant to Section 2.2-4334 of the Code of Virginia. (See also Sections 6.2 and 14.6 of Instructions to Bidders.)
- E. **Ownership of Material and Work:** All material and work covered by progress payments shall become the property of the County. This provision shall not relieve the Contractor from the responsibility for all material and to maintain all completed work and to repair all damaged work. The Contractor shall not deem a progress payment as a waiver to complete the terms of the Contract or shift the risk of loss from the Contractor to the County. The Contractor warrants that Contractor has good title to all material, equipment, and supplies which Contractor uses in the Work or for which Contractor accepts payment in whole or in part.
- F. **Payments to Others by Contractor:** The Contractor agrees that Contractor will comply with the requirements of Section 2.2-4354 of the Code of Virginia regarding Contractor's payment to other entities and that Contractor will take one of the two actions permitted therein within seven (7) calendar days after receipt of amounts paid to Contractor by the County. The Contractor agrees that Contractor shall indemnify and hold the County, its governing body, officers, agents, and employees harmless for any lawful claims resulting from failure of the Contractor to make prompt payments to all persons supplying him equipment, labor, tools, or material in prosecution and completion of the Work provided for in the Contract. In the event of such claims, the County may, after providing written notice to the Contractor, withhold from any progress and/or final payment the unpaid sum of money deemed sufficient to pay all lawful claims and associated costs in connection with the Contract.
- G. **Final Payment:** Within thirty (30) calendar days after the Final Acceptance of the Work, the County shall pay the Contractor the Final Payment, less all prior payments, damages, setoffs, liquidated damages, any amounts withheld from retainage, or any other amounts Contractor may owe the County for any reason whatever.
- H. **Payment and Acceptance:** No payment, final or otherwise, nor partial or entire use, occupancy, or acceptances of the Work by the County shall be an acceptance of any work or material not in accordance with the Contract, nor shall the same relieve the Contractor of any responsibility for any faulty material or workmanship or operate to release the

Contractor or its surety from any obligation under the Contract or the Performance Bond or the Labor and Material Payment Bond.

- I. **Right to Audit:** The Contractor agrees that the County, and any approving Federal or State Agency or any of their duly authorized representatives, shall have access to any books, documents, papers, records, schedules and electronic data of the Contractor which are pertinent to this Project for the purpose of making an audit, examinations, excerpts, copies or transcriptions and that Contractor will provide copies of such items to County upon County's request, at no cost to County.

SECTION 53. LIQUIDATED DAMAGES

No liquidated damages are provided for by this contract.

SECTION 54. INSPECTION FOR SUBSTANTIAL COMPLETION AND FINAL ACCEPTANCE

- A. **Substantial Completion:** The Contractor shall notify the County, in writing, that the Work will be ready for inspection to determine if it is substantially complete and ready for testing on or after a certain date, which date shall be stated in the notice. The notice shall be given at least ten (10) calendar days in advance of said date and shall be forwarded through County. Inspection and testing shall take place at a time mutually agreeable to the Contractor and County. The inspection shall determine if substantial completion has been accomplished. If so, County will issue a Certificate of Substantial Completion and attach a written list of unfinished Work and defective Work, commonly referred to as a "punch list", which must be finished and corrected to obtain Final Acceptance.
- B. **Request for Final Acceptance:** The Contractor shall notify County, in writing, that the Work will be ready for final inspection and testing on or after a certain date, which date shall be stated in the notice. That inspection and any necessary testing shall be conducted in the same manner as the inspection for substantial completion. When the Work is finally and totally complete, including the elimination of all known deficiencies, the Work shall be finally accepted by the County and final payment shall be made in accordance with Section 20.7 of these General Conditions.
- C. **Final Inspection:** County will conduct the final inspection, and may elect to have other persons of its choosing also participate in the inspection. If re-inspection is required, the Contractor shall reimburse the County for all costs of re-inspection or, at the County's option, the costs may be deducted from payments due to the Contractor.
- D. **As-Built Drawings:** No Contract retainage will be released prior to receipt of all approved As-Built Drawings.
- E. **Final Acceptance:** Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of the following documents and items; As-Built drawings, operation and maintenance manuals, written warranties, Certificate of Substantial Completion, Affidavit of Payment of Claims, and

MBE/WBE/SB/VB Usage Status Form, County will furnish a written Certificate of Final Acceptance of the Work to the Contractor. County may accept the Work for occupancy or use while asserting claims against the Contractor, disputing the amount of compensation due to the Contractor, disputing the quality of the Work, its completion, or its compliance with the Contract Documents, and the like.

- F. **Release By Contractor:** The acceptance by the Contractor of the final payment or a payment designated as such shall be and does operate as a release by the Contractor of all claims by the Contractor against County and of all other liability of the County to the Contractor whatever, including liability for all things done or furnished in connection with the Work or the Contract.

SECTION 55. GUARANTEE OF WORK

- A. **Two Year Warranty:** The Contractor does warrant and guarantee the Work against defects or deficiencies in the Work and in all material, equipment, and workmanship for a period of two (2) years from the date of Final Acceptance.
- B. **Defective Work:** The Contractor agrees it shall repair or replace, at Contractor's sole expense, and to the satisfaction of County, any work, material, equipment, or part that is found, by County, to be defective.
- C. **Repairs:** If, within any guarantee period, defects are noticed by County which require repairs or changes in connection with the guaranteed work, those repairs or changes being in the determination of County rendered necessary as the result of the use of material, equipment, or workmanship which is defective, inferior, or not in accordance with the terms of the Contract, then the Contractor shall, promptly upon receipt of notice from County, such notice being given not more than four weeks after the expiration of any such guarantee period, and without any expense to the County:
- i. Place in satisfactory condition all guaranteed work and correct all defects therein; and
 - ii. Make good all damage to the structure, site, equipment, or contents thereof, which in the determination of County is the result of the use of material, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the Contract; and
 - iii. Make good any work or material or the equipment and contents of structures or the site disturbed in fulfilling any such guarantee.
- D. **Warranty Extension:** In any case, where in fulfilling the requirements of the Contract or any guarantee embraced in or required thereby, the Contractor disturbs, damages or repairs any work guaranteed under the Contract, Contractor shall restore such work to a condition satisfactory to County and guarantee such restored work to the same extent and for a like additional period of time as it was originally guaranteed under this Contract.
- E. The Design-Builder agrees to assign to Roanoke County at the time of final completion of the Work all manufacturer's warranties relating to equipment, materials, and labor used in the Work and further agrees to perform the Work in such manner so as to

preserve any and all such manufacturer's warranties. If necessary as a matter of law, the Design-Builder may retain the right to enforce directly any such manufacturers' warranties during the one-year period following the date of Substantial Completion.

- F. **Correction of Defects:** If the Contractor, after notice, fails to proceed promptly, but in no event longer than thirty (30) calendar days after such notice, unless otherwise agreed to by County, to comply with the terms of the guarantee and/or correct the Work, the County may have the defects corrected by its own forces or another contractor and the Contractor and its surety shall be liable for all costs and expenses incurred in doing so.
- G. Nothing contained in this section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents or the law of Virginia, including liability for defective work.

SECTION 56. STOP WORK ORDER

In the event that conditions exist such that no work can or should continue, other than the routine closing of the site, the Contractor may submit to County a request to stop work or County on its own may issue a Stop Work Order. County designee will, if he/she approves the request or issues the order himself/herself, deliver a written "Stop Work Order" to the Contractor stipulating the effective date and the Contract time remaining. The Work, other than the routine closing of the site, and Contract time shall not again be started until a written "Resume Work Order" is received by the Contractor from County. When the Work is stopped at the request of the Contractor and through no fault of the Contractor, the Contractor may only recover from the County payment for the cost of the Work actually performed, together with reasonable overhead and profit thereon up to that time, but profit shall be recovered only to the extent that the Contractor can demonstrate that it would have had profit on the entire Contract if it had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed, including, but not limited to, home office overhead or any other such costs. The Contractor may also recover the actual cost of physically closing down the jobsite, but no other costs of the Stop Work Order. The County may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall the Stop Work Order to the Contractor relieve in any way the obligations of the Contractor's surety on its payment and performance bonds. When work is stopped by County due to any fault of the Contractor, the Contractor may not recover any of the above costs or items or any other costs, profits, expenses, or damages of any type.

SECTION 57. TERMINATION OF CONTRACT FOR CAUSE

- A. **Termination for Cause:** If the Contractor should be adjudged a bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, the County may terminate the Contract. If the Contractor should refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper material, or if it should fail to make prompt payment to subcontractors or suppliers of material or labor, or disregard laws, ordinances, or the written instructions of County, or otherwise fails to comply with any of the terms or provisions of this Contract including, but not limited to, poor services, deficient work or material, the County may terminate this Contract. In no event shall

termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.

- B. **Possession of Work:** Upon termination of the Contract, the County may take possession of the premises and of all material, tools, and appliances thereon and finish the Work by whatever method the County may deem expedient. In such case the Contractor shall not be entitled to receive any further payment of any type. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract price, the Contractor shall pay the difference to the County, together with any other cost or expenses of terminating the Contract and having it completed by others, together with any and all other damages County may be entitled to from the Contractor.

SECTION 58. TERMINATION FOR CONVENIENCE OF COUNTY

- A. **Termination for Convenience:** The County, at its discretion, may terminate this Contract at any time without cause, in whole or in part, upon giving the Contractor 7 days written notice of such termination. Upon such termination, the Contractor shall immediately cease work and remove from the jobsite all of its labor forces, equipment, and material as County elect not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as County may require assigning to the County the Contractor's interest in all subcontracts and purchase orders designated by County. After all such steps have been taken to County's satisfaction; the Contractor shall receive as full compensation for termination and assignment only the following:
- i. All amounts then otherwise due under the terms of this Contract for actual work performed and approved by County; and
 - ii. Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination. The Contractor shall not be entitled to any compensation for lost profits or for any other type of contractual compensation or damage, other than those provided by the preceding sentence, including any on site or home office overhead. Upon payment of the foregoing, County shall have no further liabilities or obligations to Contractor of any nature.
- B. **Termination Effect on Surety:** In no event shall termination for the convenience of the County terminate the obligation of the Contractor's surety on its payment and performance bonds.

SECTION 59. PRECONSTRUCTION CONFERENCE

County shall notify the Contractor as to the location, date, and time of a preconstruction conference to confirm procedures for processing construction estimates for payment and related submissions and to discuss other matters pertaining to scheduling and execution of the Work.

SECTION 60. PROJECT SIGN(S)

The Contractor shall supply, erect, and maintain Project Sign(s) in accordance with the County of Roanoke Standard Detail. The sign(s) shall be located as directed by County. The Contractor shall not display any other signs or advertisements.

SECTION 61. ENTIRE CONTRACT.

This Contract, including any attachments, exhibits, and referenced documents, constitutes the complete understanding between the parties. This Contract may be modified only by written agreement properly executed by the parties.

THIS AGREEMENT may be modified in writing by mutual agreement of both parties.

IN WITNESS WHEREOF, the parties hereto have signed this Contract by their authorized representatives.

(Full Legal Name of Consultant)

By_____

Printed Name and Title

Roanoke County Board of Supervisors

By_____

Printed Name and Title

Approved as to execution:

County Attorney/Assistant County Attorney

CONTRACT 2023-011
BETWEEN COUNTY OF ROANOKE AND [VENDOR NAME] FOR
PUBLIC SERVICES STORAGE BUILDING RENOVATIONS AND CHANGE-OF-USE

EXHIBIT 1: SAMPLE CONTRACTOR'S INSURANCE AND BOND REQUIREMENTS

REFERENCE: IFB # 2023-011

INSURANCE REQUIREMENTS SECTION

The Contractor shall comply with the insurance requirements set forth in the Contract, including the items set forth below:

- A. Neither the Contractor nor any subcontractor shall commence work under this Contract until the Contractor has obtained and provided proof of the required insurance coverages to the County, and such proof has been approved by the County. The Contractor confirms to the County that all subcontractors have provided Contractor with proof of such insurance, or will do so prior to commencing any work under this Contract.
- B. Contractor, including all subcontractors, shall, at its and/or their sole expense, obtain and maintain during the life of this Contract the insurance policies and/or coverages required by this section. The County and its officers, employees, agents, assigns, and volunteers shall be added as an additional insured to the general liability and automobile coverages of any such policies and such insurance coverages shall be primary and noncontributory to any insurance and/or self-insurance such additional insureds may have. The Contractor shall immediately notify in writing the County of any changes, modifications, and/or termination of any insurance coverages and/or policies required by this Contract. The Contractor shall provide to the County with the signed Contract an Acord certificate of insurance which states in the description of operations section one of the two paragraphs below:
 - 1. The County and its officers, employees, agents, assigns, and volunteers are additional insureds as coverage under this policy includes ISO endorsement CG 20 33 which provides that the insured status of such entities is automatic if required by a contract or a written agreement. (If additional insured status is automatic under a different coverage form, Contractor must attach a copy of the coverage form to its certificate. Any required insurance policies shall be effective prior to the beginning of any work or other performance by Contractor and any subcontractors under this Contract).

OR

- 2. ISO endorsement CG 20 10 will be issued, prior to the beginning of any work or other performance by Contractor under this Contract, to the County and its officers, employees, agents, assigns, and volunteers naming them as an additional insured under the general liability coverage. (A copy of the binder confirming the issuance must be attached to the certificate. Any required insurance policies shall be

effective prior to the beginning of any work or other performance by Contractor and any subcontractors under this Contract).

However, if B (1) or (2) cannot be provided, the County's Risk Manager, in such Manager's sole discretion, may approve such other certificate of insurance or insurance document(s) that the Risk Manager deems acceptable. The County of Roanoke shall also be named as the Certificate Holder.

C. **The following insurance coverages and limits are required in order to provide services or materials to Roanoke County general government agencies and the Roanoke County Public Schools. These limits may be adjusted depending on the type of service or materials being provided and the exposure to risk.**

The Successful Offeror shall carry Liability Insurance in the amount specified below, including contractual liability assumed by the Successful Offeror, and shall deliver a Certificate of Insurance from carriers acceptable to the owner specifying such limits. The Certificate shall show the County of Roanoke and Roanoke County Public Schools, their supervisory boards and members thereof, officers, agents, employees and volunteers as an additional insureds on the Commercial General Liability, Automobile Liability and Excess/Umbrella Liability coverage. The additional insured status shall be endorsed to the coverage with the provision that this coverage "is primary to all other coverage the County of Roanoke and/or Roanoke County Public Schools may possess." A Certificate of Insurance evidencing the additional insured status must be presented to the County of Roanoke and/or Roanoke County Public Schools along with a copy of the Endorsement prior to work or services beginning.

The coverage shall be provided by a carrier(s) rated "Excellent" by A.M. Best. In addition, the insurer shall agree to give the County 30 days' notice of its decision to cancel coverage.

1. **Workers' Compensation**

Statutory Virginia Limits

Employers' Liability Insurance

- \$100,000 for each Accident by employee
- \$100,000 for each Disease by employee
- \$500,000 policy limit by Disease

2. **Commercial General Liability - Combined Single Limit**

- \$1,000,000 each occurrence including contractual liability for specified agreement
- \$2,000,000 General Aggregate (other than Products/Completed Operations)
- \$2,000,000 General Liability-Products/Completed Operations
- \$1,000,000 Personal and Advertising injury
- \$ 100,000 Fire Damage Legal Liability

Coverage must include Broad Form property damage and (XCU) Explosion, Collapse and Underground Coverage

3. **Business Automobile Liability** – including owned, non-owned and hired car coverage
 - Combined Single Limit - \$1,000,000 each accident
4. **Additional Insurance Requirements**

Additional specific insurance coverage minimum requirements to be provided by Contractor may include the following as detailed in the Supplemental General Conditions:

 - a. **Builders Risk:** At the discretion of the County, the Contractor, at its cost, shall obtain and maintain in the names of the County and the Contractor "all-risk" builders risk insurance (if approved by the County) upon the entire structure or structures on which the Work of this Contract is to be done and upon all material in or adjacent thereto or those that are "off-site" but which are intended for use thereon, to one hundred percent (100%) of the completed value thereof.
 - b. **Property Coverage:** Installation Floater (and Rigger's Form, if applicable) will be required for the installation of contents or equipment; coverage will begin with supplier and continue until equipment/contents have been fully installed. Floater will be valued for the replacement cost value of equipment/contents including all costs. The Contractor shall provide coverage for portions of the work stored off-site after written approval of the County at the value established in the approval and for portions of the work in transit.
 - c. **Special Hazards:** In the event special hazards are evident in the work contemplated, or if required by the Contract Documents, the Contractor shall obtain and maintain during the life of the Contract a rider to the policy or policies required, in an amount not less than \$2,000,000. Should any unexpected special hazards be encountered during the performance of this Contract that could not have been reasonably foreseen, the Contractor shall, prior to performing any work involving the special hazard, immediately obtain this insurance as instructed by the County. In the event the special hazard requiring the additional coverage was not a part of the original bid, the expense of such insurance shall be reimbursed to the Contractor by the County, otherwise the Contractor shall assume full responsibility for the purchase with no charge back to the County.
 - d. **Deductible:** Deductible/self-insured retention amounts shall be reduced or eliminated upon written request from County. The insurer's cost of defense (and appeal), including attorney's fees, shall not be included within the coverages provided but shall remain the insurer's responsibility.
 - e. **Term:** Insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective work.
 - f. **Limit of Liability:** Nothing contained in these insurance requirements is to be construed as limiting the liability of Contractor or Contractor's insurance carriers. County does not in any way represent that the coverage's or the limits of insurance specified is sufficient or adequate to protect Contractor's interests or liabilities, but are merely minimums. The obligation of the Contractor to purchase insurance herein shall not in any way limit the obligation of the Contractor in any

event and/or in the event that the County should suffer an injury or loss in excess of the amount recoverable through insurance.

- i. Contractual Liability covers the following indemnity agreement: "The Successful Offeror agrees to indemnify, defend and hold harmless the County of Roanoke and Roanoke County Public Schools, their supervisory boards and members thereof, officers, agents, employees and volunteers from any claims, damages, suits, actions, liabilities and costs of any kind or nature, including attorneys' fees, arising from or caused by the provision of any services, the failure to provide any services or the use of any services or materials furnished (or made available) by the Successful Offeror, provided that such liability is not attributable to the County or School Division's sole negligence."

D. Contracts of \$100,000 or More: The following minimum insurance requirements apply in addition to the above requirements:

1. Limits of Liability: For the Commercial General Liability policy:
 - a. \$1,000,000 each occurrence including contractual liability for specified agreement occurrence
 - b. \$2,000,000 General Aggregate (other than Products/Completed Operations)
 - c. \$2,000,000 General Liability-Products/Completed Operations
 - d. \$1,000,000 Personal and Advertising injury
 - e. \$ 100,000 Fire Damage Legal LiabilityCoverage must include Broad Form property damage and (XCU) Explosion, Collapse and Underground Coverage.

Coverage is to be written on an "occurrence" and "per project" basis and such coverage shall include:

2. Umbrella Liability Insurance:

This coverage shall be written for minimum limit of:

 - a. \$5,000,000 each occurrence for Personal and Bodily Injury and Property Damage

This Policy shall apply in excess and follow form of employer's liability, commercial general liability, and auto liability. The intent of this insurance specification is to provide the coverage required and the limits expected for each type of coverage. With regard to the Business Automobile Liability and Commercial General Liability, the total amount of coverage can be accomplished through any combination of primary and excess/umbrella insurance. However, the total insurance protection provided for Commercial General Liability or for Business Automobile Liability, either individually or in combination with the Excess/Umbrella Liability, must total \$5,000,000 per occurrence. This insurance shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded the County of Roanoke and Roanoke County Public Schools. This policy shall be endorsed to be primary with respect to the additional insured.

E. Contracts Less Than \$100,000: The following minimum insurance limits apply unless specified otherwise in the Supplemental General Conditions:

1. Limits of Liability: For the Commercial General Liability policy:
 - a. \$1,000,000 each occurrence including contractual liability for specified agreement occurrence
 - b. \$1,000,000 General Aggregate (other than Products/Completed Operations)
 - c. \$1,000,000 General Liability-Products/Completed Operations
 - d. \$1,000,000 Personal and Advertising injury
 - e. \$ 100,000 Fire Damage Legal Liability

Coverage must include Broad Form property damage and (XCU) Explosion, Collapse and Underground Coverage.

- F. **Proof of Insurance Coverage:** The policies of insurance required by Sections 4.1, 4.2, or 4.3 shall be provided by a carrier(s) rated "Excellent" by A.M Best, licensed to do business in Virginia and maintained for the life of the Contract by the Contractor. Other insurance requirements include the following:
1. The Contractor shall furnish the County with the required certificates of insurance showing the insurer, type of insurance, policy number, policy term, deductible, and the amount insured for property coverage's and the limits for liability coverage's.
 2. The Contractor shall notify County and Risk Manager in writing within thirty (30) consecutive calendar days if any of the insurance coverage's or policies are cancelled or materially altered and Contractor shall immediately replace such policies and provide documentation of such to County and Risk Manager.
 3. The required insurance policies and coverages, excluding those for Workers' Compensation and Professional Liability, shall name the County of Roanoke, its governing body, officers, agents, volunteers and employees as additional insured and the certificate of insurance shall show if the policies provide such coverage. Waiver of subrogation is required with respect to any policy of workers' compensation and employers' liability insurance required under this Section. The certificate of insurance shall show if the policies provide such waiver. Additional insured and waiver endorsements shall be received by the County's Risk Manager from the insurer with the certificate of insurance unless the County's Risk Manager agrees to another process. The County's Risk Manager may approve other documentation of such insurance coverages.
 4. Insurance coverage shall be in a form and with an insurance company approved by the County which approval shall not be unreasonably withheld. Any insurance company providing coverage under this Contract shall be authorized to do business in the Commonwealth of Virginia.
 5. The classification code numbers appearing on the Commercial General Liability coverage parts shall not exclude the symbols "X-C-U".
 6. The certificate holders on the Accord form Certificates of Insurance shall be:

Roanoke County Board of Supervisors
5204 Bernard Drive, Suite 300F
Roanoke, VA 24019-0798
Attn: Purchasing Dept.

- G. Compliance by the Contractor with the foregoing requirements as to carrying insurance shall not relieve the Contractor of their liabilities provisions of the Contract
- H. Contractual Liability covers the following indemnity agreement: “The Successful Offeror agrees to indemnify, defend and hold harmless the County of Roanoke and Roanoke County Public Schools, their supervisory boards and members thereof, officers, agents, employees and volunteers from any claims, damages, suits, actions, liabilities and costs of any kind or nature, including attorneys’ fees, arising from or caused by the provision of any services, the failure to provide any services or the use of any services or materials furnished (or made available) by the Successful Offeror, provided that such liability is not attributable to the County or School Division’s sole negligence.”
- I. The continued maintenance of the insurance policies and coverages required by the Agreement is a continuing obligation, and the lapse and/or termination of any such policies or coverages without approved replacement policies and/or coverages being obtained shall be grounds for termination of the Consultant/Contractor for default.
- J. Nothing contained in the insurance requirements is to be construed as limiting the liability of the Consultant/Contractor, and/or its subcontractors, or their insurance carriers. The County does not in any way represent that the coverages or the limits of insurance specified are sufficient or adequate to protect the Consultant/Contractor’s interest or liabilities, but are merely minimums. The obligation of the Consultant/Contractor, and its subcontractors, to purchase insurance shall not in any way limit the obligations of the Consultant/Contractor in the event that the County or any of those named above should suffer any injury or loss in excess of the amount actually recoverable through insurance.
- K. The classification code numbers appearing on the Commercial General Liability coverage parts shall not exclude the symbols "X-C-U".
- L. The intent of this insurance specification is to provide the coverage required and the limits expected for each type of coverage. With regard to the Business Automobile Liability and Commercial General Liability, the total amount of coverage can be accomplished through any combination of primary and excess/umbrella insurance. However, the total insurance protection provided for Commercial General Liability or for Business Automobile Liability, either individually or in combination with the Excess/Umbrella Liability, must total \$1,000,000 per occurrence. This insurance shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded the County of Roanoke and Roanoke County Public Schools. This policy shall be endorsed to be primary with respect to the additional insured.
- M. The certificate holders on the Accord form Certificates of Insurance shall be:
 - Roanoke County Board of Supervisors
 - 5204 Bernard Drive, Suite 300F
 - Roanoke, VA 24019-0798
 - Attn: Purchasing Dept.

N. Claims Made Policies

If the liability insurance has been issued on a "claims made" basis, the Successful Offeror must either:

1. Agree to provide certificates of insurance evidencing the above coverage for a period of three (3) years after final payment under the Agreement for General Liability policies. This certificate shall evidence a "retroactive date" no later than the beginning of the Offeror's work; or
2. Purchase the extended reporting period endorsement for the policies and provide certificates of insurance and a copy of the endorsement.

BOND REQUIREMENTS SECTION

The Contractor shall comply with the bond requirements set forth in the Contract, including the items set forth below:

- A. Except in cases of emergency, all bids for construction contracts shall be accompanied by a bid bond from a surety company selected by the bidder, which is legally authorized to do business in Virginia.
1. A bid, payment or performance bond for contracts for goods or services other than construction may be required if provided in the Invitation for Bid.
 2. The amount of the bid bond shall not exceed five percent (5%) of the total amount of the bid.
 3. In lieu of a bid bond, a bidder may furnish a certified check or cash escrow in the face amount required for the bond.
 4. Upon award of any public construction contract exceeding \$100,000 awarded to any prime contractor, such contractor shall furnish:
 - a. Performance bond in the sum of the contract amount.
 - b. Payment bond in the sum of the contract amount.
 5. Performance and/or payment bonds may be required for construction contracts below \$100,000 at the discretion of the County.
 6. In cases of emergency performance bonds/payment bonds are required within ten (10) calendar days of notice to proceed/project commencement.

END

**CONTRACT 2023-011
BETWEEN COUNTY OF ROANOKE AND VENDOR NAME FOR
PUBLIC SERVICES STORAGE BUILDING RENOVATIONS & CHANGE-OF-USE**

EXHIBIT 2: SCOPE OF WORK/FEE SCHEDULE

REFERENCE: IFB# 2023-011

The following are the services and/or items that the Successful Bidder will be required to provide and such services are to be included in the bids.

The services, work, and/or items that the Contractor shall provide in a timely and proper manner in accordance with the Contract include, but are not necessarily limited to, the following:

Reference IFB 2023-011 specifications and project plans included as Attachment E to IFB 2023-011.

IFB # 2023-011
ATTACHMENT E: Project Plans

Prepared by Balzer and Associates, dated June 22, 2022.

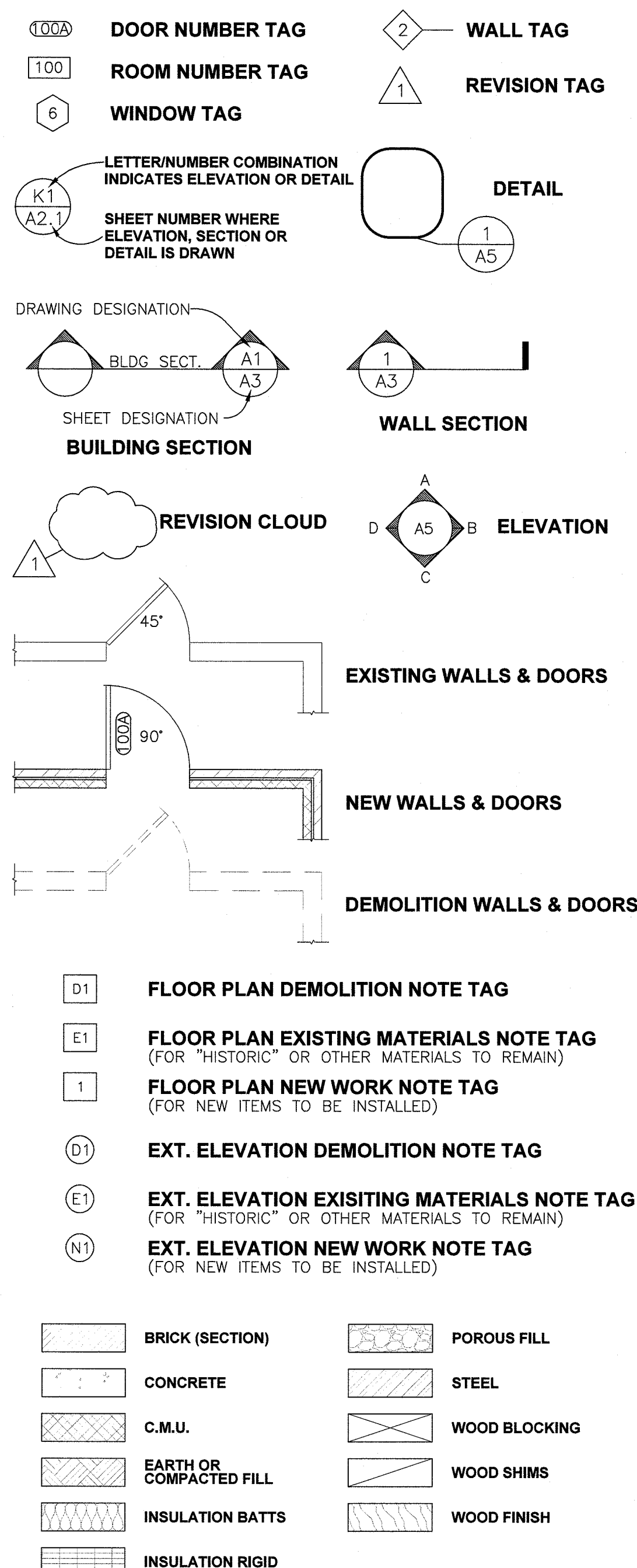
ROANOKE COUNTY PUBLIC SERVICES STORAGE BUILDING

BUILDING INTERIOR RENOVATIONS & "CHANGE-OF-USE"
5285 HOLLINS ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWING ABBREVIATIONS

AF	ABOVE FINISH FLOOR	MH	MAIN HOLE
AP	ACCESS PANEL	MFR	MANUFACTURER
ACPL	ACOUSTIC CEILING TILE	MAS	MASONRY
A/C	ACOUSTICAL PLASTER	MO	MASONRY OPENING
ALUM	AIR CONDITIONING	MTL	MATERIAL
AB	ANCHOR BOLT	MECH	MECHANICAL
ANDZ	AND ZEE	MTL BLDG	METAL BUILDING MANUFACTURER
APPROX	APPROXIMATELY	MRD	METAL ROOF DECKING
AD	AREA DRAIN	MIN	MINIMUM
ARCH	ARCHITECT (URAL)	MISC	MISCELLANEOUS
ASPH	ASPHALT	MLDG	MOUNTING
BP	BASE PLATE	MTS	MOUNTING
BSMT	BASMENT	NOM	NOMINAL
BM	BEAM	NIC	NOT IN CONTRACT
BRO	BEARING	NYS	NOT TO SCALE
BIT	BITUMINOUS	OC	ON CENTER
BLDG	BUILDING	OPH	OPPOSITE
BD	BOARD	OPH	OPPOSITE HAND
BDT	BOTTOM	OD	OUTSIDE DIAMETER
BRK	BRICK	OF	OVERALL
BLDG	BUILDING	OH	OVERHANG
CPT	CARPET	PNL	PANEL
CSMT	CASED OPENING	PMT	PAVEMENT
C/H	CEILING HEIGHT	PTD	PAINTED
CL	CENTER LINE	PBD	PARTIAL BOARD
CT	CERAMIC TILE	PLAST	PLASTER
CR	CHAIR RAIL	PLAM	PLASTIC LAMINATE
CLS	CLOSET	PLG	PLATE GLASS
CLC	CLEARANCE	PMD	POLYMER
CLC	CLOSET	PVC	POLYVINYL CHLORIDE
CONC	CONCRETE	PFE	PORTABLE FIRE EXTINGUISHER
CONC	CONCRETE MASONRY UNIT	PSF	POUNDS/SQUARE FOOT
CONST	CONSTRUCTION	PSF	POUNDS/SQUARE INCH
CONT	CONTINUOUS	PC CONC	PRECAST CONCRETE
CJ	CONTROL JOINT	PREPN	PROPERTY LINE
CORR	CORRIDOR	PROP	PROPOSED
CTR	COUNTER	QT	QUARRY TILE
CRS	COURSE	RAD	RADIUS
DEM	DEMOLITION	RISER	RECEPACLE/ELECTRICAL
DEPT	DEPARTMENT	REC	REFRIGERATOR
DIAG	DIAGONAL	REF	REFRIGERATOR
DIA	DIAMETER	REIN	REINFORCED
DM	DIMENSION	REIN	REINFORCED
DO	DOOR	REIN	REINFORCED
DIV	DIVISION	REIN	REINFORCED
DR	DOUBLE HUNG	REIN	REINFORCED
DS	DOWN SPOUT	REIN	REINFORCED
D	DRAIN	REIN	REINFORCED
DT	DRAIN TILE	REIN	REINFORCED
DWG	DRAWING	REIN	REINFORCED
ELEC	ELECTRIC	REIN	REINFORCED
ENC	ELECTRIC WATER COOLER	REIN	REINFORCED
EP	ELECTRICAL PANEL BOARD	REIN	REINFORCED
ELEV	ELEVATION	REIN	REINFORCED
EMER	EMERGENCY	REIN	REINFORCED
ENG	ENGINEER(ING)	REIN	REINFORCED
ENG	ENGINEER(ING)	REIN	REINFORCED
ENT	ENTRANCE	REIN	REINFORCED
EQU	EQUIPMENT	REIN	REINFORCED
EXIST	EXISTING	REIN	REINFORCED
EXP	EXPANSION BOLT	REIN	REINFORCED
EJ	EXPANSION JOINT	REIN	REINFORCED
EXT	EXTERIOR	REIN	REINFORCED
FB	FACE BRICK	REIN	REINFORCED
FOB	FACE OF BRICK	REIN	REINFORCED
FT	FEET, FOOT	REIN	REINFORCED
FN	FENCE	REIN	REINFORCED
FN FL	FINISH FLOOR	REIN	REINFORCED
FEC	FIRE EXTINGUISHER CABINET	REIN	REINFORCED
FPC	FIRE HOSE CABINET	REIN	REINFORCED
FPL	FIREPLACE	REIN	REINFORCED
FLR	FLOOR(ING)	REIN	REINFORCED
FD	FLOOR DRAIN	REIN	REINFORCED
FTG	FOOTING	REIN	REINFORCED
FDN	FOUNDATION	REIN	REINFORCED
FRA	FRESH AIR	REIN	REINFORCED
FBO	FURNISHED BY OTHERS	REIN	REINFORCED
GA	GAGE, GAUGE	REIN	REINFORCED
GALV	GALVANIZED	REIN	REINFORCED
GC	GENERAL CONTRACTOR	REIN	REINFORCED
GL	GLASS	REIN	REINFORCED
GLB	GLASS BLOCK	REIN	REINFORCED
GD	GRADE, GRADING	REIN	REINFORCED
OWB	GYPSUM WALL BOARD	REIN	REINFORCED
HC	HANDICAP	REIN	REINFORCED
HDWR	HARDWARE	REIN	REINFORCED
HWD	HARDWOOD	REIN	REINFORCED
HDR	HEADER	REIN	REINFORCED
HTG	HEATING	REIN	REINFORCED
HVAC	HEATING/VENTING/AIR CONDITIONING	REIN	REINFORCED
HOT	HEAVY DUTY	REIN	REINFORCED
HOC	HOLLOW CORE	REIN	REINFORCED
HGT	HEIGHT	REIN	REINFORCED
HOC	HOLLOW CORE	REIN	REINFORCED
HORZ	HORIZONTAL	REIN	REINFORCED
HSE	HOLLOW CORE	REIN	REINFORCED
HV	HOT WATER HEATER	REIN	REINFORCED
ID	INSIDE DIAMETER	REIN	REINFORCED
INCL	INCLUDE(D)(ING)	REIN	REINFORCED
INSUL	INSULATE	REIN	REINFORCED
INT	INTERIOR	REIN	REINFORCED
JAN	JANITOR'S CLOSET	REIN	REINFORCED
KIT	KITCHEN	REIN	REINFORCED
KD	KNOCK DOWN	REIN	REINFORCED
KD	KNOCKOUT	REIN	REINFORCED
LBL	LABEL	REIN	REINFORCED
LAM	LAMINATE(D)	REIN	REINFORCED
LAV	LAVATORY	REIN	REINFORCED
LH	LEFT HAND	REIN	REINFORCED
LG	LENGTH, LONG	REIN	REINFORCED
LW	LIGHTWEIGHT	REIN	REINFORCED
LTL	LINE LOAD	REIN	REINFORCED
LL	LINE LOAD	REIN	REINFORCED
LVR	LOUVER	REIN	REINFORCED

SYMBOLS & MATERIALS



PROJECT DIRECTORY

OWNER/TENANT
COUNTY OF ROANOKE
Contact: Ron Riquelmy
5204 Bernard Dr, Suite 300F
Roanoke, Virginia 24018
Phone: 540-777-6345

ARCHITECT
Balzer and Associates, Inc.
Contact: Robert W. Pilkington, Architect
1208 Corporate Circle
Roanoke, Virginia 24018
Phone: 540-772-9580

MECHANICAL ENGINEER
Stottsberg Engineering
Contact: John Berg, PE
P.O. Box 876
Fincastle, Virginia 24090
Phone: 540-467-1016

ELECTRICAL ENGINEER
Gibson Engineering
Contact: Daniel Gibson, PE
2100 Lubna Drive
Christiansburg, Virginia 24073
Phone: 540-898-6069

BUILDING CODE ANALYSIS

THIS SET OF CONSTRUCTION DOCUMENTS ADDRESSES A "CHANGE-OF-USE" WITH INTERIOR RENOVATIONS IN AN EXISTING BUILDING @ THE ABOVE REFERENCED ADDRESS. THERE WILL BE NO STRUCTURAL MODIFICATIONS TO THE EXISTING BUILDING. THERE WILL BE NO ADDITIONAL FLOOR AREA ADDED TO THE EXISTING BUILDING. THERE WILL BE NO EXTERIOR MODIFICATIONS TO THE EXISTING BUILDING.

THIS RENOVATION WILL INCLUDE A "CHANGE-OF-USE" OF THE BUILDING FROM AN EXISTING "F-1/B/S-2" USE TO AN "F-1/B/S-1" USE FOR MODERATE HAZARD STORAGE, WITH ONE AREA OF THE BUILDING SPECIFICALLY CHANGING TO "S-1".

THIS RENOVATION IS BEING DESIGNED UNDER THE 2015 VIRGINIA EXISTING BUILDING CODE (VEBC), CHAPTER 7 "CHANGE OF USE" AND CHAPTER 6 "ALTERATIONS LEVEL 2" (WITH COMPLIANCE WITH VEBC SECTION 602 PER VEBC 603.2.)

PLEASE NOTE, THIS PROJECT IS DESIGNED AS A SINGLE BUILDING WITH MULTIPLE USES (EXISTING FIRE-RATED WALLS ARE "FIRE BARRIERS" AND AS SUCH THE OVERALL FOOTPRINT IS CONSIDERED A SINGLE BUILDING). THIS PERMIT IS FOR THE CHANGE-OF-USE AND OCCUPANCY OF A PORTION OF THE EXISTING BUILDING. REMAINING TENANT SPACE (AS NOTED ON PLAN) TO REMAIN "AS IS" WITH NO CHANGES UNDER THIS PERMIT.

CODE EDITION: 2015 VEBC (2015 IEBC AND IBC w/ Virginia Amendments)
EXISTING BUILDING USE GROUP: F-1/B/S-2 (PER PREVIOUS PERMIT).
NEW USE GROUPS: F-1/B/S-1 (SEPARATED MIXED USE, SEE PLAN)
EXISTING BLDG. CONSTRUCTION TYPE: IIB ("2B")

TABULAR ALLOWABLE AREA (VCC TABLE 506.2): 15,500 S.F. (F-1 CONTROLS)
OPEN PERIMETER INCREASE: 100% OPEN= 75% INCREASE
TOTAL ALLOWABLE AREA: 27,125 S.F.
EXISTING BLDG. AREA: 21,670 S.F. (TO INSIDE FACE OF EXTERIOR WALLS)

TABULAR ALLOW. BLDG. HEIGHT (VCC TABLES 504.3 & 504.4): 2-ST/ 55'
EXISTING BLDG. HEIGHT= 1 STORY / ±24'-0"

"CHANGE-OF-USE" AREA UNDER THIS PERMIT= 14,248 S.F. (S-2 TO S-1)
WORK AREA UNDER THIS PERMIT= ± 9,100 S.F.

FIRE PROTECTION SYSTEMS:

- A. AUTOMATIC FIRE SPRINKLER SYSTEM NOT REQUIRED PER 2015 VCC 903.2.4 AND 903.2.9 (F-1 AND S-1 USE FIRE AREAS ARE LESS THAN 12,000 S.F. INDIVIDUALLY AND LESS THAN 24,000 S.F. TOTAL IN BUILDING), AND NO SPRINKLER REQUIREMENT FOR B USES UNDER VCC 903. (PLEASE NOTE, BUILDING IS DIVIDED INTO SEPARATE FIRE-AREAS BY 3-HOUR FIRE BARRIERS PER VCC 707., SEE SHEET A1.1)
- B. FIRE ALARM SYSTEM NOT REQUIRED PER 2015 VCC 907.2.2 AND 907.2.4 (F-1 AND B USES WITH LESS THAN 500 OCCUPANTS AND ONLY 1-STORY), AND NO FIRE ALARM REQUIREMENT FOR S-1 USE UNDER VCC 907.
- C. FIRE EXTINGUISHERS TO BE SHALL BE PROVIDED THROUGHOUT BUILDING PER 2015 VCC 906, DISTRIBUTED TO MEET VCC TABLE 906.3.(1). (SEE SHEET A1.1 FOR EXISTING AND PROPOSED LOCATIONS, WITH TRAVEL DISTANCE DESIGNED TO BE LESS THAN 75' FROM ANY POINT IN BLDG.)

FIRE-RATING OF BLDG. ELEMENTS:

- 2B CONSTRUCTION REQUIRES NO FIRE-RATING OF STRUCTURE
- FIRE-RATED EXTERIOR WALLS NOT REQUIRED PER VCC TABLE 602, ALL EXTERIOR WALLS GREATER THAN 10' FROM LOT LINES, SEE SITE KEY PLAN ON SHEET A1.1.
- 3-HOUR FIRE-RATED SEPARATION WALLS REQUIRED TO SEPARATE BUILDING INTO FIRE-AREAS, SEE SPRINKLER NOTES ABOVE.
- FIRE-RATED EXIT ACCESS CORRIDORS NOT REQUIRED (LESS THAN 30 OCCUPANTS USING ANY "CORRIDOR", SEE SHEET A1.0).

BUILDING OCCUPANT LOAD: 104 OCCUPANTS TOTAL (SEE SHEET A1.1)

EXIT REQUIREMENTS:

- 2 EXITS REQUIRED PER 2015 VCC TABLE 1006.3.1 (MULTIPLE BLDG. EXITS PROVIDED, SEE SHEET A1.1)
- ACCESSIBLE MEANS-OF-EGRESS NOT REQUIRED PER 2015 VCC 1009.1, EXCEPTION 1.
- EXIT TRAVEL DISTANCE= 200' PER 2015 VCC TABLE 1017.2; 156' MAX PROVIDED
- MAX. COMMON PATH OF TRAVEL= 75' PER VCC TABLE 1006.2.1 (LESS THAN 75' PROVIDED FROM ANY REMOTE POINT IN BLDG., SEE SHEET A1.1)
- FIRE-RATED EXIT ACCESS CORRIDORS NOT REQUIRED PER 2015 VCC 1020.1 (LESS THAN 30 OCCUPANTS USING ANY "CORRIDOR", SEE SHEET A1.0).
- EXIT REMOTENESS COMPLIANT W/ VCC 1007.1.1 (SEE SHEET A1.1)

PLUMBING FIXTURE REQUIREMENTS (2015 VCC 2902.1):

- (24) B USE OCCS. + (49) F-1 USE OCCS. + (31) S-1 USE OCCS. = 104 OCCS.
(12) OCCS. @ 1:25 + (40) OCCS. @ 1:100= (1) TOILET/LAV. REQ. PER SEX
(4) TOILETS/LAVS PROVIDED THROUGHOUT BLDG., SEE PLAN
(1) DRINKING FOUNTAINS NOT REQUIRED, OWNER HAS AN EXCEPTION GRANTED PREVIOUSLY BY ROANOKE COUNTY TO PROVIDE BOTTLED WATER SERVICE IN LIEU OF DRINKING FOUNTAINS.
(1) MOP SINK REQUIRED/PROVIDED (EXISTING).
NOTE: BASED ON ABOVE CALCULATIONS, NO NEW PLUMBING FIXTURES OR PLUMBING WORK REQUIRED.

HVAC/VENTILATION AIR:

- CHANGE-OF-USE DOES NOT CONSTITUTE A INCREASE IN OCCUPANT LOAD FOR MAJORITY OF FIRE AREA WHERE S-1 USE IS LOCATED. NO ADDITIONAL VENTILATION AIR REQUIRED.

- HVAC/VENTILATION FOR ADD/ALTERNATE: SPECIFIC AREAS WHERE ROOM TO BE ENCLOSED BY HARD WALLS (NEW EXERCISE/GYM SPACE) TO BE PROVIDED WITH REQUIRED VENTILATION AIR OR LOCAL EXHAUST PER 2015 VMC, SEE MECHANICAL DRAWINGS.

2015 VEBC NOTES:(MOST RESTRICTIVE VRC SECTION APPLIED)

VRC #	CATEGORY	REQUIREMENT
702	SPECIAL USES	N/A
703.1	INTERIOR FINISH	EXISTING FINISHES MEET VCC FOR NEW USE.
703.2	VERT. OPNGS.	N/A (1-STORY BLDG.)
704.2	FIRE SPRINKLER	NOT REQUIRED (SEE ABOVE)
704.3	FIRE ALARM	NOT REQUIRED (SEE ABOVE)
705	EGRESS	CHANGE-OF-USE AREA MEETS VCC FOR EGRESS (SEE SHEET A1.0)
706	HEIGHT & AREA	BLDG. MEETS VCC FOR NEW USE (SEE ABOVE)
707	EXTERIOR WALLS	BLDG. MEETS VCC FOR NEW USE (SEE ABOVE)
708	ELECTRICAL	NEW USE IS NOT CONSIDERED A SPECIAL USE. NEW USE DOES NOT REQUIRE SERVICE UPGRADE. NEW WORK TO MEET 2014 NEC (SEE ELEC DWGS.)
709	VENTILATION	CHANGE-OF-USE AREA DOES NOT CONSTITUTE AN INCREASE IN OCCUPANCY LOAD. NEW WORK TO MEET 2015 VMC (SEE MECH DWGS.)
710	PLUMBING	BLDG. MEETS VCC FOR # OF FIXTURES (SEE ABOVE)
711	STRUCTURAL	NO STRUCTURAL MODIFICATIONS
712	ACCESSIBILITY	BLDG. TO MEET VEBC CHAPTER 4 (SEE BELOW)

ACCESSIBILITY (2015 VEBC CHAPTER 4):

- VEBC 402.2: ADDITIONAL ACCESSIBLE FEATURES NOT REQUIRED FOR PARTIAL CHANGE OF OCCUPANCY.

DRAWING INDEX

SHEET NO.	SHEET TITLE
T1.1	COVER SHEET & CODE ANALYSIS
T1.2	OUTLINE SPECIFICATIONS
D1.1	EXISTING/DEMOLITION FLOOR PLAN
A1.1	LIFE SAFETY PLAN
A1.2	BUILDING RENOVATION PLAN
A2.1	WALL SECTIONS & DETAILS
A2.2	FIRE-RATED ASSEMBLIES
A2.3	FIRE-RATED ASSEMBLIES
A2.4	FIRE-RATED ASSEMBLIES
E1.1	ELECTRICAL LEGEND & GENERAL NOTES
E2.1	ELECTRICAL FLOOR PLANS
E3.1	ELECTRICAL SPECIFICATIONS
E3.2	ELECTRICAL SPECIFICATIONS
DRAWINGS FOR ADD/ALTERNATE GYM/EXERCISE SPACE	
A3.1	ALTERNATE BID GYM SPACE
M1.1	MECHANICAL LEGEND, NOTES & SCHEDULES
M1.2	MECHANICAL SPECIFICATIONS
M2.1	MECHANICAL OVERALL PLAN
M2.2	ENLARGED MECHANICAL PARTIAL PLAN

SITE / ZONING INFORMATION

TAX PARCEL #: 039.05-02-04.00-0000
SITE ADDRESS: 5285 HOLLINS ROAD
PROPERTY ZONING: COUNTY-12S (HEAVY INDUSTRIAL DISTRICT W/ SPECIAL USE)
PROPERTY USE: STORAGE & VEHICLE MAINTENANCE

PROPERTY AREA: 16.36 ACRES (NOTE: NO CHANGE)
BUILDING AREA: 22,290 S.F. (GROSS TO OUTSIDE OF EXTERIOR WALLS)

NOTE: CHANGE-OF-USE FOR BUILDING DOES NOT CONSTITUTE A CHANGE IN SITE USAGE OR MORE CONCENTRATED USE OF THE SITE. CHANGE OF USE FOR BUILDING IS ONLY TO MEET BUILDING CODE FOR TYPES OF MATERIALS THAT CAN BE STORED IN BUILDING. AS SUCH, NO ADDITIONAL SITE AMENITIES, MODIFICATIONS OR PARKING IS ANTICIPATED TO BE REQUIRED.

ANY SITE INFORMATION IN THIS DRAWING SET FOR BUILDING PERMIT SUBMITTAL ARE FOR REFERENCE ONLY.

GENERAL CODE NOTES

GENERAL CODE NOTES:

- PROVIDE EMERGENCY EGRESS LIGHTING PER 2015 VCC 1008. MAINTAIN MINIMUM 1FC LIGHT LEVELS IN ALL SPACES PROVIDING EXIT ACCESS, PER VCC 1008.2.1.
- PROVIDE ILLUMINATED EXIT SIGNS PER 2015 VCC 1013. EXIT SIGNAGE SHALL BE INTERNALLY LIGHTED PER VCC 1013.5, AND SHALL BE CONNECTED TO AN EMERGENCY BACKUP POWER SOURCE PER VCC 1013.6.3.
- INTERIOR FINISH MATERIALS SHALL BE CLASS C OR BETTER IN ROOMS AND CLASS B OR BETTER IN EXIT ACCESS CORRIDORS AND OTHER EXITWAYS PER 2015 VCC TABLE 803.1.1.
- ALL LOCKS AND LATCHES SHALL COMPLY WITH 2015 VCC 1010.1.9. ALL DOORS TO BE EQUIPPED WITH LEVER HANDLES IF REQUIRED PER VCC (SEE SCHEDULE). PANIC HARDWARE TO BE PROVIDED FROM SPACES WITH 50 OR MORE OCCUPANTS.
- ALL NEW PIPING (PLUMBING, GAS, ETC.) USED IN THIS PROJECT SHALL BE LABELED ON SITE IN ACCORDANCE WITH ALL 2015 VCC, VMC & VPC APPLICABLE PROVISIONS.
- ALL FIRE-RATED WALL ASSEMBLIES SHALL BE LABELED ABOVE CEILINGS AT 8'-0" O.C. PER 2015 VCC 703.7.
- ALL INTERIOR OCCUPIED SPACES SHALL BE PROVIDED WITH EITHER NATURAL OR MECHANICAL VENTILATION IN ACCORDANCE WITH 2015 VCC 1203.1.

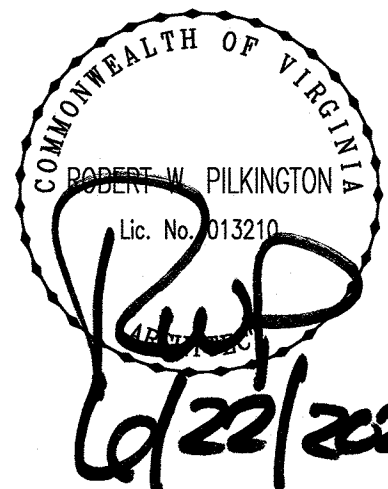


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ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG
BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE
COVER SHEET & CODE ANALYSIS

DRAWN BY: RWP
DESIGNED BY: RWP
CHECKED BY: --
DATE: 06/22/2022
SCALE: AS INDICATED
REVISIONS:

T1.1
PROJECT NO: 03220033.00

DIVISION I - GENERAL

- 1.1 ALL DESIGNS, CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL COMPLY WITH THE 2015 VIRGINIA CONSTRUCTION CODE (VCC) AND 2015 VIRGINIA EXISTING BUILDING CODE (VEBC), AS A MINIMUM LEVEL OF CONSTRUCTION DETAIL AND QUALITY. ALL WORK INCLUDED IN THE CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE CODE. BY COMMENCING CONSTRUCTION, CONTRACTOR ACKNOWLEDGES UNDERSTANDING F THE VUSBC AND AGREES TO INCORPORATE ALL REQUIRED ELEMENTS, WHETHER INDICATED WITHIN THE DOCUMENTS OR NOT.
- 1.2 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR SAFETY PRECAUTIONS AND PROGRAMS AS THEY RELATE TO THE WORK OF THIS PROJECT.
- 1.3 CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, ENGINEERING, PERMITTING AND ERECTION OF ALL TEMPORARY SCAFFOLDING, HOISTS, BRACING, FORM WORK, SHEETING, SHORING AND UNDERPINNING NECESSARY TO PERFORM THE WORK.
- 1.4 CONTRACTOR SHALL COORDINATE AND OWNER SHALL PAY FOR SPECIAL INSPECTIONS TO BE PROVIDED BY AN INDEPENDENT TESTING AGENCY AS DEFINED IN VCC SECTION 1704. INSPECTION REPORTS ARE TO BE SUBMITTED TO THE ARCHITECT AND BUILDING OFFICIAL.
- 1.5 NOT ALL DETAILS, EQUIPMENT, SYSTEMS OR MATERIAL SELECTIONS ARE INCLUDED IN THE DOCUMENTS. CONTRACTOR SHALL BASE HIS BID ON THE SUPPLIED INFORMATION, AND SHALL ALSO INCLUDE ANY ADDITIONAL DETAILS, EQUIPMENT, SYSTEMS OR MATERIALS REQUIRED TO DELIVER A COMPLETE AND FINISHED PRODUCT TO THE OWNER, OR REASONABLY AND NORMALLY INCLUDED IN A COMPLETED PROJECT OF SIMILAR SCOPE, IN COMPLIANCE WITH ALL LAWS, CODES AND ORDINANCES.
- 1.6 MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS ARE PROVIDED AS NECESSARY FOR OBTAINING PERMIT(S). PROVIDE ANY ADDITIONAL REQUIRED MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION, DRAWINGS, ENGINEERING, LABOR AND MATERIAL IF REQUIRED TO COMPLETE PROJECT.
- 1.7 ALL PUBLIC AREAS ON THE MAIN FLOOR LEVEL SHALL BE ACCESSIBLE TO THE HANDICAPPED, IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE (IBC) AND APPLICABLE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES, U.N.O. (NOTE: NO NEW WORK SHALL DECREASE THE LEVEL OF ACCESSIBILITY IN AND TO THE BUILDING.)
- 1.8 CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DRAWING DIMENSIONS PRIOR TO COMMENCING ANY WORK. ANY INCONSISTENCIES WITH THE DRAWINGS SHALL BE REPORTED TO THE ARCHITECT IN WRITING PRIOR TO COMMENCING WORK. FAILURE TO REPORT INCONSISTENCIES WILL RELIEVE ARCHITECT AND OWNER FROM ANY CLAIM FOR ADDITIONAL WORK REQUIRED RELATED TO THE INCONSISTENCY.
- 1.9 UNDER NO CIRCUMSTANCES SHALL THESE DRAWINGS BE USED FOR SHOP DRAWINGS.
- 1.10 ALL WALLS SUBJECT TO LATERAL LOAD DUE TO UNBALANCED FILL OR WIND SHALL BE BRACED PLUMB AND SHALL REMAIN BRACED UNTIL THE PERMANENT STRUCTURE ABOVE IS IN PLACE AND CAPABLE OF RESISTING ALL LOADS.
- 1.11 WORK NOTED AS "N.I.C." IS NOT PART OF THIS CONTRACT, AND WILL BE HANDLED BY OWNER AND TENANT UNDER SEPARATE CONTRACT. ALL ITEMS NOT NOTED AS THUS ON DRAWINGS SHALL BE ASSUMED TO BE PART OF CONTRACT WORK.
- 1.12 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROJECT MANAGEMENT AND COORDINATION DURING CONSTRUCTION AS NECESSARY TO COMPLETE THE PROJECT.
- 1.13 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY TEMPORARY UTILITIES AND SUPPORT FACILITIES NECESSARY TO COMPLETE THE WORK. ALL REQUIRED FEES FOR TEMPORARY SERVICES SHALL BE INCLUDED IN THE CONTRACT. PROVIDE ANY NECESSARY TEMPORARY CONSTRUCTION REQUIRED TO MAINTAIN OWNER/TENANT/PATRON USE OF THE EXISTING PROPERTY OUTSIDE OF THE LIMITS OF CONSTRUCTION.
- 1.14 SUBSTITUTIONS FOR SPECIFIED MATERIALS AND PRODUCTS SHALL BE MADE ONLY WITH PRIOR APPROVAL FROM THE ARCHITECT.
- 1.15 IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS, AND DRAWINGS REGARDING STRUCTURAL ISSUES, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
- 1.16 WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PIECES, SHALL BE REPEATED.
- 1.17 TEMPORARY BRACING, SHEETING, SHORING, ETC., REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY/STABILITY OF THE EXISTING BUILDINGS, SIDEWALKS, UTILITIES, ETC. DURING CONSTRUCTION IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA.
- 1.18 SHOP DRAWINGS:
- SHOP DRAWINGS FOR MATERIALS SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW PRIOR TO START OF FABRICATION OR COMMENCEMENT OF WORK.
 - NO PORTION OF THE CONTRACT DRAWINGS MAY BE REPRODUCED FOR SUBMITTAL AS SHOP DRAWINGS UNLESS AUTHORIZED BY BALZER AND ASSOCIATES, INC. IN WRITING. VIOLATION OF THIS PROVISION WILL RESULT IN THE REJECTION OF THE SHOP DRAWINGS AND WILL BE RETURNED WITHOUT BEING REVIEWED BY THE ARCHITECT OR STRUCTURAL ENGINEER.
 - SHOP DRAWINGS SHALL BEAR THE GENERAL CONTRACTOR'S STAMP OF APPROVAL, WHICH SHALL CONSTITUTE CERTIFICATION THAT HE HAS VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS, AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. SHOP DRAWINGS NOT REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL WILL BE REJECTED.
 - CHANGES TO SHOP DRAWINGS THAT ARE RE-SUBMITTED MUST BE CLOUDED OR OTHERWISE CLEARLY INDICATE THE CHANGES THAT HAVE BEEN MADE TO A PREVIOUSLY ISSUED AND REVIEWED DRAWING.
 - THE CONTRACTOR SHALL PROVIDE THE ARCHITECT OR STRUCTURAL ENGINEER WITH WRITTEN NOTICE OF DEVIATIONS OF ANY TYPE FROM THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE NOTICE MUST BE RECEIVED PRIOR TO SHOP DRAWING SUBMITTAL. THE CONTRACTOR REMAINS LIABLE FOR ANY DEVIATION UNLESS REVIEWED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND ACKNOWLEDGED IN WRITING, PRIOR TO RECEIPT OF THE SHOP DRAWINGS.
 - SHOP DRAWINGS WILL BE RETURNED NOT LATER THAN 10 WORKING DAYS AFTER RECEIPT BY THE ARCHITECT OR STRUCTURAL ENGINEER.
 - ARCHITECT/ENGINEER SHALL NOT BE LIABLE FOR WORK PERFORMED WITHOUT APPROVED SHOP DRAWINGS.

DIVISION 2 - FOUNDATION & SITE PREPARATION

(N/A)

DIVISION 3 - CONCRETE

- 3.1 ANY CONCRETE REPAIR WORK, IF REQUIRED, SHALL MEET THE FOLLOWING: CONCRETE MATERIALS, PROCESSES, AND WORK SHALL BE IN ACCORDANCE WITH ACI 318-11 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", UNLESS OTHERWISE NOTED OR DETAILED ON THE CONTRACT DRAWINGS. DETAIL, FABRICATE AND PLACE REINFORCEMENT IN ACCORDANCE WITH ACI 318-11 UNLESS OTHERWISE SHOWN.

DIVISION 4 - MASONRY

- 4.1 ANY CONCRETE MASONRY REPAIR WORK, IF REQUIRED, SHALL MEET THE FOLLOWING: ANY CONCRETE MASONRY WORK SHALL BE IN ACCORDANCE WITH ACI 530-11 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".

DIVISION 5 - STEEL

- 5.1 STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
- A. WIDE FLANGE SHAPES – ASTM A992 (FY = 50 KSI)
- B. ANGLES, CHANNELS, PLATES, MISC. SHAPES – ASTM A36 (FY = 36 KSI)
- C. PIPE COLUMNS – ASTM A500, GRADE B (FY = 42 KSI)
- D. HOLLOW STRUCTURAL SECTIONS (HSS) – ASTM A500, GRADE B (FY = 46 KSI)
- 5.2 STRUCTURAL STEEL WORK AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, AISC "MANUAL OF STEEL CONSTRUCTION", AND AISC "CODE OF STANDARD PRACTICE", INCLUDING THE "COMMENTARY" AND SUPPLEMENTS.
- 5.3 ALL SHOP CONNECTIONS SHALL BE WELDED, AND ALL FIELD CONNECTIONS SHALL BE BOLTED USING ASTM A325 HIGH STRENGTH BOLTS, UNLESS OTHERWISE NOTED AS WELDED OR OTHER CONNECTION ON DRAWINGS. ALL HIGH STRENGTH BOLTS SHALL BE ¾" DIAMETER INSTALLED IN OPEN HOLES 1¾" DIAMETER UNLESS OTHERWISE NOTED.
- 5.4 HARDENED WASHERS SHALL BE PROVIDED UNDER TURNING ELEMENT AT ALL HIGH STRENGTH BOLTED CONNECTIONS.
- 5.5 ALL ANCHOR RODS SHALL BE ASTM F1554, GRADE 36 W/ SI SUPPLEMENT. ALL HEADED STUD TYPE SHEAR CONNECTORS SHALL BE ASTM A108, GRADE 1015 OR 1020 COLD FINISHED CARBON STEEL.
- 5.6 ALL POWDER ACTUATED FASTENERS TO BE USED IN STRUCTURAL STEEL SHALL BE HILTI X-EDNI FASTENERS, OR EQUIVALENT, WITH A SHANK DIAMETER OF 0.177" AND A MINIMUM LENGTH OF 5/8".
- 5.7 THREADED STUD WEDGE–STYLE, CARBON STEEL EXPANSION ANCHORS SHALL BE USED FOR ANCHORING INTO CONCRETE OR SOLID–GROUTED MASONRY. DIAMETERS OF ANCHORS USED SHALL BE AS CALLED OUT ON STRUCTURAL DRAWINGS. USE KWIK BOLT ANCHORS, AS MANUFACTURED BY HILTI FASTENING SYSTEMS, OR APPROVED EQUAL. INSTALL ANCHORS PER MANUFACTURER'S SPECIFICATIONS.
- 5.8 COLD FORMED STEEL FRAMING SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE IBC INTERNATIONAL BUILDING CODE.
- 5.49 ALL STRUCTURAL PROPERTIES FOR COLD FORMED STEEL FRAMING SHALL BE COMPUTED IN ACCORDANCE WITH THE A.I.S.I. "SPECIFICATIONS FOR THE DESIGN OF COLD–FORMED STEEL STRUCTURAL MEMBERS".
- 5.10 ALL LIGHT GAGE STEEL STUDS AND JOISTS, INCLUDING ACCESSORIES, SHALL BE GALVANIZED WITH A MINIMUM G–60 COATING.
- 5.11 STUDS, RUNNERS, BRACING AND BRDING SHALL BE MANUFACTURED PER ASTM C–955.
- 5.12 ALL GALVANIZED STUDS, JOISTS AND ACCESSORIES, 16 GA. OR HEAVIER, SHALL BE FORMED FROM STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM A-446 WITH A YIELD OF 50 KSI AND AS SET FORTH IN SECTION 1.2 OF THE A.I.S.I. "SPECIFICATION FOR THE DESIGN OF COLD–FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.
- DIVISION 6 - WOOD
- 6.1 WOOD CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION (NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION). ALL LUMBER SHALL CONFORM WITH PS 20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND WITH THE APPLICABLE RULES OF INSPECTION AGENCIES CERTIFIED BY THE AMERICAN LUMBER STANDARD.
- 6.2 UNLESS OTHERWISE NOTED, ALL CONNECTIONS SHALL CONFORM TO THE "FASTENING SCHEDULE", 2015 VCC TABLE 2304.10.1.
- 6.3 CONTRACTOR TO PROVIDE WALL BLOCKING FOR ANY SHELVING, EQUIPMENT, GRAB BARS, MOP HOLDERS, FIXTURES, DOOR JAMBS IN METAL STUD WALLS, ETC. FOR FIRM SUPPORT. ALL WOOD BLOCKING SHALL BE FIRE–RETARDANT TREATED (FRT) WOOD. COORDINATE WITH ALL CONTRACTOR, OWNER AND EQUIPMENT SUPPLIER REQUIREMENTS PRIOR TO ENCLOSING FRAMING.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

- 7.1 FIBERGLASS BATT INSULATION FOR CONCEALED INSTALLATIONS: KRAFT–FACED THERMAL BATT INSULATION COMPLYING WITH ASTM C665, TYPE II, CLASS C, WITH MAXIMUM FLAME SPREAD OF 25 AND SMOKE–DEVELOPMENT OF 450 OR LESS. FOR EXPOSED INSTALLATION: HEAVY DUTY FIBERGLASS MESH REINFORCED, PSK–FACED COMPLYING WITH ASTM C665, TYPE II, CLASS A, CATEGORY 1, WITH FLAME SPREAD OF 25 OR LESS AND SMOKE DEVELOPMENT OF 50 OR LESS. INCLUDE VINYL FACED MOISTURE BARRIER (.02 PERMS) WHERE EXPOSED TO VIEW. TAPE SEAMS. COORDINATE FACE COLOR WITH OWNER.
- 7.2 ELASTOMERIC SEALANT: "SPEC SEAL ES ELASTOMERIC SEALANT" OR SIMILAR, TO BE WATER–BASED, NON–HALOGENATED, ELASTOMERIC AND SHALL CONTAIN NO SOLVENTS INORGANIC FIBERS OR ASBESTOS. SEALANT SHALL DRY TO FORM A FLEXIBLE, MOISTURE–RESISTANT SEAL AND SHALL BE NOTED BY MANUFACTURER TO ADHERE TO SURFACES INDICATED IN DRAWINGS. SEALANT SHALL BE LISTED TO HAVE BEEN TESTED IN JOINTS FOR HOURLY RATING OF WALLS INDICATED IN DRAWINGS. APPLY IN MANNER TO MEET MANUFACTURER'S STRICT APPLICATION GUIDELINES. SEE NOTE 7.4 FOR ALTERNATE REQUIREMENTS.
- 7.3 INTUMESCENT SEALANT: "HILTI FIRESTOP FS–ONE MAX SEALANT" OR SIMILAR, TO BE INTUMESCENT (EXPANDS WHEN EXPOSED TO FIRE), WATER–BASED, LOW–VOC AND SHALL CONTAIN NO ASBESTOS. SEALANT SHALL EXPAND WHEN EXPOSED TO FIRE TO FORM A FIRE–PROOF SEAL AROUND PENETRATING ITEMS AND SHALL BE NOTED BY MANUFACTURER TO ADHERE TO SURFACES INDICATED IN DRAWINGS. SEALANT SHALL BE LISTED TO HAVE BEEN TESTED IN PENETRATIONS FOR HOURLY RATING OF FIRE–RATED ASSEMBLIES INDICATED IN DRAWINGS. APPLY IN MANNER TO MEET MANUFACTURER'S STRICT APPLICATION GUIDELINES. SEE NOTE 7.4 FOR ALTERNATE REQUIREMENTS.
- 7.4 IF THE CONTRACTOR PROPOSES TO USE AN ALTERNATE MANUFACTURER FOR FIRE–CAULKING (ELASTOMERIC OR INTUMESCENT) SEALANTS, THE CONTRACTOR SHALL PROVIDE DESIGN TEST INFORMATION FOR THEIR SELECTED MANUFACTURER SHOWING THE ALTERNATE PROPOSED MEETS THE DESIGN CRITERIA OF THE SPECIFIED PRODUCTS. COST OF ANY REQUIRED TESTING OF ALTERNATE PRODUCTS SHALL BE AT CONTRACTOR'S EXPENSE.

SEE SHEETS A2.1, A2.2, A2.3 AND A2.4 FOR REQUIREMENTS FOR FIRE–RATED JOINTS AND PENETRATIONS.

DIVISION 8 - DOORS AND WINDOWS

- 8.1 ALL DOORS TO BE MINIMUM 3'-0" x 7'-0" TALL UNLESS NOTED OTHERWISE IN DRAWINGS. ALL DOORS SHALL BE COMMERCIAL CUSTOM GRADE UNLESS OTHERWISE NOTED. PROVIDE "LEVER STYLE" KNOBS. SEE RENOVATION PLAN KEY NOTES FOR ADDITIONAL DOOR/FRAME NOTES. HARDWARE SHALL BE HEAVY DUTY COMMERCIAL CUSTOM GRADE. ALL LOCKS AND LATCHES SHALL COMPLY WITH VCC 1010.1.9. SHOP DRAWINGS AND SUBMITTALS SHALL BE SUBMITTED FOR ALL DOORS AND FRAMES.
- 8.2 STEEL DOORS AND FRAMES:
- INTERIOR DOORS: ANSI/SDI –100, GRADE II, HEAVY DUTY, MINIMUM 18 GAGE GALVANIZED FACES, SEAMS WELDED AND GROUND SMOOTH. LABEL WHERE INDICATED IN DRAWINGS.
- FRAMES:
- FABRICATE FROM 18 GAGE GALVANIZED STEEL FOR INTERIOR DOORS. FRAMES TO HAVE WELDED CORNERS FOR INTERIOR FIRE–RATED DOORS. PROVIDE SILENCERS ON INTERIOR FRAMES. ALL FRAMES TO RECEIVE MINIMUM 26 GAGE MORTAR BOXES IN MORTARED IN FRAMES. PROVIDE ALL ANCHORAGE DEVICES AS REQUIRED FOR WALL TYPE. ANCHORS TO BE CONCEALED TYPE. FACTORY CUT DOORS AND FRAMES FOR HARDWARE INSTALLATION.
- INSTALLATION: EXERCISE CARE IN SETTING FRAMES TO MAINTAIN SCHEDULED DIMENSIONS. HOLD HEAD LEVEL AND MAINTAIN JAMBS PLUMB AND SQUARE. SECURE ANCHORAGES AND CONNECTIONS TO ADJACENT CONSTRUCTION. LEAVE FRAME SPREADER BARS INTACT UNTIL FRAMES ARE SET PERFECTLY AND SECURELY ATTACHED. TOUCH–UP PAINT ANY DAMAGED PRIMER AS REQUIRED.
- 8.3 INTERIOR DOOR HARDWARE SHALL BE CORBIN RUSSWIN, SERIES CL3500 HEAVY DUTY CYLINDRICAL LEVER LOCKSETS, OR EQUAL.
- 8.4 FIRE–RATED COILING DOORS: OVERHEAD DOOR "FIREKING" MODEL 631, OR EQUAL, TO BE UNDERWRITERS LABORATORY (UL) AND FACTORY MUTUAL (FM) LISTED, FIRE–RATED AS INDICATED IN DRAWINGS. PROVIDE FUSIBLE LINK ON EACH SIDE OF WALL. PROVIDE ALL BRACKETS AND MOUNTING HARDWARE. PROVIDE MANUFACTURER'S STANDARD CHAIN HOIST OPERATOR. ALL DOOR & TRACK COMPONENTS SHALL BE FABRICATED FROM GALVANIZED STEEL. SECURE, REINFORCE, AND SUPPORT TRACKS AS REQUIRED FOR DOOR SIZE AND WEIGHT TO PROVIDE STRENGTH AND RIGIDITY WITHOUT SAG, SWAY, AND VIBRATION DURING OPENING AND CLOSING OF DOORS.

DIVISION 9 - FINISHES

- 9.1 ALL INTERIOR FINISHES SHALL MEET THE REQUIREMENTS OF 2015 VCC/IBC TABLE 803.11. INTERIOR FLOOR FINISHES TO MEET THE REQUIREMENTS AS OUTLINED IN VCC/IBC SECTION 804.0.
- 9.2 CONSULT OWNER FOR ANY ADDITIONAL DOCUMENTS RELATED TO INTERIOR MATERIALS AND FINISHES (COLORS, ETC.).
- 9.3 GYPSUM BOARD ASSEMBLIES SHALL BE SECURED TO STUDS AT SPACING INDICATED BY GYPSUM BOARD MANUFACTURER WITH FASTENERS SPECIFIED BY SAME. PROVIDE SHEET STEEL ZINC COATED BY HOT DIP PROCESS TRIM ACCESSORIES COMPLYING WITH ASTM C1047. TRIM INCLUDES CORNER BEAD, LC BEAD, SCREW HEADS, AND IRREGULARITIES. SAND SMOOTH.
- 9.4 ALL GYPSUM BOARD SHALL BE MINIMUM 5/8" THICK FOR WALLS AND 5/8" THICK FOR CEILINGS, UNLESS NOTED OTHERWISE IN DRAWINGS. PROVIDE MOISTURE RESISTANT BOARD IN EXTERIOR SOFFITS, BATHROOMS, AROUND OPEN TUBS, LAUNDRY AND JANITOR ROOMS, AND OTHER AREAS SUBJECTED TO MOISTURE. PROVIDE TILE BACKER BOARD IN LIEU OF GWB BEHIND ALL WALL TILE, SEE DRAWINGS FOR TILE LOCATIONS. PROVIDE FIRE–CODE GWB AS INDICATED IN DRAWINGS.
- 9.5 SUBSTITUTIONS FOR SPECIFIED PRODUCTS SHALL BE EQUAL TO THOSE SPECIFIED IN COMPOSITION, PHYSICAL PROPERTIES, COLOR/TEXTURE/APPEARANCE, AND ENVIRONMENTAL QUALITIES. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE OWNER AND ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 9.6 PAINTS UTILIZED SHALL MEET THE FOLLOWING SPECIFICATIONS:
- INTERIOR PAINT: UTILIZE PAINT MATERIALS CONTAINING 0% VOC'S (VOLATILE ORGANIC COMPOUNDS), CONSISTING OF (1) COAT INTERIOR LATEX PRIMER AND (2) COATS OF LATEX FINISH.
- 9.7 ACOUSTICAL CEILING TILE (ACT) TO BE ARMSTRONG "FINE FISSURED" (OR EQUAL), SQUARE EDGE/FLUSH GRID, WHITE, 24"x24"x5/8" IN 15/16" WHITE GRID.
- ACT SUSPENSION SYSTEMS SHALL BE DESIGNED BY CEILING MANUFACTURER TO CARRY ALL LOADS SUPERIMPOSED BY LAY–IN INSULATION ABOVE CEILING AND ALL LIGHTS/GRILLES AS SHOWN ON DRAWINGS.
- A. STANDARD: INSTALL PER ASTM C 636 AND MANUFACTURER'S INSTRUCTIONS. INSTALL FIRE–RATED CEILING SYSTEMS ACCORDING TO TESTED FIRE–RATED DESIGN. RE–INSTALLATION OF EXISTING ACOUSTICAL CEILING SYSTEMS TEMPORARILY REMOVED SHALL FOLLOW THE SAME GUIDELINES BELOW.
- B. SUSPEND CEILING HANGERS FROM STRUCTURE ABOVE, AND AS FOLLOWS:
- INSTALL HANGERS PLUMB AND FREE FROM CONTACT WITH INSULATION OR OTHER OBJECTS ABOVE CEILING.
 - SECURE WIRE HANGERS TO CEILING SUSPENSION MEMBERS AND TO STRUCTURAL SUPPORTS ABOVE WITH A MINIMUM OF THREE TURNS.
 - DO NOT ATTACH HANGERS TO WOOD ROOF DECK. ATTACH HANGERS TO STRUCTURAL MEMBERS.
 - SPACE HANGERS NOT MORE THAN 48 INCHES (1200 MM) O.C.
 - WHERE WIDTH OF DUCTS AND OTHER CONSTRUCTION WITHIN CEILING PLENUM PRODUCES HANGER SPACINGS THAT INTERFERE WITH LOCATION OF HANGERS AT SPACINGS REQUIRED TO SUPPORT STANDARD SUSPENSION SYSTEM MEMBERS, INSTALL SUPPLEMENTAL SUSPENSION MEMBERS AND HANGERS IN FORM OF TRAPEZES OR EQUIVALENT DEVICES.
- C. INSTALL SUSPENSION SYSTEM RUNNERS SO THEY ARE SQUARE AND SECURELY INTERLOCKED WITH ONE ANOTHER. REMOVE AND REPLACE DENTED, BENT, OR KINKED MEMBERS.
- D. INSTALL ACOUSTICAL PANELS WITH UNDAMAGED EDGES AND FIT ACCURATELY INTO SUSPENSION SYSTEM RUNNERS AND EDGE MOLDINGS. SCRIBE AND CUT PANELS AT BORDERS AND PENETRATIONS TO PROVIDE A NEAT, PRECISE FIT. INSTALL PANELS WITH EDGES FULLY HIDDEN FROM VIEW BY FLANGES OF SUSPENSION SYSTEM RUNNERS AND MOLDINGS.
- CONTACT OWNER FOR ADDITIONAL FINISH INFORMATION.

DIVISION 10 - SPECIALTIES

- 10.1 SEE DRAWINGS (SHEET A1.1) FOR LOCATIONS OF FIRE EXTINGUISHERS. FIRE EXTINGUISHERS TO BE OWNER–SUPPLIED AND INSTALLED BY CONTRACTOR IN LOCATIONS NOTED.
- 10.2 CHAIN–LINK FENCING: 8'-0" HIGH CHAIN LINK FENCING, FABRICATED FROM GALVANIZED STEEL 9 GAUGE WIRE, 2" MESH SIZE. INCLUDE TOP, MIDDLE AND BOTTOM RAILS OF 1-5/8"ø D.D. GALVANIZED PIPE. POSTS SHALL BE GALVANIZED STEEL PIPE, TO BE 4"ø D.D. AT CORNERS AND SWING GATES, AND 2-7/8"ø D.D. AT INTERMEDIATE POSTS. POSTS SHALL BE SPACED AT A MAXIMUM OF 8'-0" O.C. AND SHALL INCLUDE DOME–STYLE CAPS. POSTS SHALL BE ANCHORED TO CONCRETE SLAB WITH GALVANIZED STEEL BASEPLATE WELDED TO BOTTOM OF POSTS, WITH (4) 3/8" WEDGE/EXPANSION ANCHORS OR ANCHOR RODS DRILLED AND EPOXIED INTO CONCRETE. INCLUDE ALL REQUIRED BRACKETS AND OTHER FITTINGS AS REQUIRED TO INSTALL A COMPLETE FENCE SYSTEM. INCLUDE THREE (3) STRANDS OF BARBED WIRE AT TOP WITH ASSOCIATED MOUNTING ARMS AT POSTS AS REQUIRED. SWING–GATES SHALL BE IN WIDTHS INDICATED IN DRAWINGS, FABRICATED FROM 2-7/8"ø D.D. GALVANIZED PIPE SECTIONS, WITH LOCKABLE FENCE–GATE HARDWARE FOR PADLOCKING. INSTALL FENCE SYSTEM PER MANUFACTURER'S STRICT INSTALLATION GUIDELINES.

DIVISION 11 - EQUIPMENT (NOT USED)

DIVISION 12 - FURNISHINGS

- 12.1 CABINETRY, DISPLAY CASES AND OTHER INTERIOR CASEWORK, IF REQUIRED, TO BE SUPPLIED/INSTALLED BY OWNER.

DIVISION 13 - SPECIAL CONSTRUCTION (NOT USED)

DIVISION 14 - CONVEYING SYSTEMS (NOT USED)

DIVISION 15 - MECHANICAL

- 15.1 ALL MECHANICAL AND PLUMBING DESIGNS, CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL PROVISIONS OF THE 2015 EDITION OF THE "VIRGINIA PLUMBING CODE" (VPC), AND THE 2015 EDITION OF THE "VIRGINIA MECHANICAL CODE" (VMC), AS A MINIMUM LEVEL OF CONSTRUCTION DETAIL AND QUALITY.

SEE MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL SPECIFICATIONS.

DIVISION 16 - ELECTRICAL

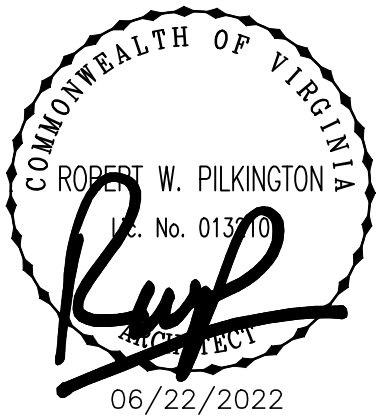
- 16.1 ALL ELECTRICAL DESIGNS, CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL PROVISIONS OF THE 2015 "VIRGINIA CONSTRUCTION CODE" (VCC), AND THE 2014 "NATIONAL ELECTRIC CODE" (NEC), AS A MINIMUM LEVEL OF CONSTRUCTION DETAIL AND QUALITY.
- 16.2 PROVIDE EXIT SIGNS/LIGHTS IN ACCORDANCE WITH VCC SECTION 1013. PROVIDE EMERGENCY EGRESS LIGHTS IN ACCORDANCE WITH VCC SECTIONS 1008 AND 2702.
- SEE ELECTRICAL DRAWINGS FOR ADDITIONAL SPECIFICATIONS.



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ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

OUTLINE SPECIFICATIONS

5285 HOLLIS ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY RWP
DESIGNED BY RWP
CHECKED BY ---
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS

ROUANKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

EXISTING / DEMOLITION FLOOR PLAN

5285 HOLLINS ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY	RWP
DESIGNED BY	RWP
CHECKED BY	---
DATE	06/22/2022
SCALE	AS INDICATED
REVISIONS	

D1.1
PROJECT NO 03220033.00


DEMOLITION PLAN KEY NOTES:

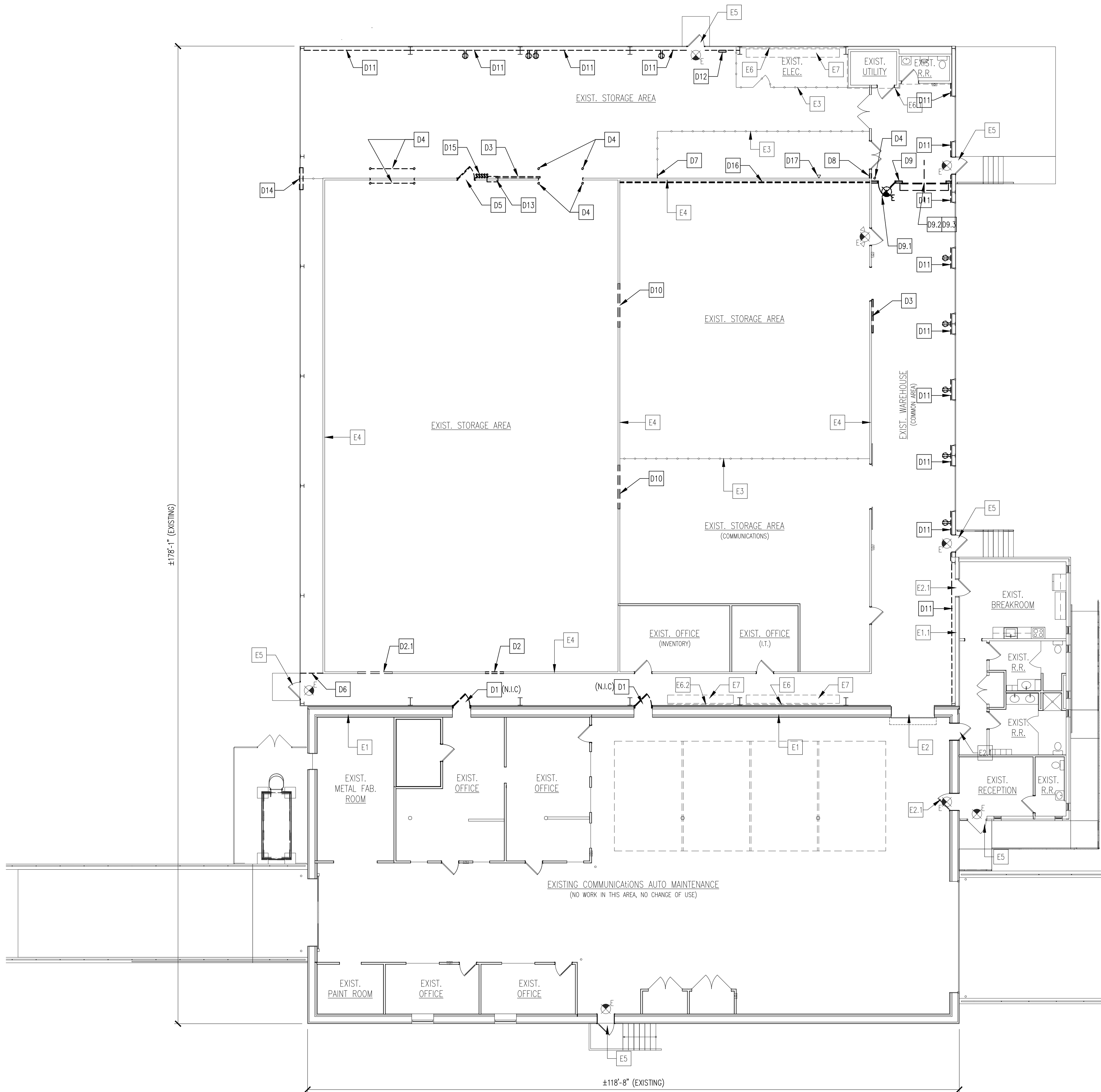
- | | |
|------|---|
| | REMOVE EXIST. DOOR & FRAME, PREP CONC. WALL OPNG. FOR NEW DOOR FRAME. (BY OWNER, N.I.C.) |
| D2 | REMOVE PORTION OF EXIST. COOLER WALL AS REQ. FOR NEW 36" WIDE x 7'-0" OPENING; PROVIDE LIGHT-GAGE HEADER ACROSS OPNG. & PATCH/REPAIR EDGES OF COOLER WALL AFTER DEMO. |
| D2.1 | SIMILAR TO NOTE D2, 6'-4" WIDE OPENING FOR NEW PAIR OF DOORS/FRAME, TO BE PROVIDED ONLY AS PART OF ADD/ALTERNATE #1 ON SHEET A3.1 |
| D3 | REMOVE EXIST. SLIDING COOLER DOOR & ASSOCIATED HARDWARE (EXIST. OPNG. TO REMAIN) |
| D4 | REMOVE EXIST. STL. PIPE BOLLARD(S) AND ASSOCIATED RAILINGS, PATCH/REPAIR CONC. SLAB AFTER DEMO |
| D5 | REMOVE EXIST. PERSONNEL DOOR & FRAME IN EXIST. COOLER WALL; PATCH/REPAIR EDGES OF COOLER WALL AFTER DEMO |
| D6 | REMOVE PORTION OF EXIST. CHAIN-LINK FENCE |
| D7 | REMOVE PORTION OF EXIST. CHAIN-LINK FENCING AND RECONFIGURE CORNER AS REQ. FOR INSTALLATION OF NEW FIRE-BARRIER, G.C. COORDINATE EXACT AMOUNT IN FIELD AS REQ. |
| D8 | REMOVE PORTION OF EXIST. PARTIAL HEIGHT MTL. STUD/GWB WALL AS REQ. FOR INSTALLATION OF NEW FIRE-BARRIER, G.C. COORDINATE EXACT AMOUNT IN FIELD AS REQ. |
| D9 | REMOVE EXIST. PARTIAL HEIGHT MTL. STUD/GWB WALL AS REQ. FOR INSTALLATION OF NEW FIRE-BARRIER |
| D9.1 | REMOVE EXIST. NON-FIRE-RATED PERSONNEL DOOR & FRAME IN PARTIAL HEIGHT MTL. STUD/GWB WALL BEING REMOVED; STORE FOR OWNER'S POTENTIAL FUTURE RE-USE. |
| D9.2 | REMOVE EXIST. NON-FIRE-RATED OVERHEAD COILING IN PARTIAL HEIGHT MTL. STUD/GWB WALL BEING REMOVED; STORE FOR OWNER'S POTENTIAL FUTURE RE-USE. |
| D9.3 | REMOVE EXIST. STEEL SUPERSTRUCTURE (STL. COLUMNS, BEAM & DIAGONAL BRACES) @ EXISTING WALL OPNG. |
| D10 | REMOVE EXIST. PLYWOOD INFILL PANEL IN EXIST. COOLER WALL OPNG. |
| D11 | REMOVE EXIST. PLYWOOD AND BACKER FRAMING. REMOVE ANY SURFACE-MOUNTED ELECTRICAL RECEPTACLES SHOWN AT PLYWOOD DEMO AREA, REMOVE CIRCUITS BACK TO SOURCE PANEL. |
| D12 | REMOVE EXISTING ELEC. PANEL "C" (WHICH CURRENTLY SUPPLIES ONLY TO SURFACE-MOUNTED RECEPTACLES BEING REMOVED W/ NOTE D11 ABOVE). SEE ELEC. DWGS. FOR ADDITIONAL INFORMATION. |
| D13 | REMOVE EXISTING THRU-WALL VENT (HIGH IN WALL). |
| D14 | REMOVE EXISTING EXTERIOR THRU-WALL LOUVER (& ASSOCIATED ELEC. FEED) IN EXTERIOR WALL (HIGH IN WALL). |
| D15 | REMOVE & RELOCATE EXIST. LIGHT SWITCHES & ASSOCIATED POWER FEED/CONDUITS AS REQ. |
| D16 | REMOVE EXIST. MTL STUD & GWT WALL ON TOP OF COOLER, FROM TOP OF COOLER TO UNDERSIDE OF ROOF |
| D17 | RELOCATE EXIST. DATA DROP & ASSOCIATED CONDUIT(S) TO OUTSIDE FACE OF NEW WALL |

EXISTING-TO-REMAIN KEY NOTES:

- | | |
|------|--|
| E1 | EXISTING 3-HOUR INTERIOR FIRE BARRIER TO REMAIN (12" THICK CONC. WALL, VIA EQUIVALENT THICKNESS METHOD PER 2015 VCC TABLE 721.1(2), SEE FIRE-RATED ASSEMBLY ON SHEET A2.3) (EXIST. IS CONTINUOUS TO UNDERSIDE OF LOW ROOF, SEE SECTION ON SHEET A2.1) |
| E1.1 | EXISTING 2-HOUR INTERIOR FIRE BARRIER TO REMAIN (8" CMU WALL, VIA EQUIVALENT THICKNESS METHOD PER 2015 VCC TABLE 721.1(2), SEE FIRE-RATED ASSEMBLY ON SHEET A2.3) (EXIST. IS CONTINUOUS TO UNDERSIDE OF LOW ROOF) (NOTE: WALL ALSO INCLUDES GWB ON OFFICE SIDE OF WALL, CONT. TO UNDERSIDE OF ROOF.) |
| E2 | EXISTING 3-HOUR OVERHEAD COILING DOOR TO REMAIN. |
| E2.1 | EXISTING 3-HOUR PERSONNEL DOOR & FRAME TO REMAIN. |
| E3 | EXISTING 8'-0" CHAIN LINK FENCING |
| E4 | EXISTING COOLER WALL |
| E5 | EXISTING EXTERIOR EXIT DOOR |
| E6 | EXISTING PLYWOOD WALL PANEL(S) TO REMAIN (SEE SHEET A1.2 FOR NEW TREATMENT) |
| E6.1 | EXISTING WOOD WALL PANELING AROUND RESTROOMS TO REMAIN (SEE SHEET A1.2 FOR NEW TREATMENT) |
| E6.2 | EXISTING FRP PLYWOOD WALL PANEL(S) TO REMAIN (NO CHANGES REQ.) |
| E7 | EXISTING ELEC. GEAR/PANELS/TRANSFORMERS TO REMAIN |

GENERAL DEMOLITION NOTES:

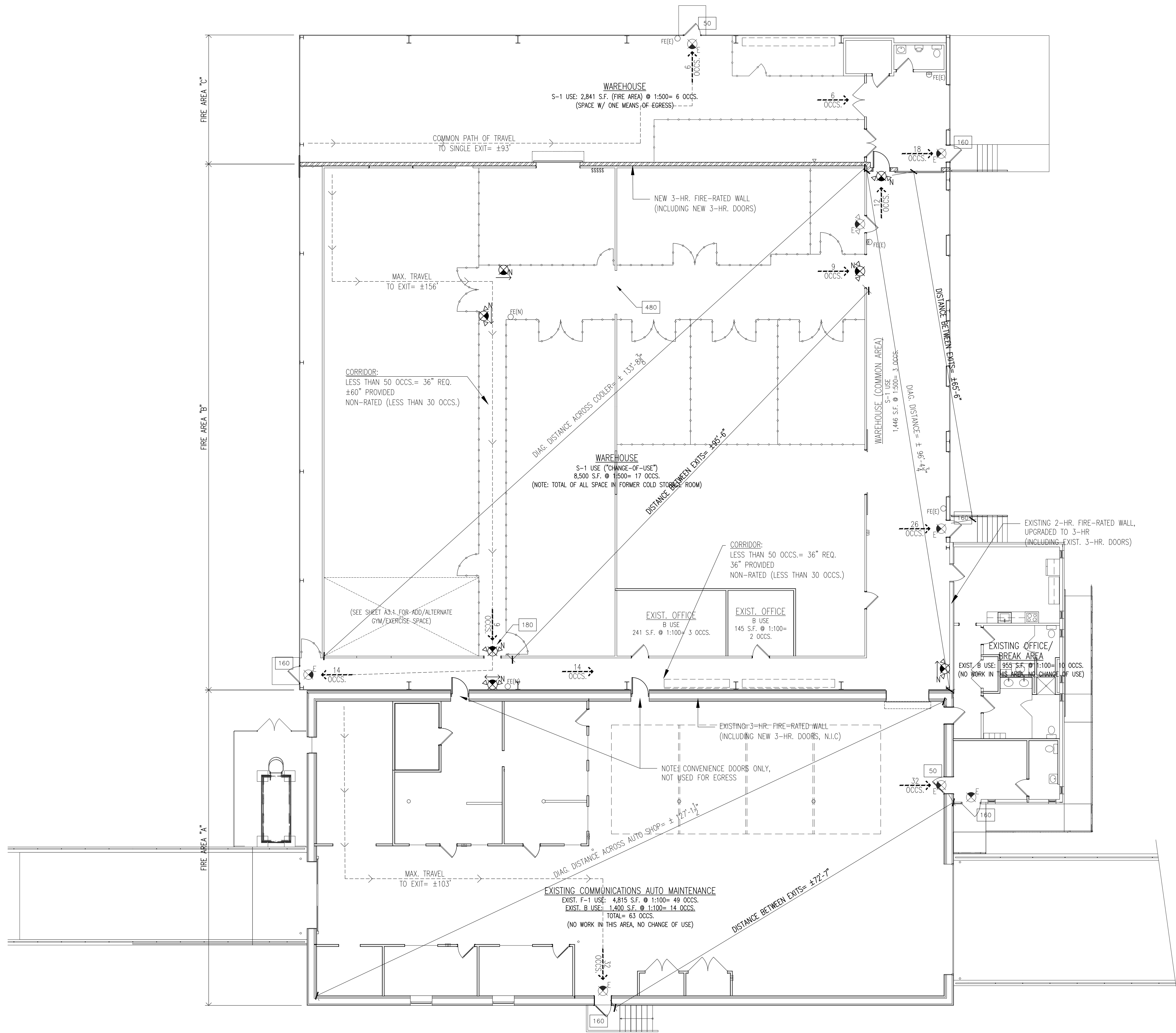
- EXISTING BUILDING WAS CONSTRUCTED PRIOR TO 1985. PLEASE SEE SURVEY FOR ASBESTOS CONTAINING MATERIALS (ACM'S) FOR THIS BUILDING TITLED "ASBESTOS & LEAD INSPECTION REPORT" DATED 04/20/2022 AND PREPARED BY HDH TECHNICAL INC. SUMMARY PAGE (SHEET 4 OF THE PDF) INDICATES NO ACM'S DETECTED WITHIN THE WORK AREA OF THIS PERMIT.
- ALL ITEMS SHOWN AS  ARE TO BE REMOVED. (UNLESS NOTED OTHERWISE)
- THE CONTRACTOR IS REQUIRED TO MAKE FIELD INSPECTIONS TO VERIFY EXISTING CONDITIONS.
- ALL FLOORS AND WALLS OF EXISTING AREAS THAT WILL BE AFFECTED BY CONSTRUCTION PROCEDURES INCLUDING DEBRIS REMOVAL MUST RECEIVE PROTECTION. DUST BARRIERS MUST BE INSTALLED BETWEEN WORK AREAS, UNDISTURBED AREAS AND OCCUPIED SPACES.
- DO NOT CUT AND PATCH WORK IN A MANNER THAT WOULD RESULT IN SUBSTANTIAL VISUAL EVIDENCE OF CUT AND PATCH WORK.
- COORDINATE ALL DEMOLITION AND RESTORATION WORK WITH OWNER. USE MATERIALS FOR CUTTING/PATCHING THAT ARE IDENTICAL TO EXISTING MATERIALS.
- AT ALL AREAS WHERE MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT IS REMOVED, PROPERLY CAP AND TERMINATE ALL UTILITIES AS REQUIRED BY ALL PREVAILING NATIONAL AND LOCAL CODES.
- G.C. SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; INCLUDING BUT NOT LIMITED TO: TEMPORARY & PERMANENT BEAMS & LINTELS; SHORING OF EXISTING CONSTRUCTION; AND FOR SAFETY PRECAUTIONS AND PROGRAMS AS THEY RELATE TO THE WORK OF THIS PROJECT.
- ALL DEMOLISHED MATERIAL SHALL BE REMOVED FROM SITE U.N.O.
- LOCATIONS NOTED WITH ELEC PANELS (EP) TO BE REMOVED SHALL BE TRACED, SAFELY SHUT-OFF FROM BLDG. AND PROPERLY DISCONNECTED BY ELECTRICAL CONTRACTOR.
- AREAS OF EXISTING PLYWOOD REMOVAL (NOTED UNDER KEYNOTE D11) MAY HAVE EXISTING SURFACE-MOUNTED ITEMS NOT SPECIFICALLY SHOWN THAT ARE TO REMAIN, INCLUDING, BUT NOT LIMITED TO, LIGHT SWITCHES, EXIT SIGNS, SURFACE-MOUNTED CONDUITS, FIRE EXTINGUISHERS AND OTHER MISCELLANEOUS MINOR EQUIPMENT. THOSE ITEMS SHALL BE EITHER TEMPORARILY REMOVED OR TEMPORARILY SUPPORTED AS REQUIRED AND SHALL BE RE-INSTALLED WITH NEW BLOCKING (EITHER FRT WOOD OR OTHER NON-COMBUSTIBLE MEANS OF SUPPORT), G.C. TO COORDINATE IN FIELD AS REQUIRED.



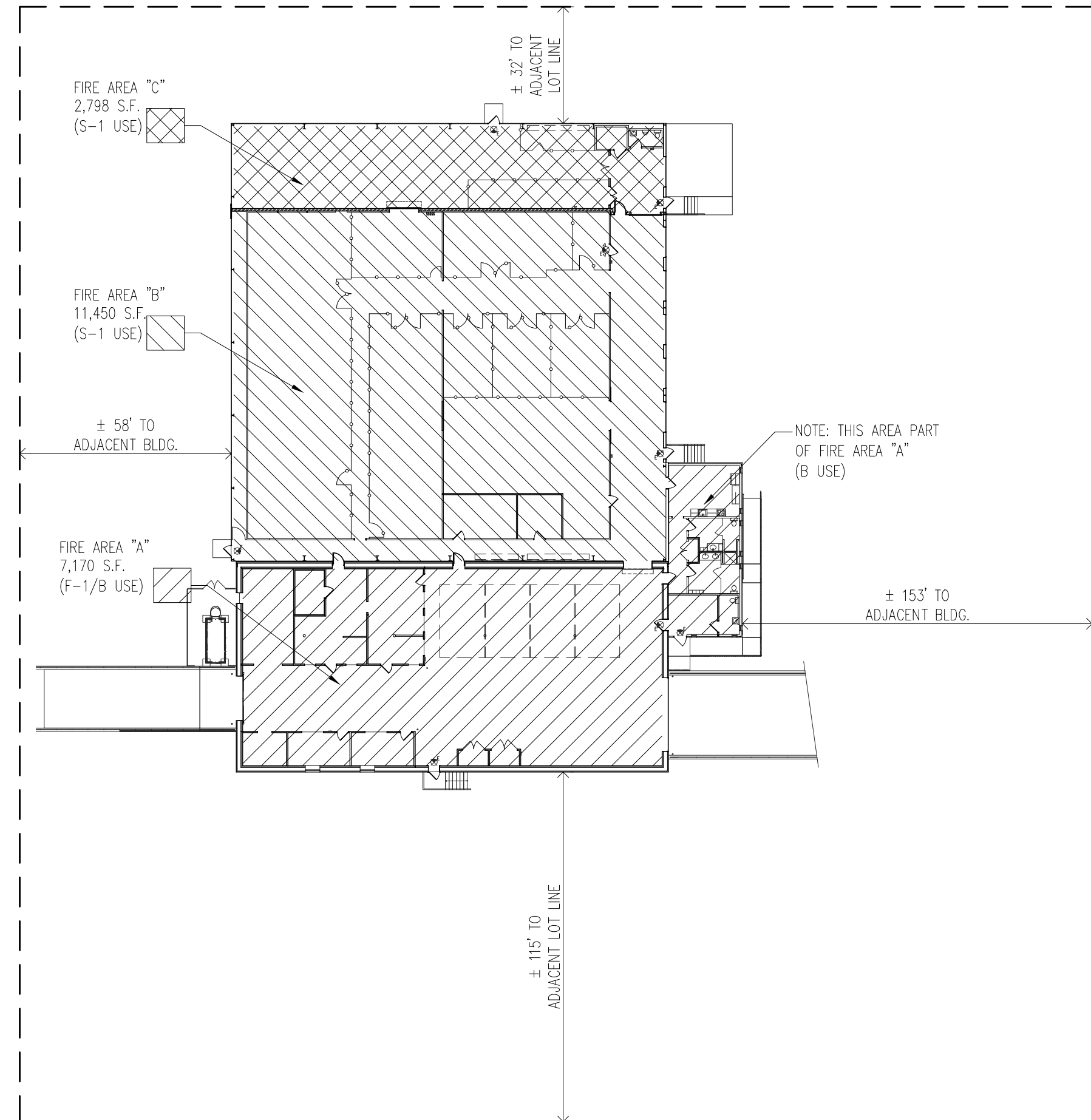
**EXISTING / DEMOLITION
BUILDING FLOOR PLAN**

SCALE: 3/32" = 1'-0"

J:\23\2023\03220033.DWG ROANOKE COUNTY PUBLIC SERVICES - COLD STORAGE BLDG INTERIOR RENOVATIONS & CHANGE-OF-USE A1-1.dwg



1
A1.1
LIFE SAFETY PLAN
SCALE: 3/32"= 1'-0"



2
A1.1
SITE KEY PLAN
SCALE: 1/32"= 1'-0"

NOTE: DASHED BOX SHOWS APPROX. DISTANCES TO PROPERTY LINES OR ADJACENT BUILDINGS. NOT-TO-SCALE. SEE ROANOKE COUNTY GIS FOR MORE INFORMATION IF REQUIRED.

LIFE SAFETY LEGEND	
ITEM	DESCRIPTION
	EXISTING COMBO ILLUMINATED EXIT LIGHT W/ EMERGENCY HEADS (W/ BATTERY BACKUP)
	EXISTING ILLUMINATED EXIT LIGHT (W/ BATTERY BACKUP)
	NEW COMBO ILLUMINATED EXIT LIGHT W/ EMERGENCY HEADS (W/ BATTERY BACKUP)
	NEW COMBO ILLUMINATED EXIT LIGHT W/ DIRECTIONAL ARROW(S) (W/ EMERGENCY HEADS AS SHOWN) (W/ BATTERY BACKUP)
	EXISTING FIRE EXTINGUISHER LOCATION
	NEW FIRE EXTINGUISHER LOCATION (SEE SPECS ON SHEET T1.2)
	ACTUAL NUMBER OF OCCS. USING EGRESS COMPONENT
	DOOR CAPACITY (@ 0.2"/OCC. FOR NON-SPRINKLERED BLDG.)

- LIFE SAFETY PLAN NOTES:
- SEE ELEC. DWGS. FOR LOCATIONS OF ALL EMERGENCY EGRESS LIGHTING. EMERGENCY LIGHTING TO PROVIDE 1FC MIN. LIGHT LEVEL REQUIRED ALONG ALL EGRESS PATHS, TO BE FIELD-VERIFIED AT FINAL INSPECTION.
 - DOORWAY AND CORRIDOR CAPACITIES CALCULATED @ 0.2" PER OCCUPANT PER 2015 IBC 1005.3.2
 - DOORWAYS SERVING AS A SINGLE MEANS-OF-EGRESS ARE CALCULATED TO 50 OCCUPANTS MAX. AS SHOWN ON PLAN.
 - LIGHTED EXIT SIGN SHOWN ALONG CHAIN-LINK FENCE WALLS TO BE MOUNTED DIRECTLY AND SECURELY TO FENCE POSTS AND FENCE TOP RAIL.
 - FIRE EXTINGUISHERS IN NEW LOCATIONS SHOWN SHALL BE PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR.

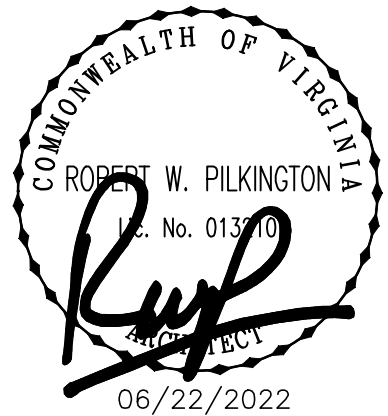


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ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

LIFE SAFETY PLAN

5285 HOLMES ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY RWP
DESIGNED BY RWP
CHECKED BY --
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS

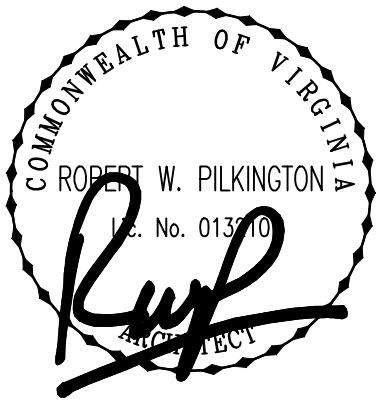
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PROJECT NO 03220033.00



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ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG
BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE
BUILDING RENOVATION PLAN

5285 HOLMES ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY RWP
DESIGNED BY RWP
CHECKED BY
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS

A1.2
PROJECT NO 03220033.00

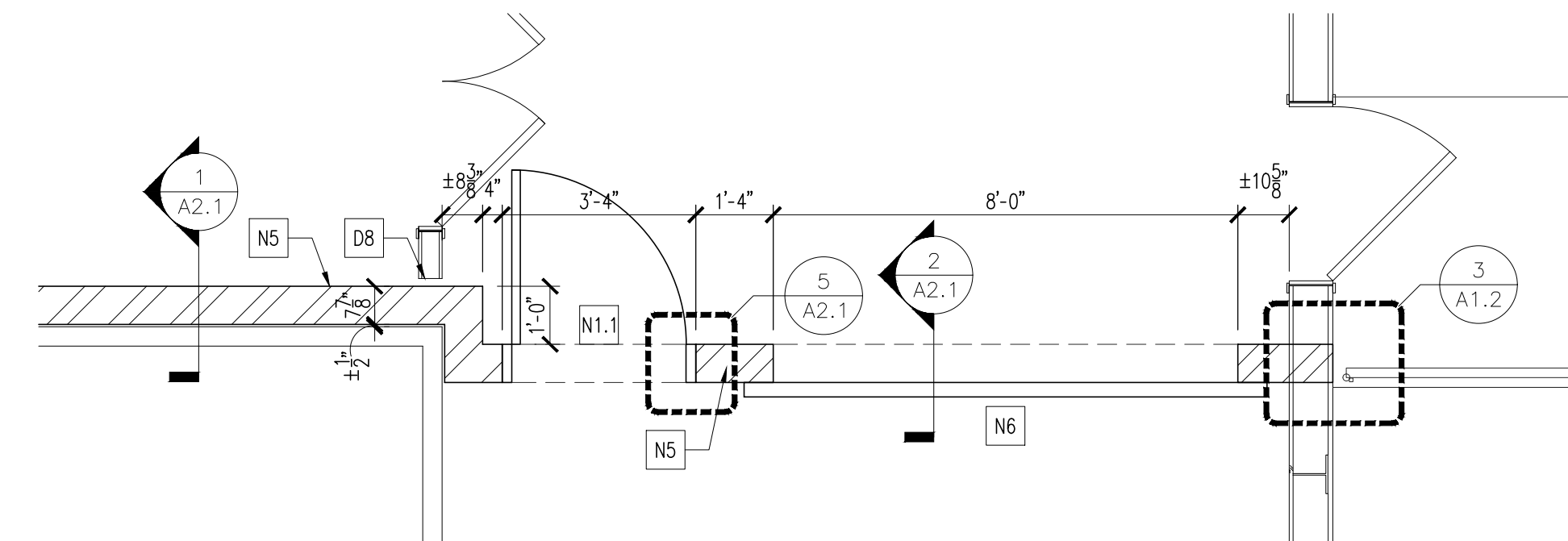
RENOVATION PLAN KEY NOTES:

- N1 **NEW 3-HOUR DOOR & FRAME:** NEW 3'-0"x7'-0" FLUSH MTL. DOOR (NO GLAZING) IN HOLLOW-METAL FRAME, 3-HOUR RATED, W/ AUTOMATIC SURFACE-MOUNTED CLOSER & LEVER-TYPE LOCKING HARDWARE (OFFICE H.W., ANSI# F82). (NOTE: N.I.C.- TO BE PROVIDED AND INSTALLED BY OWNER.) (SEE DETAIL 7/SHEET A2.1 FOR TYP. JAMB DETAIL)
- N1.1 **NEW 3-HOUR DOOR & FRAME:** NEW 3'-0"x7'-0" FLUSH MTL. DOOR (NO GLAZING) IN HOLLOW-METAL FRAME, 3-HOUR RATED, W/ AUTOMATIC SURFACE-MOUNTED CLOSER & LEVER-TYPE LATCH HARDWARE (PASSAGE H.W., ANSI# F75). (SEE DETAIL 5/SHEET A2.1 FOR TYP. JAMB DETAIL)
- N2 NEW 8'-0" CHAIN-LINK FENCING.
- N3 NEW 8'-0" HIGH x 8'-0" WIDE DOUBLE CHAIN-LINK GATE.
- N4 NEW 8'-0" HIGH x 4'-0" WIDE SINGLE CHAIN-LINK GATE.
- N4.1 **NEW SINGLE CHAIN-LINK GATE:** 8'-0" HIGH x 3'-6" WIDE CHAIN-LINK GATE W/ NEW MOUNTING POSTS EA. SIDE, W/ LATCH HARDWARE. MATCH SPECS TO OTHER FENCING.
- N5 **NEW 3-HOUR SHAFTLINER FIRE-BARRIER:** SEE SHEET A2.1 FOR ALL DETAILS. SEE SHEET A2.4 FOR FIRE-RATING DETAILS FOR ANY ELECTRICAL PENETRATIONS THROUGH WALL.
- N6 **NEW 3-HOUR OVERHEAD ROLLING FIRE DOOR:** 8'-0" HIGH x 8'-0" WIDE, FUSIBLE LINK ON BOTH SIDES OF WALL, SEE SECTION 2/A2.1 AND SHEET T1.2 FOR SPECS.
- N6.1 **NEW 3-HOUR OVERHEAD ROLLING FIRE DOOR:** SIM. TO #6 ABOVE, DOOR TO BE 8'-0" WIDE X 9'-0" HIGH TO MATCH EXIST. OPNG., DOOR TO BE CENTERED ON EXIST. COOLER OPNG. AND MOUNTED ON OPPOSITE/WAREHOUSE SIDE OF WALL (SEE SECTION 2/A2.1)
- N7 **NEW CASED OPNG.:** NEW 3'-0"x7'-0" HOLLOW METAL CASED OPNG. @ NEW WALL OPNG. IN COOLER WALL, SEE DETAIL 6/SHEET A2.1.
- N8 **WALL INFILL:** INFILL EXIST. COOLER WALL OPNG. W/ 2-1/2" MTL. STUDS @ 16"O.C. & 5/8" GWB. GWB TO BE TAPED, MUDDED & SANDED.
- N9 **FIRE-BARRIER CONVERSION:** CONVERT EXIST. 2-HR. RATED CMU FIRE BARRIER TO 3-HR. RATED BY ONE OF THE FOLLOWING METHODS:

OPTION A: PROVIDE 1" GYPSUM SHAFT-LINER BOARD ADHERED TO EXIST. CMU, CONT. ACROSS ENTIRE FACE OF CMU ON WAREHOUSE SIDE (SEE PLAN FOR EXTENTS), CONT. FROM FLOOR SLAB TO ABOVE LOW ROOF.

OPTION B: FILL ALL EMPTY CORES OF EXIST. 2-HR. CMU W/ "CORE-FILL 500" EXPANDING FOAM INSULATION, CONT. FROM FLOOR SLAB TO ABOVE LOW ROOF (SEE SHEET A2.3 FOR FIRE-RATING INFORMATION).
- N10 APPLY NEW FIELD-APPLIED FIRE-RETARDANT PAINT TO EXIST. PLYWOOD PANELS REMAINING. NEW PAINT TO BE "FX LUMBER GUARD" BY FIRE RETARDANT COATINGS OF TEXAS, LLC, OR SIMILAR, TO BE APPLIED PER MANUFACTURER'S STRICT APPLICATION GUIDELINES, TO MEET MANUFACTURER'S SPECIFIC THICKNESS REQUIRED. APPLY OVER ALL EXPOSED SURFACES OF PLYWOOD REMAINING. (SEE SHEET A2.4 FOR SPEC DETAILS)
- N11 INFILL EXIST. EXTERIOR WALL OPENING W/ EXTERIOR MTL. WALL PANELS & 6" VINYL-FACED BATT INSULATION (OWNER TO PROVIDE MTL. WALL PANELS). WALL PANELS TO BE ATTACHED W/ GASKETED SHEET METAL SCREWS @ 12"O.C. ALL SIDES OF PERIMETER.
- N12 RELOCATED LIGHT SWITCHES & ASSOCIATED POWER FEED/CONDUIT(S). (SEE NOTE D15/SHEET D1.1 FOR PREVIOUS LOCATION)
- N13 RELOCATED DATA DROP & ASSOCIATED CONDUIT(S). (SEE NOTE D17/SHEET D1.1 FOR PREVIOUS LOCATION)

RENOVATION PLAN GENERAL NOTES:
1. NEW LIGHTED EXIT SIGNS AND NEW EMERGENCY LIGHTS NOT SPECIFICALLY NOTED ON THIS SHEET, SEE ELECTRICAL DWGS.
2. SEE SHEET A3.1 FOR ADD/ALTERNATE FOR NEW EXERCISE SPACE.
3. NEW DOORS SHOWN TO BE PROVIDED WITH NEW HARDWARE FOR BASE BID. EXISTING DOOR HARDWARE AT DOORS PREVIOUSLY REMOVED MAY BE RE-USED AT NEW DOORS IN SIMILAR LOCATIONS, TO BE REVIEWED IN FIELD BY G.C. AND REVIEWED W/ OWNER PRIOR TO FINAL DECISION FOR RE-USING TO BE MADE.



FIRE BARRIER PLAN DETAIL

SCALE: 3/8"=1'-0"

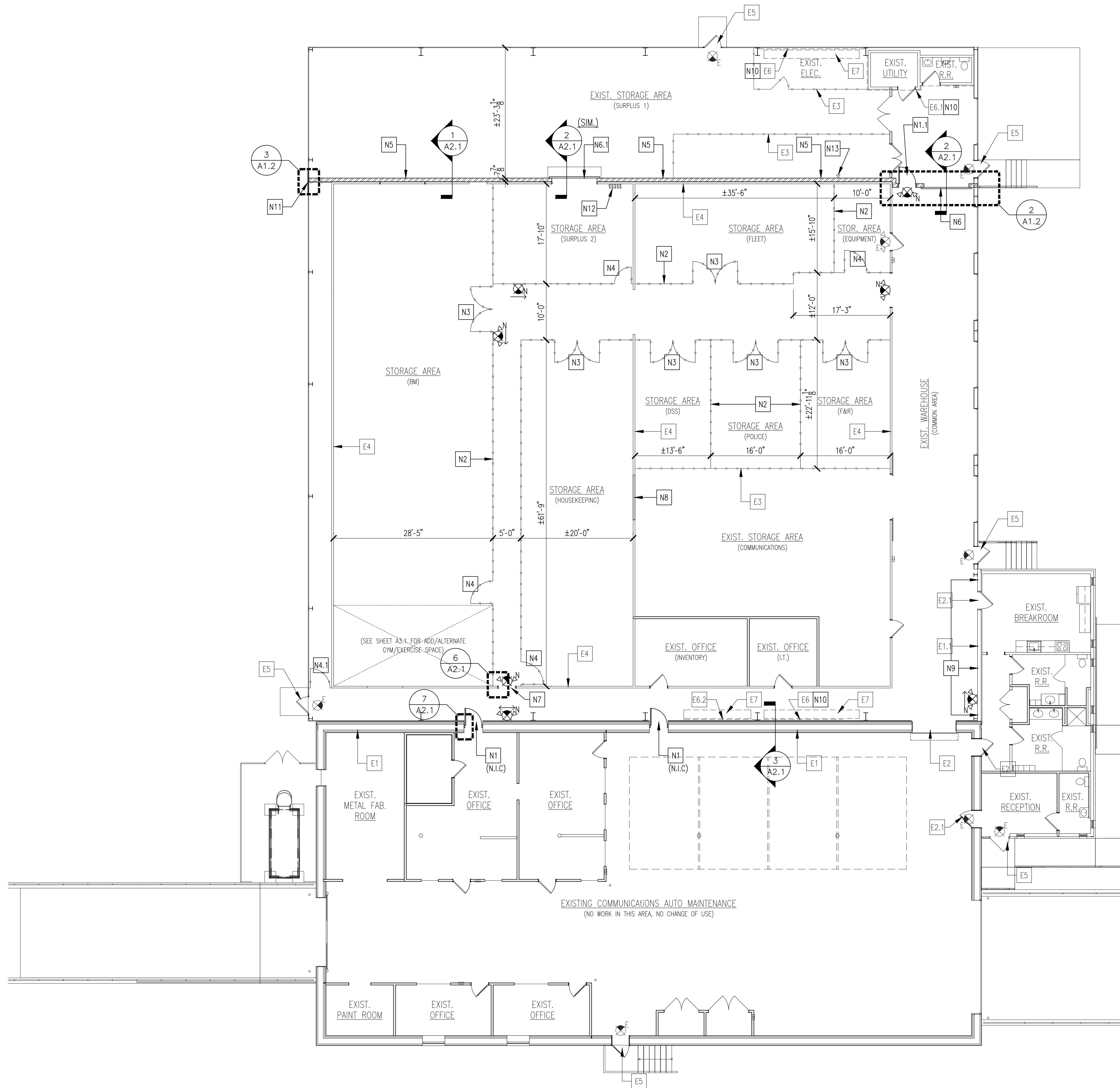
2
A1.2

- CONT. BEAD OF SpecSeal ES1000 ELASTOMERIC SEALANT ALL AROUND GIRT
- (3) LAYERS 5/8" FIRE-CODE GWB STRIPS SECURED TO DEFLECTION TRACK & TO END STUD @ WALL PANELS, OVERLAP 4" MIN. W/ WALL SHEATHING
- GAP AS REQ. FOR WALL DEFLECTION
- (3) LAYERS 5/8" FIRE-CODE GWB, SEE UL ASSEMBLY FOR SPACING & DETAILS
- 3-HOUR RATED WALL: UL# U415
- 6" SHAFTWALL STUDS, SEE UL ASSEMBLY FOR SPACING & DETAILS
- 1" GYPSUM SHAFTBOARD, SEE UL ASSEMBLY FOR SPACING & DETAILS
- SHAFTWALL END TRACK, CONT. TO ROOF
- CUSTOM FABRICATED CONT. 14gage DEFLECTION TRACK W/ OFFSET FLANGE, SECURED TO BACKSIDE OF GIRTS
- CONT. VERT. BEAD OF SpecSeal ES1000 ELASTOMERIC SEALANT EA. SIDE
- GWB CONT. TO BACK OF MTL. WALL PANELS
- 8"x14 GAGE STUD, CONT. BETWEEN EXIST. GIRTS
- 3"x3"x14 GAGE CLIP ANGLE @ EA. GIRT, SECURE TO GIRTS & VERT STUDS
- FILL VOIDS IN MTL. PANELS W/ ROCK WOOL INSUL.
- BREAK EXIST. INSUL. @ RATED WALL
- EXIST. EXTERIOR WALL MTL. WALL PANELS

FIRE BARRIER PLAN DETAIL

SCALE: 1"=1'-0"

3
A1.2

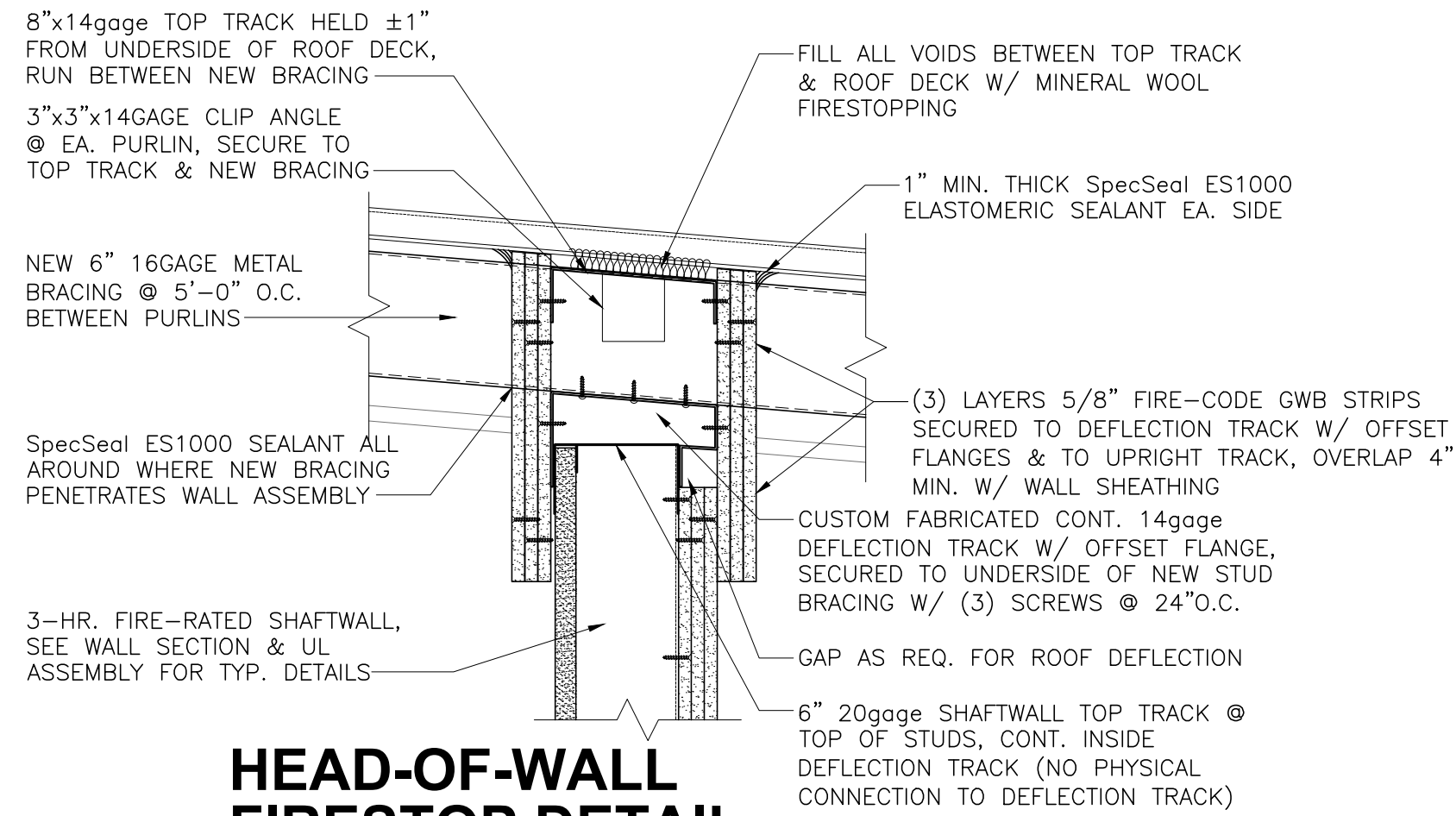


BUILDING RENOVATION PLAN

SCALE: 3/32"=1'-0"

1
A1.2

NOTE: ABSOLUTELY NO SCREWS THRU THE EXISTING ROOF DECK

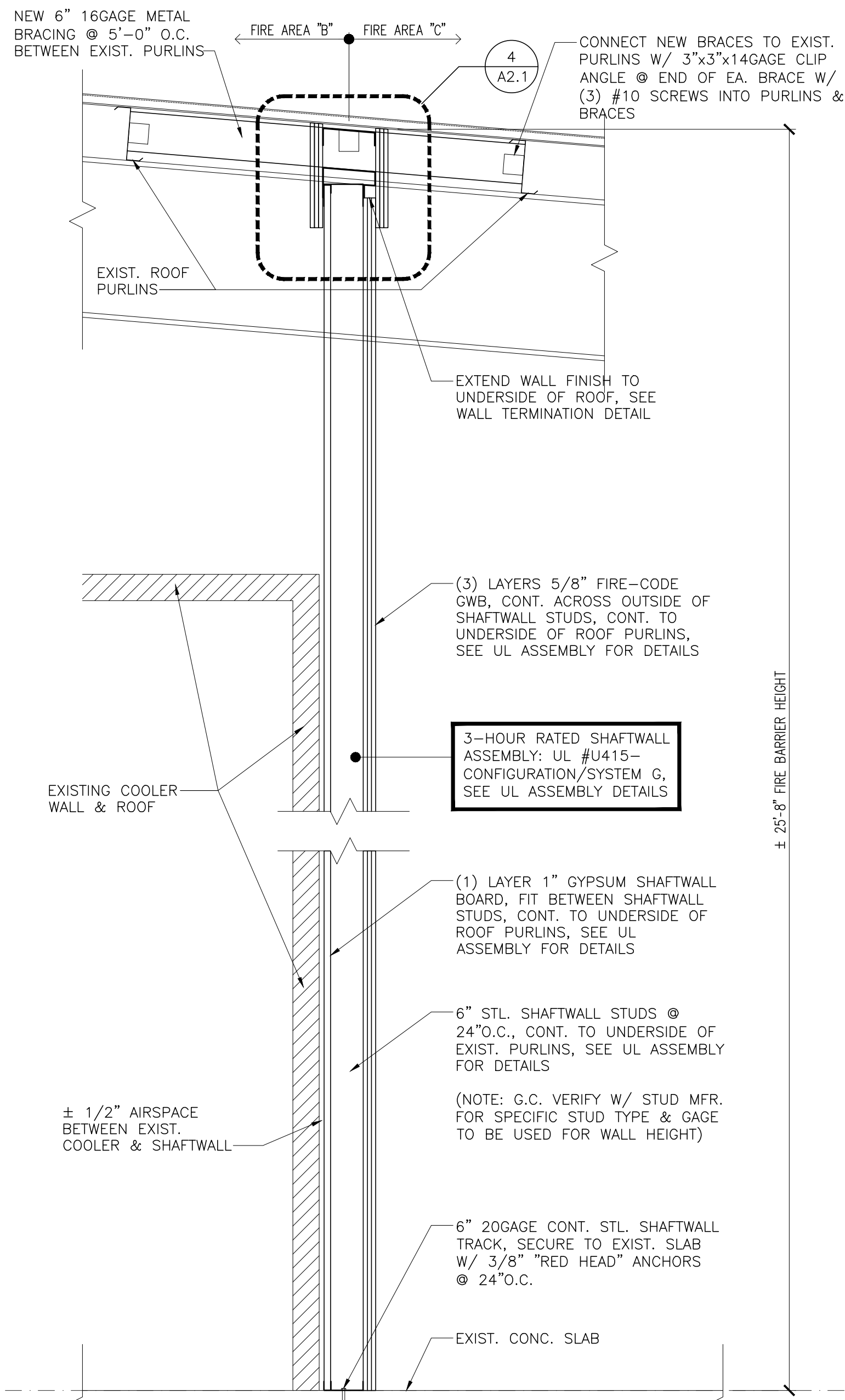


HEAD-OF-WALL FIRESTOP DETAIL

SCALE: 1-1/2"=1'-0"

NOTE: PURLINS PARALLEL TO WALL

3-HOUR FIRESTOP ASSEMBLY
SIM. TO UL# HW-D-0060

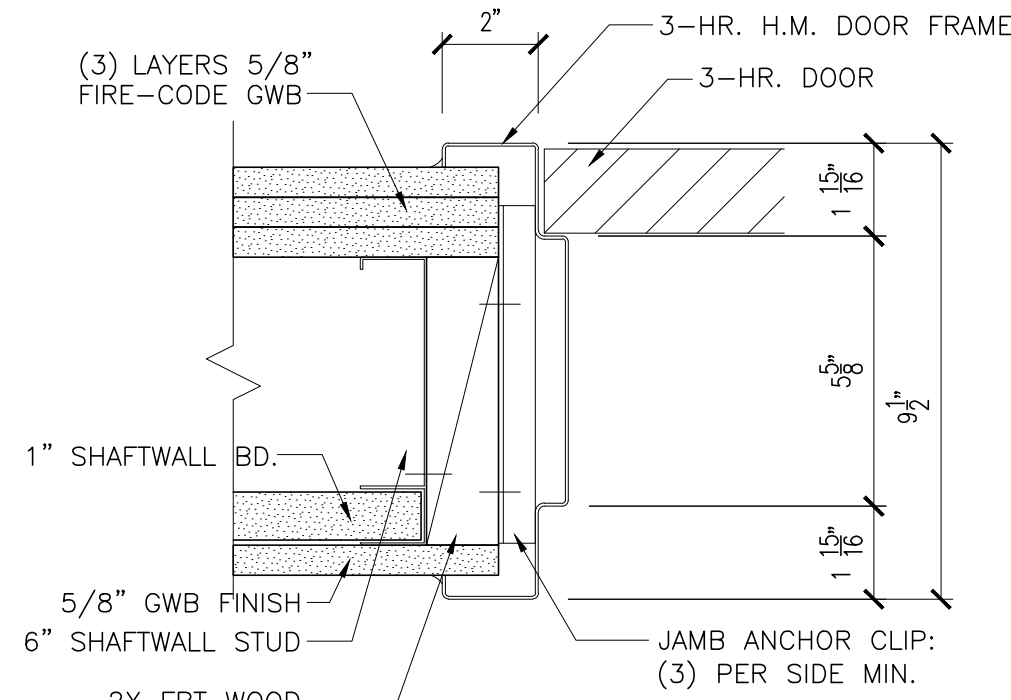


WALL SECTION @ NEW FIRE BARRIER

SCALE: 3/4"=1'-0"

WALL NOTES:

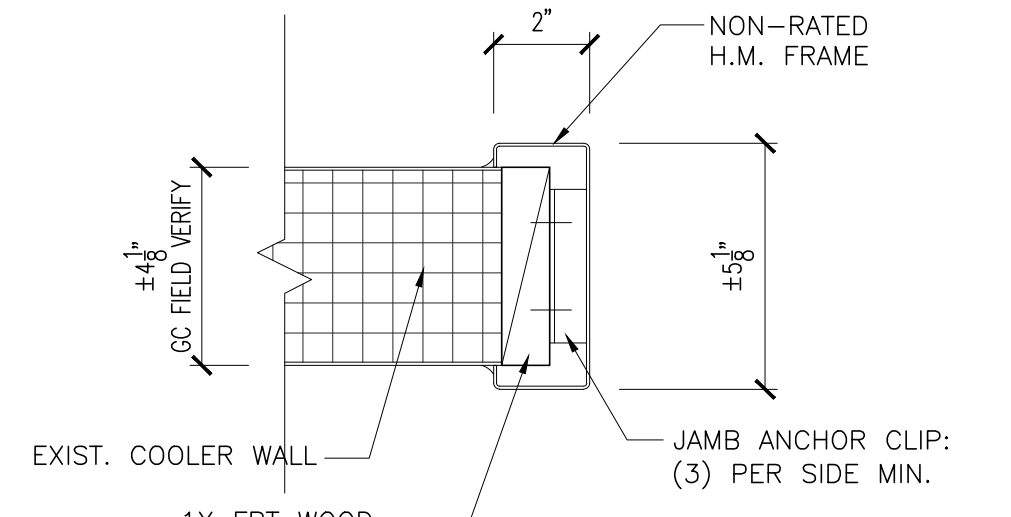
- ALL NEW GWB SHALL BE TAPED, MUDDED AND SANDED.
- SEE UL ASSEMBLY FOR JOINT FINISH AND ANCHORING REQUIREMENTS ON FIRE-RATED WALLS.



INTERIOR HOLLOW METAL DOOR JAMB

SCALE: 3"=1'-0"

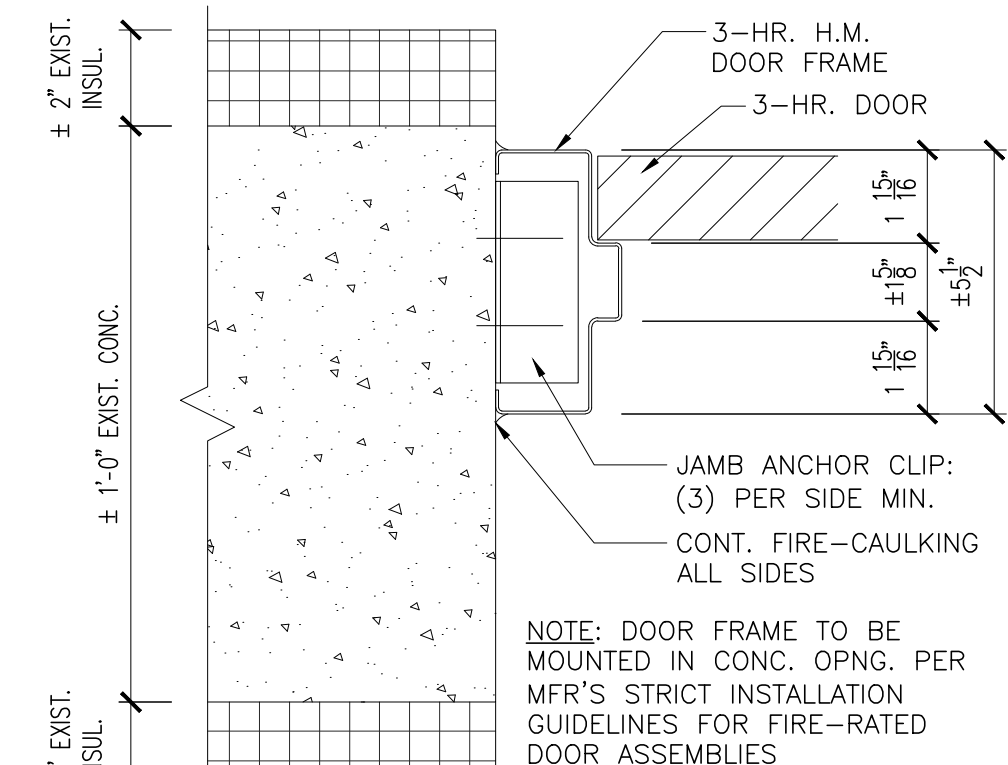
NOTE: HEAD SIMILAR, U.N.O.



INTERIOR HOLLOW METAL CASED OPENING JAMB

SCALE: 3"=1'-0"

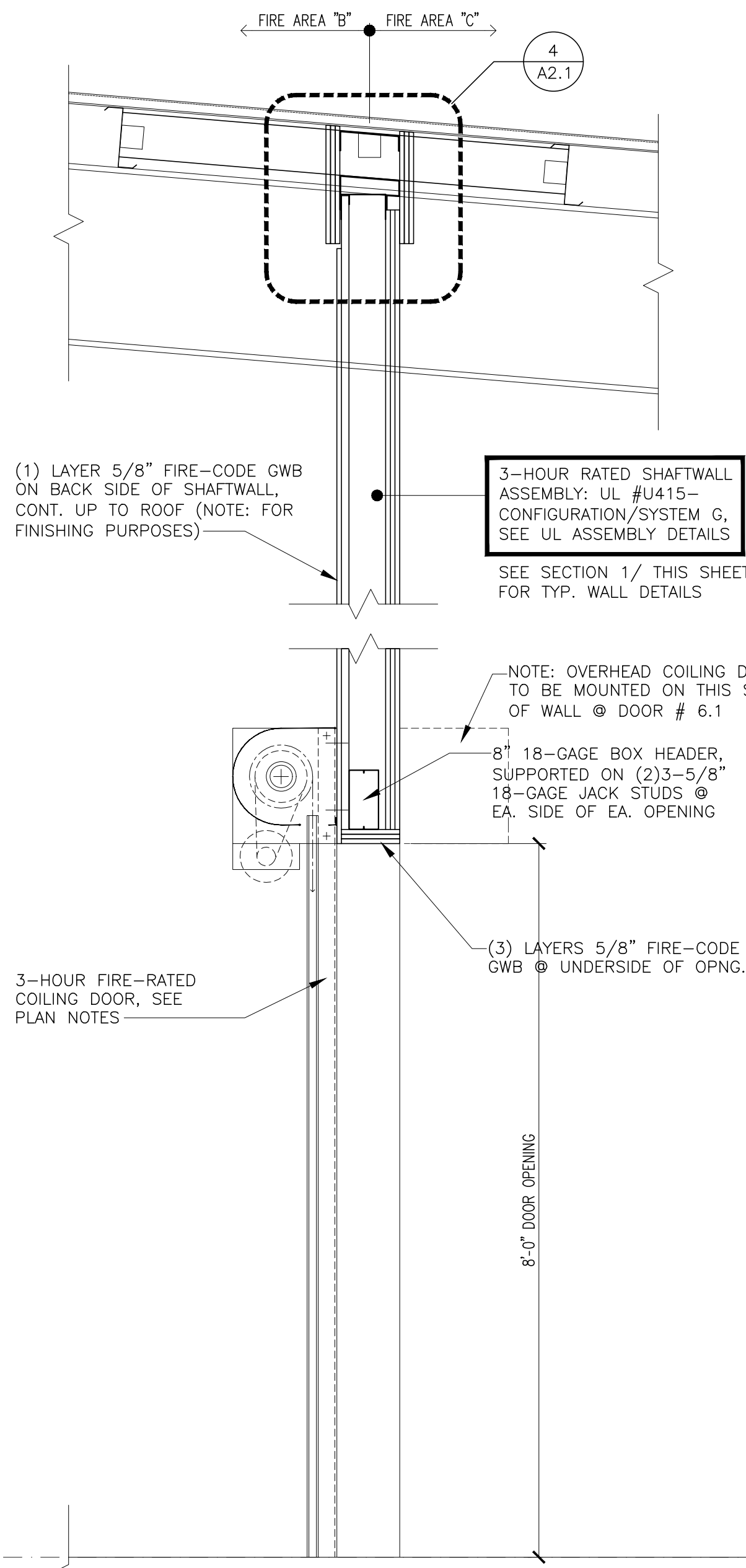
NOTE: HEAD SIMILAR, U.N.O.



INTERIOR HOLLOW METAL DOOR JAMB (N.I.C.)

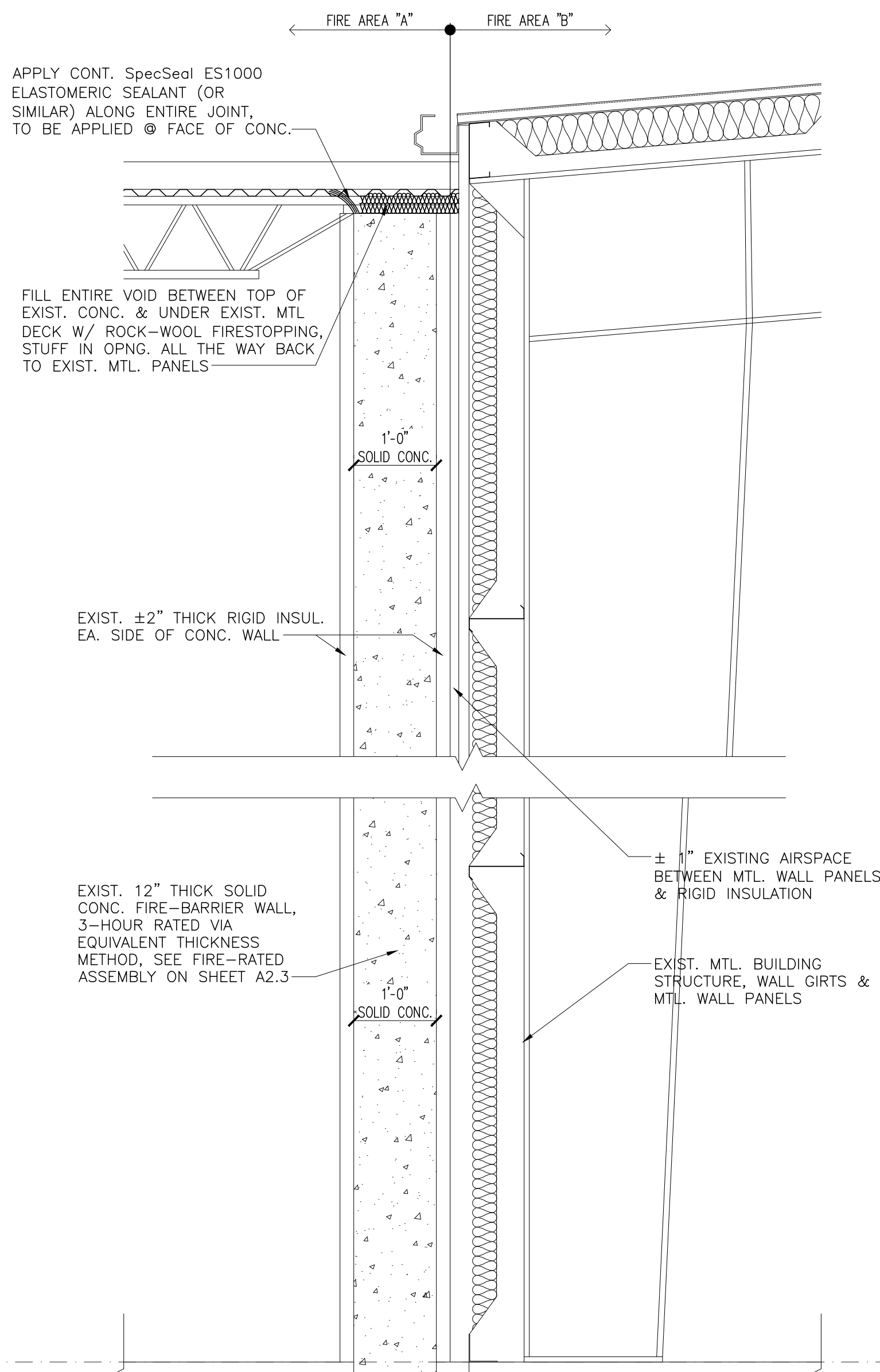
SCALE: 3"=1'-0"

NOTE: HEAD SIMILAR, U.N.O.



WALL SECTION @ NEW FIRE COILING DOOR

SCALE: 3/4"=1'-0"



WALL SECTION @ EXISTING FIRE BARRIER

SCALE: 3/4"=1'-0"

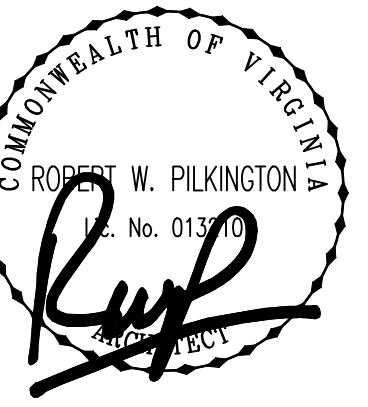


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ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

WALL SECTIONS & DETAILS

5285 HOLMES ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY RWP
DESIGNED BY RWP
CHECKED BY --
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS

A2.1
PROJECT NO 03220033.00

\\22100103\03220033.00 ROMANCE COUNTY PUBLIC SERVICES-COLD STORAGE BLDG\ARCH\DRAWINGS\03220033.00 AI-2.dwg



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540.772.9580



A2.2

PROJECT NO 03220033.00

[illegible]

\\22\00\03\03220033.00 ROANOKE COUNTY PUBLIC SERVICES-COLD STORAGE BLDG\ARCH\DRAWINGS\03220033.00 AI-2.dwg

<https://iq.ulprospector.com/en/profile?e=170115>

<https://fig.uprospector.com/en/profile?e=170115>

10

21

3/6

4/6

2015 VIRGINIA CONSTRUCTION CODE

**For more information or
the name of the certified
installer nearest to you,
call 800-627-1687.**

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A2.3
PROJECT NO 03220033.00

UL# W-L-1252
(3-HOUR PENETRATION FOR ELEC CONDUIT)

CLASSIFIED
C
UL
US
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CANULC-S115

System No. W-L-1252

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1, 2, 3 and 4 Hr (See Items 1 and 3)	F Ratings — 1, 2, 3 and 4 Hr (See Items 1 and 3)
T Rating — 0 Hr	FT Rating — 0 HRL
L Rating At Ambient — Less Than 1 CFM/Sq Ft	FH Ratings — 1, 2, 3 and 4 Hr (See Items 1 and 3)
L Rating At 400 F — Less Than 1 CFM/Sq Ft	FTH Rating — 0 HRL
	L Rating At Ambient — Less Than 1 CFM/Sq Ft
	L Rating At 400 F — Less Than 1 CFM/Sq Ft

WL 1252

1

2

3

1

2

3

SECTION A-A

1. Wall Assembly — The 1, 2, 3 or 4 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing shall consist of steel channel studs. Steel studs to be min 3-1/2 in. (89 mm) wide spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — Min 5/8 in. (16 mm) thick with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall or Partition Design. Max diam of opening is 5-3/4 in. (146 mm).

The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrant — One metallic pipe, conduit or tube to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe, conduit or tube and periphery of opening shall be min 0 in. (point contact) to max 7/8 in. (22 mm). Pipe, conduit or tube to be rigidly supported on both sides of wall assembly.

A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.

C. Conduit — Nom 4 in. (102 mm) diam (or smaller) rigid steel conduit.

D. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic conduit.

E. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.

F. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Fill, Void or Cavity Material — Sealant* — Fill material applied within annulus, flush with both surfaces of wall. Type and thickness of sealant is dependent on F and FH Ratings as indicated in Table below. An additional 1/2 in. (13 mm) diameter bead of sealant applied at penetrant/gypsum board interface at point contact location on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant or CP 606 Sealant

F, FH Ratings hr	Sealant Type	Sealant Thickness, in. (mm)
1, 2	FS-ONE, FS-ONE MAX or CP 606	5/8 (16)
3	FS-ONE, FS-ONE MAX or CP 606	1 (25)
4	FS-ONE, FS-ONE MAX	1 (25)

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

NOTE: DETAIL TO BE USED WHEREVER ANY ELECTRICAL WIRING IN CONDUIT, OR OTHER MISCELLANEOUS PIPING, PENETRATES ONE OR BOTH MEMBRANES OF FIRE-RATED WALL.

FIRE-RETARDANT COATING FOR PLYWOOD

FRCT
TM

Fire Retardant Coatings of Texas, LLC
1150 Blue Mound Rd West #403
Haskell, Texas 76042
Office (817) 710-5233 Fax (817) 439-8385
www.frctexas.com

Intertek

CERTIFIED & LISTED

FX LUMBER GUARD

Technical Information

Flame Spread Index: 10	CLASS A RATED	DON'T LET FREEZE	300-350 sf per gal
Intertek Certification W/N 21094	Intertek CCCR-1044	DON'T DILUTE	ENVIRONMENT SAFE
1 COAT APPLICATION	Transparent	NON CORROSIVE	STAINABLE / PAINTABLE
Shelf Life: 3yrs	Odorless	NON TOXIC	PH: Avg. 4.7

A colorant can be added for validation of treatment.

FX LumberGuard: Fire Retardancy is indefinite if protected from excessive exposure to high humidity of >80% constantly or wet locations.

FX LumberGuard: is rated one of the top fire retardant coatings for application process, performance, stability and testing.

FX LumberGuard: treated dimensional lumber will not require retreating for straight or cross cuts, if ripping, the board will need re-treating, plywood can be straight, cross cut or ripped and will not require re-treatment.

Application Process:

Material to be treated must be clean & dry before treating. Agitate FX Lumber Guard before and throughout application. Apply as it's received by spraying with a hand pump sprayer, a high volume low pressure system, rolled or brushed on at a rate of 300-350 sf per gallon depending on material being treated. (Vertical spraying) Start from the bottom and work up as there is less run off this way, drying time will vary from 8-32hrs depending on temp & humidity.

Field Testing:

When the observation of the treatment and/or field testing is required, field testing must be conducted as follows: The treated substrate will not have distinctive observable features. To ensure the substrate has been treated properly, the treated substrate must be field tested, the flame from a small fire source (propane torch) is applied to a treated and untreated sample of substrate for a period of not less than 15 seconds. The presence of the treatment must be observable through the comparison of the reactions of the substrates to the flame. Presence of the coating can be observed when the coatings begin to form a black char layer.

Meets 16 CFR 1500.3 FHSA of the Consumer Product Safety Commission (CPSC) as Non-Hazardous / Non-Toxic

NOTE: Degradation: Design Values of lumber or plywood are not affected due to not impregnating with a salt base chemical or kiln drying after treatment.

WARNING: KEEP THIS AND ALL CHEMICALS OUT OF CHILDREN'S REACH - AS WITH ANY PRODUCT, THIS PRODUCT MAY CAUSE EYE AND/OR SKIN IRRITATION - ALWAYS WEAR PERSONAL PROTECTION EQUIPMENT WHEN HANDLING THIS OR ANY CHEMICALS.

Intertek CCCR-1044

Intertek W/N 21094

UL LISTED

GREEN MARK

NFPA MEMBER

QUALITY

Revised June 2015
FX Lumber Guard Technical Data© "Fire Retardant Coatings of Texas" & "FRCT" Logo are federally registered trademarks

Listed to ASTM E84 & ASTM E2768
SYP, SPF, Hem Fir & Doug Fir Lumber & SPF and SYP Plywood
CSI Div. 06 05 73.13 Fire Retardant Wood Treatment &
CSI Div. 09 96 43 Fire Retardant Coatings

Additional Testing
ASTM E119 • ASTM E119 / CAN/UL S101 •
CAN/ULC S102 • NFPA 255 / 703
ANSI/UL723 UBC 42.1
I-Joist, PSL, LVL, Glulam's, Cedar, Redwood, OSB, MDF, Particle Board and other porous softwoods / hardwoods & Sheathings.
Intertek Warnock Hersey Certification is the equivalent to "UL Certification"
Intertek Code Compliance Research Report (CCRR) is the equivalent to "ICC-ESR"

UL# W-L-3385
(3-HOUR PENETRATION FOR BARE CABLES)

CLASSIFIED
C
UL
US
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CANULC-S115

System No. W-L-3385

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1, 2 and 3 Hr (See Item 1)	F Ratings — 1, 2 and 3 Hr (See Item 1)
T Rating — 0 Hr	FT Rating — 0 HRL
	FH Ratings — 1, 2 and 3 Hr (See Item 1)
	FTH Ratings — 0 HRL

WL 3385

1

2

3

1A

1B

2

3

SECTION A-A

1. Wall Assembly — The 1, 2 or 3 fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — Nom 5/8 in. (16 mm) thick gypsum board, with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory. Max diam of opening is 4 in. (102 mm).

The F Rating of the firestop system is equal to the fire rating of the wall assembly.

2. Cables — Aggregate cross-sectional area of cable in opening to be max 45 percent of the cross-sectional area of the opening. The annular space between the cable bundle and the periphery of the opening to be min 0 in. (point contact) to max 7/8 in. (22 mm). Cables to be tightly banded and rigidly supported on both sides of the wall assembly. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and jacket.

B. Max 25 pair No. 24 AWG telephone cable with PVC insulation and jacket.

C. Max 4 pr No. 22 AWG Cat 5 or Cat 6 computer cables.

D. Type RGU coaxial cable with polyethylene (PE) insulation and PVC jacket having a max outside diameter of 3/4 in. (13 mm).

E. Max RG 6/U coaxial cable with fluorinated ethylene insulation and jacketing.

F. Multiple fiber optical communication cable jacketed with PVC and having a max OD of 5/8 in. (16 mm).

G. Max three copper conductor No. 8 AWG Metal-Clad Cable*.

H. Max 3/C (with ground) (or smaller) No. 8 AWG copper conductor cable with PVC insulation and jacketing.

I. Through Penetrating Product* — Any cables, Metal-Clad Cable* or Armored Cable* currently Classified under the Through Penetrating Products category.

3. Fill, Void or Cavity Material* — Sealant — Fill material applied within the annulus, flush with both surfaces of wall. A min 5/8 in. (16 mm) thickness of sealant is required for the 1 or 2 hr F Rating. A min 1 in. (25 mm) thickness of sealant is required for the 3 hr F Rating. An additional 1/2 in. (13 mm) diam bead of fill material shall be applied at the point contact location of cable bundle/gypsum board interface on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP606 or FS-One Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

NOTE: DETAIL TO BE USED WHEREVER ANY BARE CABLES PENETRATE ONE OR BOTH MEMBRANES OF FIRE-RATED WALL FOR LOCATIONS OF LIGHT FIXTURES, ETC.

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ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

FIRE-RATED ASSEMBLIES






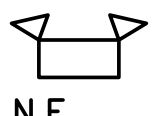







5285 HOLLINS ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY RWP
DESIGNED BY RWP
CHECKED BY ---
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS

A2.4
PROJECT NO 03220033.00

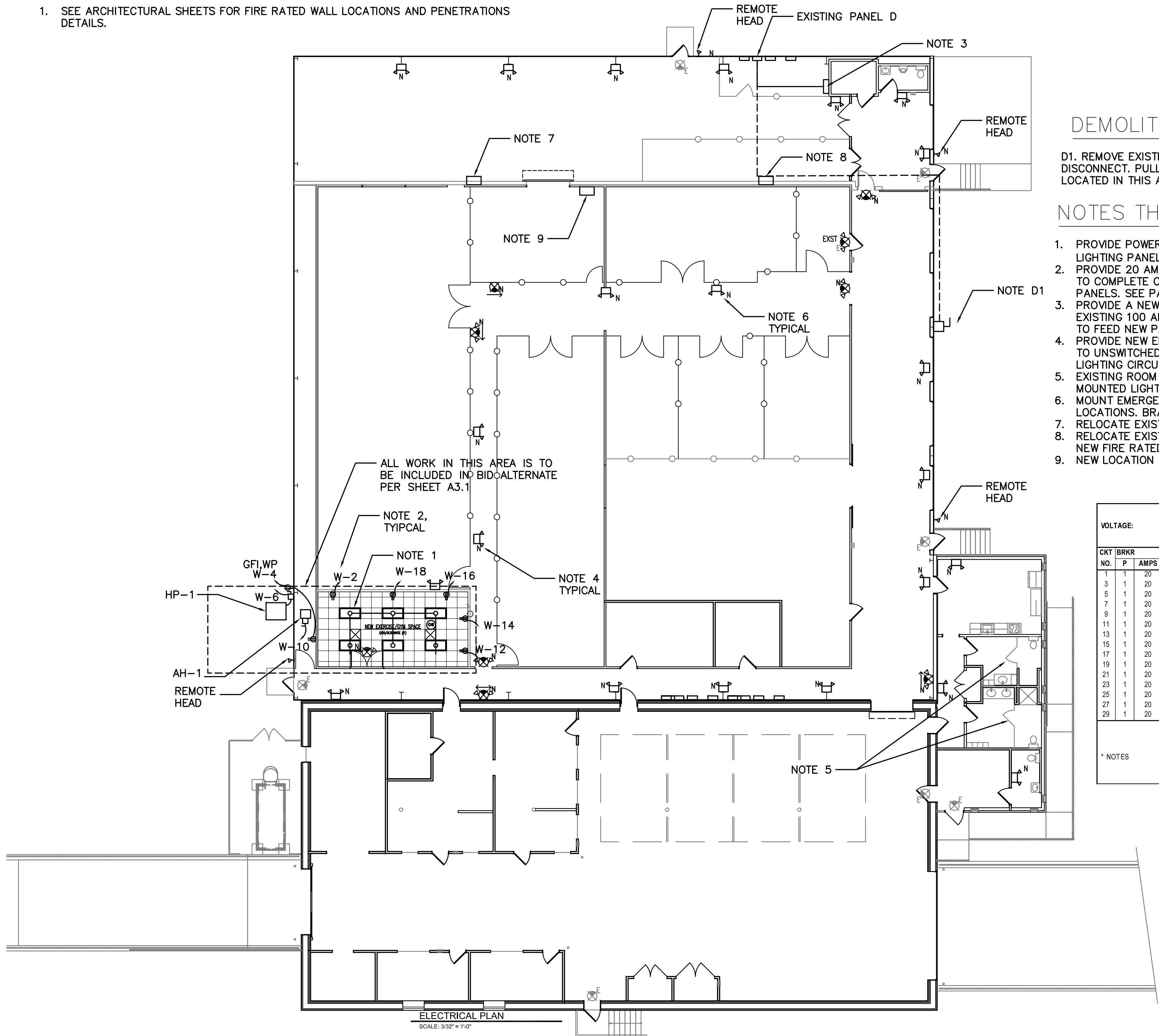
J:\23\2023\03220033.00 - ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG INTERIOR RENOVATIONS & CHANGE-OF-USE - FIRE-RATED ASSEMBLIES.dwg 06/22/2022 10:41:24 am

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GENERAL NOTES		ELECTRICAL LEGEND												
<div>1. MECHANICAL EQUIPMENT IS SHOWN IN APPROXIMATE LOCATIONS. FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND PIPING, SEE MECHANICAL DRAWINGS. SOME MECHANICAL EQUIPMENT IS LOCATED ON THE ROOF. VERIFY LOCATION WITH MECHANICAL AND PROVIDE ALL CONDUIT AND WIRING TO OUTDOOR EQUIPMENT.</div> <div>2. REVISE PANELBOARD SCHEDULES ON PANEL DIRECTORIES TO REFLECT FINAL INSTALLATION CONDITIONS.</div> <div>3. LOCATE ALL RACEWAYS TO AVOID INTERFERENCE WITH DUCTS, PIPES, MECHANICAL EQUIPMENT, WITH REMOVAL OF CEILING TILES, OR WITH ACCESS TO EQUIPMENT WHICH REQUIRES PERIODIC ADJUSTMENT OR MAINTENANCE.</div> <div>4. PROVIDE NAMEPLATES ON THE EXTERIOR OF ALL ELECTRICAL PANELS AND ENCLOSURES WITH THE DEVICE ID, RATING, POWER SOURCE AND INSTALLATION DATE AND BY WHICH SWITCH OR STARTER.</div> <div>5. UNLESS INDICATED OTHERWISE, SIZE CONDUITS IN ACCORDANCE WITH NFPA 70.</div> <div>6. COORDINATE WITH THE MECHANICAL CONTRACTOR TO ENSURE ALL WORKING CLEARANCE AND DEDICATED WORKING SPACE OF PANELBOARDS.</div> <div>7. GROUNDING CONDUCTORS ARE NOT INDICATED IN BRANCH CIRCUIT RACEWAYS. PROVIDE GROUND CONDUCTORS AS REQUIRED BY NEC.</div> <div>8. OCCUPANCY SENSORS SHOULD CONTROL ALL LIGHTING IN ROOMS, BOTH INBOARD AND OUTBOARD SWITCHING WHERE APPLICABLE, UNLESS INDICATED OTHERWISE.</div> <div>9. PROVIDE LABELS ON ALL RECEPTACLE INDICATING PANEL AND CIRCUIT FEEDING EACH DEVICE.</div> <div>10. CONNECT EMERGENCY BATTERY UNITS TO LOCAL LIGHTING CIRCUITS.</div>		<div></div> <div>LED LIGHTING FIXTURE, RECESSED, SURFACE OR PENDANT CEILING MOUNTED, COORDINATE WITH OWNER FOR ANY DESIRED NIGHT LIGHT LOCATIONS.</div>	<div></div> <div>EXIT LIGHTING FIXTURE, SURFACE CEILING MOUNTED, DIRECTIONAL ARROWS AS INDICATED. VR SUBSCRIPT INDICATES VANDAL RESISTANT.</div>	<div></div> <div>EXIT LIGHTING FIXTURE, SURFACE WALL MOUNTED, DIRECTIONAL ARROWS AS INDICATED.</div>	<div></div> <div>DUPLEX WALL RECEPTACLE, MOUNTING HEIGHT = 1'-6", EXCEPT 'C' SUBSCRIPT INDICATES MOUNTING IN CASEWORK(TYP). 'GFI' SUBSCRIPT INDICATES GROUND FAULT, 'M' SUBSCRIPT INDICATES RECEPTACLE MOUNTED BEHIND MIRROR, 'EWC' SUBSCRIPT INDICATES GROUND FAULT BEHIND ELECTRIC WATER COOLER. '*' INDICATES MOUNTED HEIGHT = 8" ABOVE COUNTER(TYP). 'E' INDICATES EXISTING TO REMAIN.</div>	<div></div> <div>OCCUPANCY SENSOR, DUAL TECHNOLOGY</div>	<div></div> <div>EMERGENCY BATTERY UNIT, LITHONIA EU2C OR EQUAL, 'N' INDICATES NEW, 'E' INDICATES EXISTING</div>	<div></div> <div>EMERGENCY BATTERY UNIT WP, REMOTE HEAD, CONNECT TO BATTERY PACK INSIDE OF BUILDING. PROVIDE ADDITIONAL BATTERY PACKS AS REQUIRED.</div>	<div></div> <div>BRANCH CIRCUIT HOME RUN TO PANELBOARD. NOTATION INDICATES PANELBOARD & BRANCH CIRCUIT CONNECTION.</div>	<div></div> <div>CONDUCTORS IN CONDUIT CONCEALED IN SLAB OR BELOW GRADE.</div>	<div></div> <div>SINGLE-POLE SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP. LOWER CASE SUBSCRIPT WHEN USED, INDICATES FIXTURES CONTROLLED (TYP).</div>	<div></div> <div>PANELBOARD, 208Y/120-VOLT, 3-PHASE, 4-WIRE, MOUNTING HEIGHT=6'-0" TO TOP. SEE PANELBOARD SCHEDULES.</div>	<div></div> <div>DISCONNECT SWITCH, EXTERNALLY OPERATED, 240V, 3 Ø UNLESS OTHERWISE NOTED. NOTATION INDICATES NUMBER OF POLES AND AMPERAGE CAPACITY. 'NF' SUBSCRIPT INDICATES NON FUSED.</div>	<div></div> <div>CONDUCTORS IN CONDUIT CONCEALED IN CEILING OR WALL.</div>

GENERAL NOTES:

1. SEE ARCHITECTURAL SHEETS FOR FIRE RATED WALL LOCATIONS AND PENETRATIONS DETAILS.



DEMOLITION NOTES THIS SHEET:

D1. REMOVE EXISTING 100 AMP FUSED DISCONNECT AND EXISTING 3 PHASE SERVICE TO DISCONNECT. PULL FEEDERS BACK TO A SUITABLE LOCATION TO FEED 100 AMP, 3 POLE PANEL LOCATED IN THIS AREA. EXTEND EXISTING WIRING TO PANEL LOCATION AS REQUIRED.

NOTES THIS SHEET:

1. PROVIDE POWER FOR NEW LIGHTING IN GRID IN THIS AREA. PROVIDE POWER FROM EXISTING LIGHTING PANEL. ALL NEW LIGHTS ARE TYPE 'A'.
2. PROVIDE 20 AMP DEDICATED CIRCUIT FOR EQUIPMENT. PROVIDE #12 WIRE AND #12 GROUND TO COMPLETE CIRCUIT. PROVIDE POWER FROM 20 AMP, SINGLE POLE BREAKER IN EXISTING PANELS. SEE PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
3. PROVIDE A NEW 100 AMP, 3 PHASE PANEL W IN THIS LOCATION. PROVIDE FEED FROM EXISTING 100 AMP, 3 POLE BREAKER IN EXISTING PANEL D. RECONFIGURE EXISTING WIRING TO FEED NEW PANEL.
4. PROVIDE NEW EMERGENCY BATTERY UNITS AND EXIT SIGNS INDICATED. CONNECT EXIT SIGNS TO UNSWITCHED LIGHTING CIRCUIT. CONNECT EMERGENCY BATTERY UNITS TO LOCAL LIGHTING CIRCUIT. PROVIDE ADDITIONAL HOT WIRES AS REQUIRED FOR CORRECT OPERATION.
5. EXISTING ROOM CONTAINS EMERGENCY BATTERY BALLASTS IN EXISTING 2X4 CEILING MOUNTED LIGHTS.
6. MOUNT EMERGENCY BATTERY UNITS AT THE TOP OF THE FENCE SYSTEM AT FENCE POSTS LOCATIONS. BRACKET EMERGENCY BATTERY UNIT TO THE POST AND THE TOP FENCE RAIL.
7. RELOCATE EXISTING BANK OF SWITCHES TO NEW LOCATION.
8. RELOCATE EXISTING DATA DROPS AND EXISTING CONDUIT FROM SURFACE OF COOLER TO NEW FIRE RATED WALLS.
9. NEW LOCATION OF RELOCATED GANG OF SWITCHES.

PANEL W																									
VOLTAGE: 208Y/120				PHASE: 3				BUS AMPS: 100A				<div><div></div><div>X</div></div> SURFACE MOUNTED				KAIC RATING: 22,000									
WIRE: 4				MAIN BREAKER AMPS: MLO				<div><div></div><div></div></div> FLUSH MOUNTED																	
CKT NO.	BRKR P	AMPS	WIRE NO	SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA				CKT NO.	BRKR P	AMPS	WIRE NO	SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA							
							PHA	PHB	PHC	3 PH								PHA	PHB	PHC	3 PH				
1	1	20				SPARE					2	1	20	2	12		GYM RCPT	0.2							
3	1	20				SPARE					4	2	25	2	10		HP-1		1.3						
5	1	20				SPARE					7	1	20				AHU-1	3.2			1.3				
7	1	20				SPARE					8	2	40	2	8				3.2						
9	1	20				SPARE					12	1	20	2	12		GYM RCPT				0.2				
11	1	20				SPARE					14	1	20	2	12		GYM RCPT	0.2							
13	1	20				SPARE					16	1	20	2	12		GYM RCPT				0.2				
15	1	20				SPARE					18	1	20	2	12		GYM RCPT				0.2				
17	1	20				SPARE					20	1	20				GYM RCPT								
19	1	20				SPARE					21	1	20				SPARE								
21	1	20				SPARE					22	1	20				SPARE								
23	1	20				SPARE					24	1	20				SPARE								
25	1	20				SPARE					26	1	20				SPARE								
27	1	20				SPARE					28	1	20				SPARE								
29	1	20				SPARE					30	1	20				SPARE								
TOTAL LEFT SIDE							0.0	0.0	0.0	0.0	TOTAL RIGHT SIDE							3.6	4.7	1.7	0.0				
TOTAL RIGHT SIDE							3.6	4.7	1.7	0.0	TOTAL CONNECTED LOAD							9.9							
TOTAL							3.6	4.7	1.7	0.0															
* NOTES																									

LIGHTING FIXTURE SCHEDULE

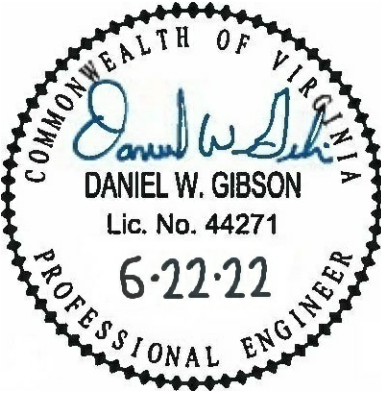
MARK	MANUFACTURER	MODEL NUMBER	INPUT VOLTAGE	LAMPS		TOTAL WATTS	MNTG.	REMARKS
				NO.	TYPE			
A	LITHONIA LIGHTING	2GTL 4 48L GZ10 LP840	MVOLT			34.1	REC	2'X4' RECESSED TROFFER
⏏	LITHONIA LIGHTING	EU2C	MVOLT				SURF	EMERGENCY LIGHT WITH REMOTE HEADS
⏏	LITHONIA LIGHTING	EXR/ECRG (COMBO)					SURF	EMERGENCY EXIT SIGN



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SECTION 16000

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

Provide new lighting, power, data and low voltage systems as indicated on the plans.

1.2 QUALITY ASSURANCE

A. General

- a. Comply with IEEE C2, "National Electrical Safety Code".
- b. IEEE Compliance: Comply with applicable Institute of Electrical and Electronics Engineers, Inc. standards pertaining to generator construction.
- c. NEC Compliance: Comply with NFPA 70, "National Electrical Code" as applicable to construction and installation of products required in this specification.
- d. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters Laboratories and have been certified to comply with UL requirements.
- e. IEEE Compliance: Comply with STD 241, "IEEE Recommended Practice for Electrical Power Systems in Commercial Buildings" pertaining to communication systems.

B. MOTOR CONTROLLERS

- a. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters' Laboratories and have been certified to comply with UL and NEMA.

C. LIGHTING

- a. NEMA Compliance: Comply with applicable requirements of NEMA Stds. Pub/No.'s LE 1 and LE 2 pertaining to lighting equipment.
- b. UL Compliance: Comply with UL standards, including UL 486A and B, pertaining to lighting fixtures. Provide lighting fixtures and components which are UL listed and labeled. Provide exterior fixtures with "Suitable for Wet Location" label.
- c. CBM Labels: Provide fluorescent lamp ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label.

1.3 COORDINATION OF ELECTRICAL WORK

A. General: Refer to the division sections for general coordination requirements applicable to the entire work. It is recognized that the contract documents are diagrammatic in showing certain physical relationships which must be established within the electrical work and in its interface with other work including utilities and mechanical work and that such establishment is the exclusive responsibility of the Contractor.

- a. Arrange electrical work in a neat, well organized manner with conduit and similar services running parallel with primary lines of the building construction and with the maximum headroom possible, but a minimum 7'_0" overhead clearance.
- b. Locate operating and control equipment properly to provide easy access and arrange entire electrical work with adequate access for operation and maintenance.
- c. Advise other trades of openings required in their work for the subsequent move_in of large units of electrical equipment.
- d. Coordinate all work, including power outages, with Owner's Schedule of Operation.

B. Product Handling: Space at the project for storage of materials and products is limited. Coordinate the deliveries of electrical materials and products with the scheduling and sequencing of the work so that storage requirements at the project are minimized. In general, do not deliver individual items of electrical equipment to the project substantially ahead of the time of installation.

1.3 ELECTRICAL SYSTEM IDENTIFICATION

- A. Conduit Systems: Provide adequate marking of primary conduits which are exposed or concealed in accessible spaces. to distinguish each run as either a power or signal/communication conduit. Except as otherwise indicated, use orange banding with black lettering. Provide self adhesive or snap_on type plastic markers. Indicate voltage ratings of conductors where above 240 V. Locate markers at ends of conduit runs, near switches and other control devices and near items of equipment served by the conductors. Switch_leg conduit and short branches for power connections need not be marked, except where conduit is larger than 1 inch. Label all junction boxes with branch circuit numbers terminated within.
- B. Identification Labels and Warning Signs: Provide engraved plastic laminate or baked enamel labels on major units of electrical equipment including switchboards, panelboards, motor controllers, control devices and similar systems. Label shall include equipment identification mark and voltage characteristics and shall be melamine plastic, 0.125_inch thick, white with black center core. Provide warning signs where there is hazardous exposure or danger associated with access to or operation of electrical facilities. Provide text of sufficient clarity and lettering of sufficient size, minimum 0.25 inch nominal block style, to convey adequate information at each location; mount permanently in an appropriate and effective location.

1.4 PAINTING ELECTRICAL WORK

- A. General: Except as otherwise indicated, comply with the applicable provisions of Division 9 for electrical_work painting. Electrical equipment shall have factory_applied painting systems which shall meet the requirements of NEMA ICS6. The work of this article shall include general field painting of electrical work. a. Coordinate the painting with the painting of other work of a similar nature and comply with indicated color and color matching requirements. Except as otherwise indicated, paint surfaces of electrical work which would normally be painted in the application and exposure indicated.
- B. Do not paint over nameplates on equipment, sliding/rotating shaft surfaces, non_ferrous hardware/accessories/trim and similar items where painting would normally be omitted.

1.5 ELECTRICAL SYSTEM PERFORMANCE

- A. General: The overall system performances of electrical work are of even greater importance than the specified individual unit_of_work performances. Each unit of electrical work has been designed and specified to perform at minimum levels of output and efficiency and is intended to contribute to and be compatible with the entire system. Compatibility of actual performances by electrical system performances is the Contractor's responsibility.
- B. Adjustments: Where it has been determined that electrical systems do not or will not perform in compliance with the specified performances, adjustments or corrections shall be made to the work as necessary to achieve required performances.

1.6 ELECTRICAL WORK CLOSEOUT

- A. Additional Service: Perform services within the above 12-month period not classified as routine maintenance or as warranty work as described in Division 1 Section "Warranties and Bonds" when DWGized in writing. Compensation for additional services must be agreed upon in writing prior to performing services.
- B. Closeout Coordination: Coordinate closeout operations with closeout of mechanical systems and other power consuming equipment.
- C. Record Drawings: Maintain a blue_line set of electrical contract drawings and/or shop drawings in clean, undamaged condition, for indication of major electrical equipment or concealed lines located in position other than that shown on the contract drawings. Mark_up whatever drawings are most capable of showing installed conditions accurately. In general, record every substantive installation of electrical work which previously is either not shown or shown inaccurately, specifically record the following:
 - a. Work concealed behind or within other work, in a nonaccessible location.
 - b. Main feeders with switchgear, panelboards, and control devices located, identified and numbered. This information shall be displayed in a glazed, hardwood frame, minimum two (2) feet square, near the main service disconnect.
 - c. Maintenance procedures and schedules.
 - d. Testing procedures and acceptable parameters.
- G. Cleaning and Lubrication: After final testing of each electrical system, clean system both externally and internally. Comply with manufacturer's instructions for lubrication of both power and hand operated equipment. Touch_up minor damage to factory_painted finishes and provide one pint of touch-up paint for each color of major equipment installed.

PART 2 - PRODUCTS

2.1 CABLE AND WIRE

- A. Provide factory-fabricated wire or cable of the size, rating, material and type as indicated for each service in compliance with NECA - Standard of Installation. Where not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards. Conductors shall be rated 600 volt of insulation type THW, THWN, THHN, or USE installed in compliance with National Electrical Code requirements.
- B. Provide bonding conductors for sizes No. 8 AWG and smaller of solid bare copper per ASTM B 1, and for sizes No. 6 AWG and larger stranded bare copper per ASTM B 8.
- C. No. 10 AWG and smaller diameter shall be solid copper; No. 8 AWG and larger diameter shall be stranded copper.
- D. Provide color coding for service, feeder, branch, control, and signaling circuit conductors. Color shall be green for grounding conductors and white for neutrals; except where neutrals of more than one system are installed in same raceway or box, other neutral shall be white with colored (not green) stripe. Color of ungrounded conductors in different voltage systems shall be as follows:
 - a. 120/208 volt, 3-phase:
 - i. Phase A - black.
 - ii. Phase B - red.
 - iii. Phase C - blue.
- E. Provide the following types of cables in NEC approved locations and applications where indicated. Provide cable UL listed for its intended use.
 - a. Metal clad cable: Type MC.
- F. Provide UL 486A, factory-fabricated, solderless, metal connectors of the size, ampacity, rating, material, type and class as indicated for each service. Where not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards. Provide insulating tape in compliance with UL 510.

2.2 ELECTRICAL RACEWAYS

- A. Metal Conduit, Tubing and Fittings: Provide metal conduit, tubing and fittings of type, grade, size and weight indicated for each service. Where type and grade are not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards for wiring requirements.
 - a. Rigid Steel Conduit: ANSI C80.1, UL 6.
 - b. Intermediate Steel Conduit (Zinc Coated Steel): UL 1242.
 - c. Rigid Metal Conduit Fittings: UL 514B, cadmium- or zinc- coated threaded type.
 - d. Electrical Metal Tubing (EMT): ANSI C80.3, UL 797.
 - e. EMT Fittings: UL 514B, compression or set-screw type
 - f. Flexible Metal Conduit: Cadmium- or zinc-coated steel.
 - g. Flexible Metal Conduit Fittings: UL 514B, cadmium- or zinc-coated.
 - h. Liquid-Tight Flexible Metal Conduit: UL 360, provide liquid-tight flexible metal conduit comprised of single strip, continuous, flexible, interlocked, double-wrapped steel, galvanized inside and outside; forming smooth internal wiring channel; with liquid-tight jacket of flexible polyvinyl chloride.
 - i. Liquid-Tight Flexible Metal Conduit Fittings: FS W-F-406.
- B. Wireways: Electrical wireways shall be of types, sizes, and number of channels as indicated. Fittings and accessories including but not limited to couplings, offsets, elbows, expansion joints, adapters, hold-down straps, and end caps shall match and mate with wireway as required for complete system. Where features are not indicated, select to fulfill wiring requirements and comply with applicable provisions of NEC. Wireway covers shall be hinged type.
- C. Surface Metal Raceways and Fittings: UL 5, two-piece steel, totally enclosed. Snap cover type with wiring devices, sizes and channels as indicated. Wiremold, or approved equal.
 - a. Type a: Two section, steel, approximately 7/8 inch x 1 1/4 inch wide, with 20 amp, 125V, specification grade grounding surge protection receptacles 2'-6" on centers, alternating circuits. Provide with ivory paintable finish.

2.3 ELECTRICAL OUTLET BOXES AND FITTINGS

- A. Interior Outlet Boxes: UL 514A, provide galvanized flat rolled sheet steel interior outlet wiring boxes, flush mounted of type, shapes and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts in back and sides, and with threaded screw holes with corrosion-resistant screws for securing box covers and wiring devices. Provide feraloy cast outlet boxes where surface mounted with threaded conduit hubs to suit each respective location and installation.
- B. Weatherproof Outlet Boxes: Provide corrosion-resistant cast metal weatherproof outlet wiring boxes, of types, shapes and sizes, with threaded conduit ends, cast metal face plates with spring-hinged waterproof caps suitably configured for each application, including faceplate gaskets and corrosion-resistant fasteners. Weatherproof while in operation.
- C. Cast-Iron Floor Boxes: Fully adjustable, waterproof, with threaded raceway entrances, adjusting rings, gaskets, and brass floor plates. Provide multi-section boxes with individual screw type brass section covers, barrier between compartments and provide for a duplex receptacle under one or more of the covers. Telephone outlets shall have provisions to accommodate 10-wire telephone terminal block. Provide gaskets where required to ensure watertight installation. Provide trim suitable for floor conditions.

2.4 WIRING DEVICES

- A. General: Provide factory-fabricated wiring devices, in types, colors and electrical ratings for applications indicated and complying with NEMA Standards Publication No. WD 1. Where types and grades are not indicated, provide proper selection as determined by installer to fulfill wiring requirements, and comply with NEC and NEMA standards for wiring devices. Provide receptacles with isolated ground and/or surge protection where indicated.
- B. Receptacles:
 - a. Hospital Grade Duplex: UL 498, provide duplex heavy duty type receptacles, 2-pole, 3-wire grounding, with green hexagonal equipment ground screw, ground terminals and poles internally connected to mounting yoke, 20-amperes, 125 volt, ivory nylon face with metal plaster ears, side wiring, NEMA Configuration 5-20R, unless otherwise indicated.
 - b. Provide with cast aluminum weatherproof cover where indicated to be WP while in operation.
- C. Switches:
 - a. Snap: UL 20, provide general duty flush single-pole toggle switches, 20-amperes, 120-277 volts AC only, with mounting yoke insulated from mechanism, equip with plaster ears, ivory switch handle and side wired screw terminals. Single Three-way and Four-way as indicated on drawings.
 - b. Motion Sensing, Ceiling Mounted: Provide dual technology ultrasonic and passive infrared or microphonic and passive infrared motion detector, manual off switch, 0 to 4800 watt fluorescent switching capacity, 277 volts AC, 360 sensing coverage, six to 15 minute off time delay, LED walk test indicator, bypass switch, suitable for use in classrooms, 5_year warranty, UL listed, Universal Energy Control (UNENCO) Switchomatic Coordinate with connected wattage and type of room light fixtures.
- D. Wiring Device Accessories:
 - a. Wall Plates: Provide UL listed, one-piece device plates for outlets and fittings to fit the device installed. For flush-mounted outlets on finished walls, provide white switch and outlet plates of types, sizes and with ganging and cutouts as indicated. Install with metal screws for securing plates to devices; screw heads colored to match finish of plate.
 - b. For surface mounted boxes, provide feraloy cast outlet plates on all outlet boxes, type suitable for wiring device installed in box.
 - c. Provide plate with engraved legend where indicated.

2.5 SAFETY AND DISCONNECT SWITCHES

- A. General: UL 98, NEMA KS1, provide surface-mounted, sheet-steel enclosed switches, of types, sizes and electrical characteristics indicated; 3-blades, 4-wire with amperage rating as required, 60 hertz and visible blades with door in open position. Provide with safety handle which is easily recognizable and is capable of being padlocked in the open position and operating mechanism for quick-make and quick-break. Current carrying parts of high-conductivity copper, with silver-tungsten type switch contacts. Provide NEMA 1 type enclosures indoors and NEMA 3R type enclosures with raintight hubs outdoors.
- B. Provide General Duty Type: 240 volts AC, Type GD. Heavy Duty Type: 600 volts AC.
- C. Switches used as motor disconnect means shall be horsepower rated. Fused switches shall utilize Class R fuseholder and fuses unless indicated otherwise or recommended by equipment manufacturer.

2.6 ELECTRICAL GROUNDING AND BONDING EQUIPMENT

- A. General: UL 467. Provide grounding products of types indicated and of sizes and ratings as required by NEC. Provide all material required including but not necessarily limited to, cable/wire, connectors, terminals (solderless lugs), grounding rods/electrodes, bonding jumper braid and other items and accessories needed for a complete installation. Where more than one type meets indicated requirements, selection is installer's option. Where materials or components are not otherwise indicated, provide products complying with NEC, and established industry standards.
- B. Electrical Grounding Conductors: Unless otherwise indicated, provide electrical grounding conductors for grounding connections matching power supply wiring materials except bare or green insulation and sized according to NEC. Equipment grounding conductors shall have green insulation. Solid conductors shall comply with ASTM B-3, stranded conductors with ASTM B-8.
- C. Grounding Connectors: Provide listed and labeled grounding connectors for the required materials. Provide high-conductivity plated pressure connector units or exothermic welded connections.

2.7 COMBINATION MOTOR CONTROLLERS

- A. General: Motor circuit protector; molded-case circuit-type breaker type with magnetic-only trip element calibrated to coordinate with the actual locked-rotor current of the connected motor and the controller overload relays. Provide breakers that are factory assembled with the controller, interlocked with unit cover or door, and arranged to disconnect the controller. Provide motor circuit-protectors with field-adjustable trip elements.

2.8 LIGHTING FIXTURES

- A. Provide lighting fixtures of sizes, types, and ratings indicated in lighting fixture schedule
- B. Wiring: Provide electrical wiring within fixture suitable for connecting to branch circuit.
 - a. NEC Type AF for 120 volt, minimum No. 18 AWG.
 - b. NEC Type SF_2 for 277 volt, minimum No. 18 AWG.

2.9 TIME CONTROLLED SWITCHES

- D. Provide electrically operated time controlled maintained contact switches with 24_hour dials capable of periodically and automatically switching mechanically held or electrically held contactors ON and OFF. Select switches which permit selection of from 1 to 7 ON_OFF operations each day; with coil ratings of 120 volts, 60 Hz, and with DPDT switch. Provide flush mount enclosure, NEMA Type 1, with side hinged door and lock, mounting holes and knockouts. Provide timing switch with manual circuit_by_pass switch, 10 hour reserve power, and separate grounding terminal. Finish enclosure with manufacturer's standard gray finish.

2.10 MOTION DETECTORS

- A. Indoor Motion Detectors: Provide passive infrared motion sensor to operate lights on detection of occupancy, 120/277 volts, field adjustable.
- B. Outdoor Motion Detectors: Passive infrared motion sensor in weatherproof enclosure with adjustable digital sensitivity and time delay and isolated SPDT relay contact. Provide unit suitable for operation at temperatures as low as -40F. Provide adjustable mounting bracket.

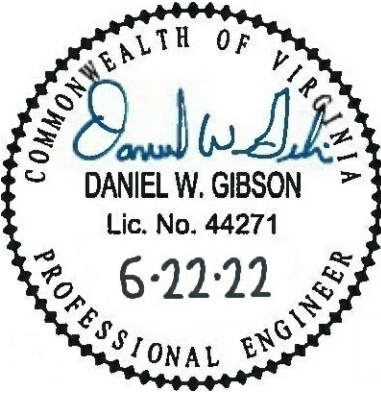


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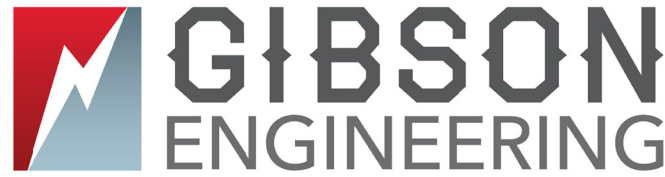
ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

ELECTRICAL SPECIFICATIONS

5285 HOLLIS ROAD
ROANOKE COUNTY, VIRGINIA 24019

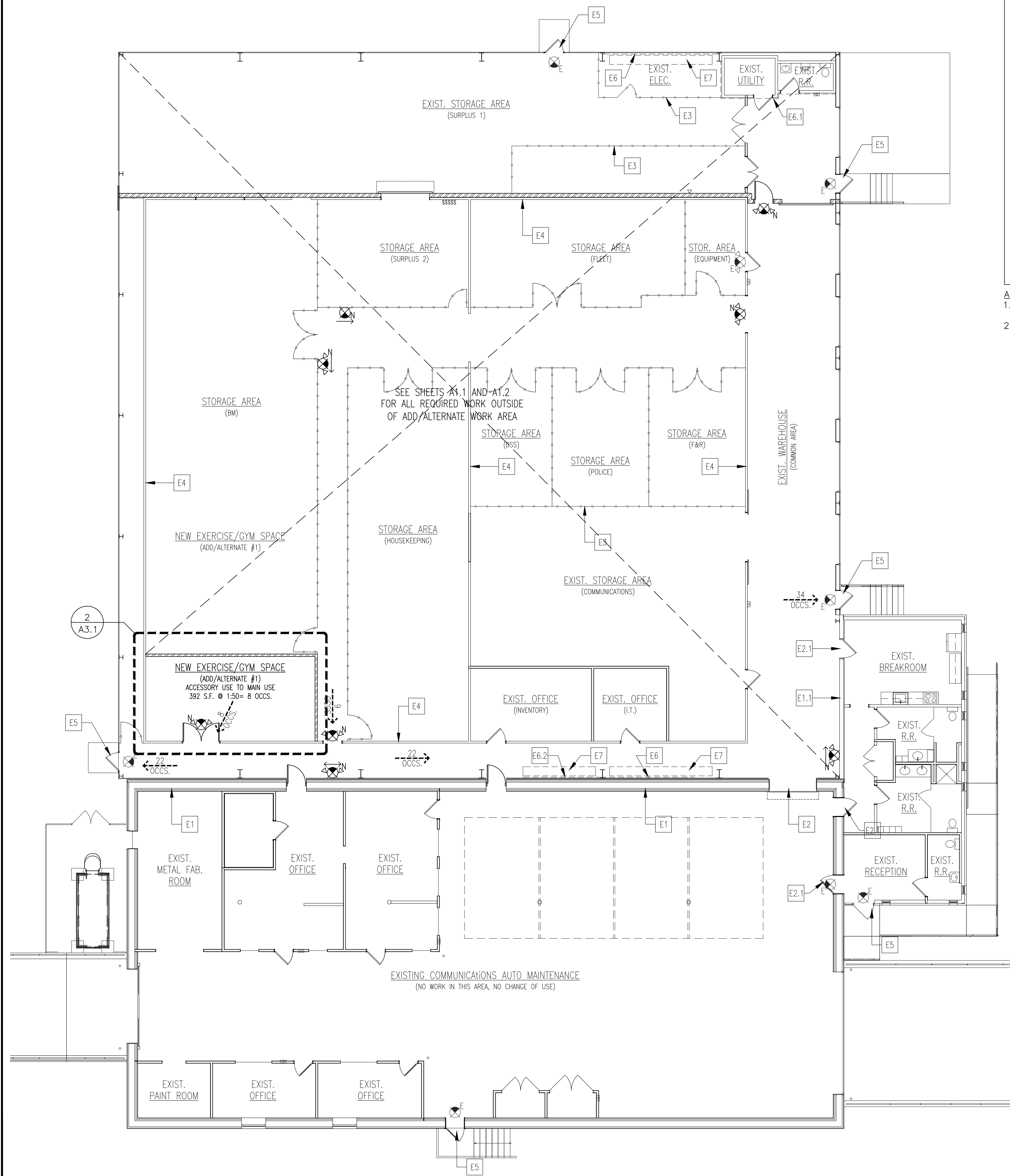
DRAWN BY DWG
DESIGNED BY DWG
CHECKED BY DWG
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS



2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

E3.1

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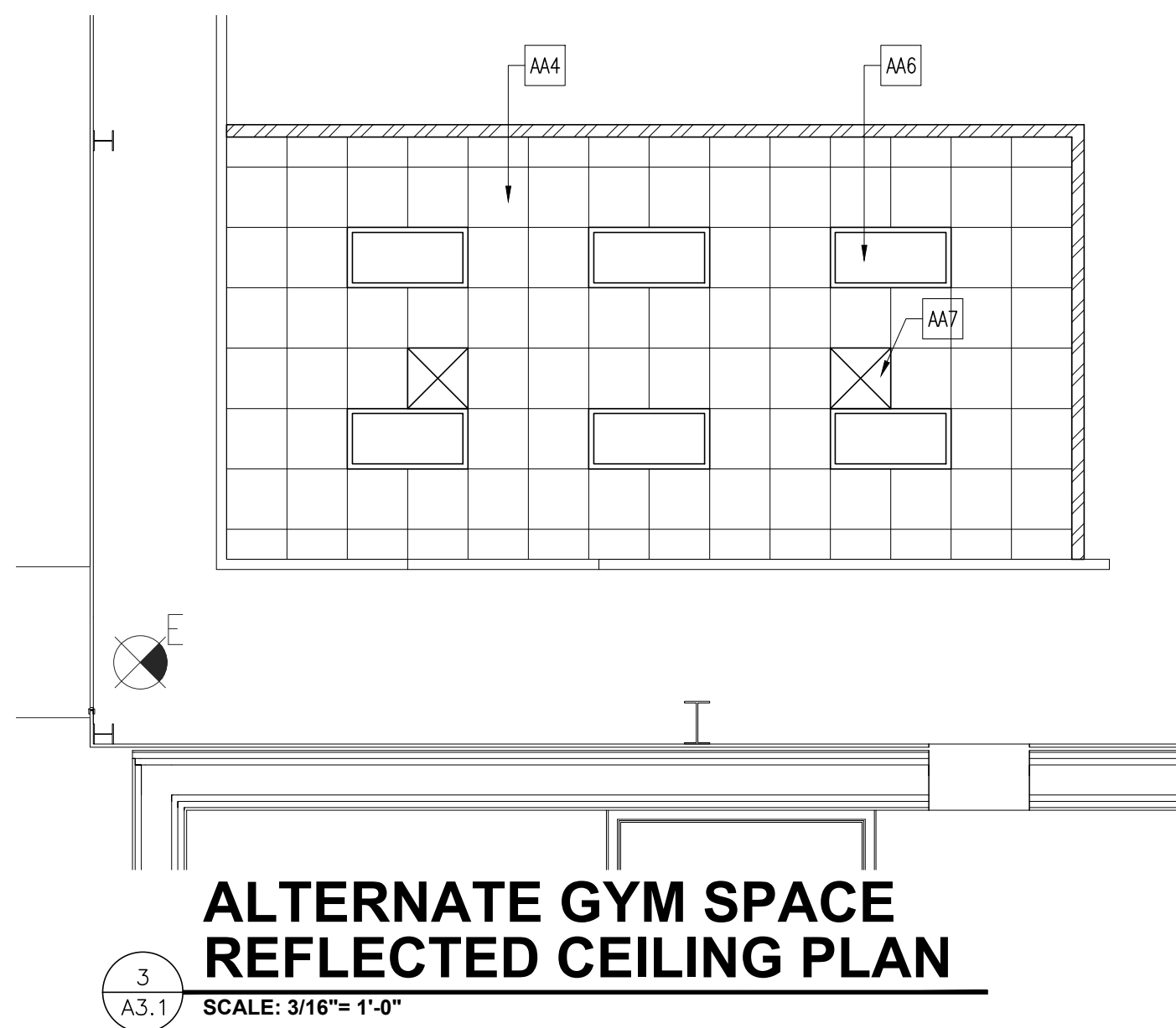
1
A3.1
**ALTERNATE GYM SPACE
BUILDING RENOVATION PLAN**
SCALE: 3/32"= 1'-0"

ADD/ALTERNATE PLAN KEY NOTES:

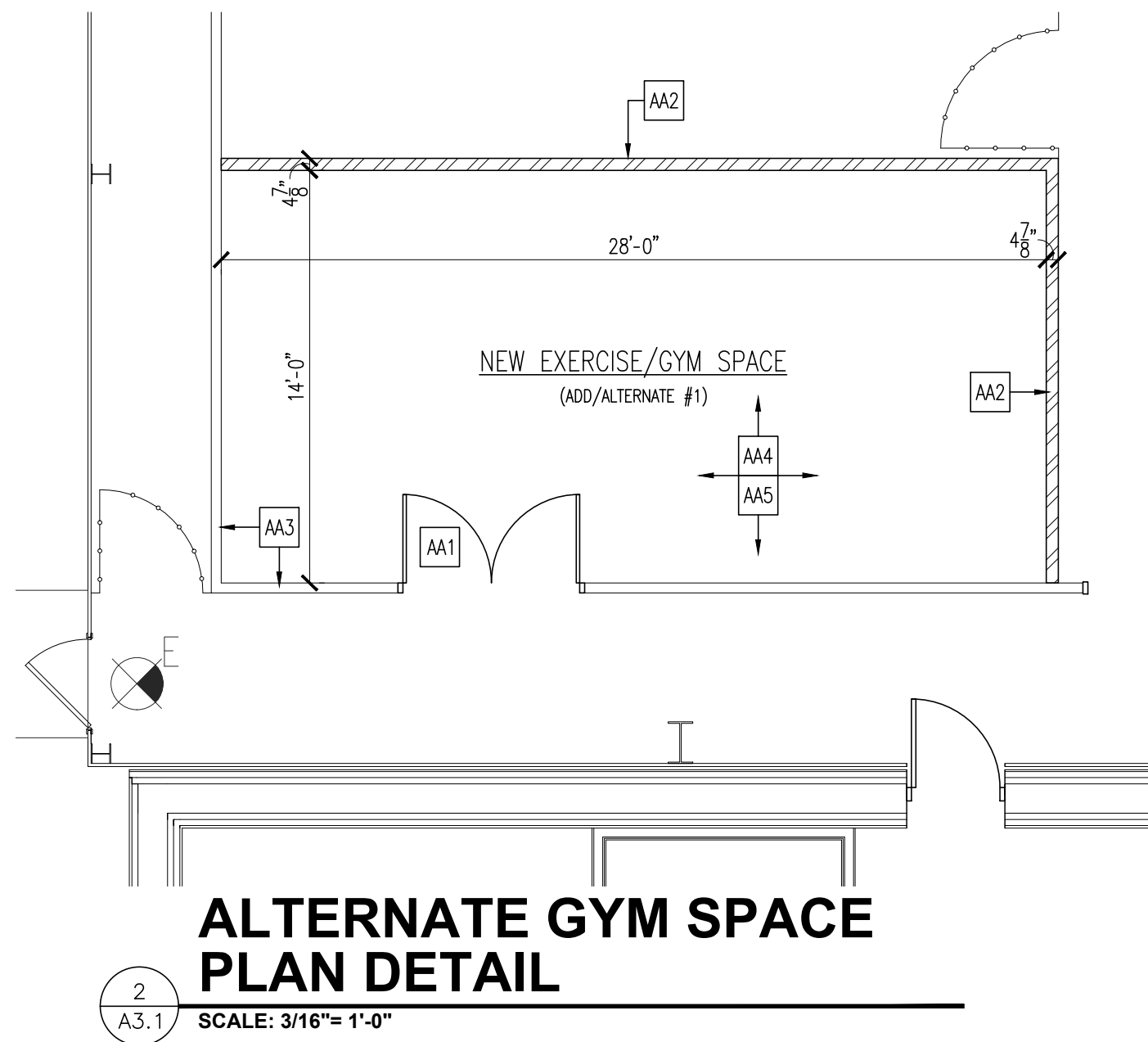
- AA1 **NEW NON-RATED DOORS & FRAME:** NEW (2)3'-0"x7'-0" FLUSH MTL. DOORS (NO GLAZING) IN HOLLOW-METAL FRAME, NON-FIRE-RATED, LEVER-TYPE LOCKING HARDWARE (OFFICE H.W.L. ANSI# F82) ON ACTIVE LEAF AND SURFACE-MOUNTED FLUSH BOLT @ TOP OF INACTIVE LEAF. (NOTE: SEE SHEET D1.1 FOR WALL DEMO REQUIRED) (SEE DETAIL 6/SHEET A2.1 FOR SIM. JAMB DETAIL IN COOLER WALL)
- AA2 **NEW WALLS (NON-FIRE-RATED):** 3-5/8" 20-GAGE MTL. STUDS @ 16"O.C. W/ 20 GAGE CONT. TOP & BOT. TRACKS. BOT. TRACK SECURED TO FLOOR SLAB W/ POWDER-ACTUATED FASTENERS @ 24"O.C. TOP TRACK SECURED TO UNDERSIDE OF EXIST. COOLER CEILING PANELS W/ NO. 10 SCREWS @ 24"O.C. 5/8" STANDARD GWB EA. SIDE, SECURED TO STUDS W/ NO. 6 SCREWS @ 12"O.C. MAX. TAPE & FINISH ALL JOINTS. GWB TO BE CONT. TO UNDERSIDE OF COOLER CEILING ON WAREHOUSE SIDE AND UP TO 12'-0" ON GYM ROOM SIDE OF WALL. INSULATE WALL CONT. TO UNDERSIDE OF COOLER CLG. W/ R-15 BATTS.
- AA3 **EXISTING COOLER WALLS:** EXIST. INSULATED COOLER WALL TO REMAIN (NO ADDITIONAL INSULATION OR FINISHING REQUIRED).
- AA4 **NEW FINISH CLG. ABOVE:** 2X2 ACT CLG. @ 11'-4" A.F.F.; ARMSTRONG "FINE FISSURED" OR SIMILAR.
- AA5 **FINISH FLOOR:** BARE CONCRETE (CLEANED & SEALED)
- AA6 **NEW LIGHTS:** NEW 2X4 LED LAY-IN FIXTURES, SEE ELEC. DWGS.
- AA7 **NEW HVAC:** NEW HVAC UNIT, DUCTWORK ABOVE CLG. & 2X2 LAY-IN SUPPLY GRILES, SEE MECH. DWGS.

ADD/ALTERNATE PLAN GENERAL NOTES:

1. NEW LIGHTED EXIT SIGNS AND NEW EMERGENCY LIGHTS NOT SPECIFICALLY NOTED ON THIS SHEET, SEE ELECTRICAL DWGS.
2. THIS SHEET COVERS SCOPE OF WORK SPECIFIC TO THE ADD/ALTERNATE FOR THE NEW GYM/EXERCISE SPACE, SEE SHEETS A1.1 AND A1.2 FOR SCOPE OF WORK REQUIRED THROUGHOUT THE REST OF THE BUILDING.



3
A3.1
**ALTERNATE GYM SPACE
REFLECTED CEILING PLAN**
SCALE: 3/16"= 1'-0"



2
A3.1
**ALTERNATE GYM SPACE
PLAN DETAIL**
SCALE: 3/16"= 1'-0"

CODE ANALYSIS FOR GYM SPACE:

ACCESSORY USE

- EXERCISE/GYM SPACE IS CONSIDERED AN "ACCESSORY OCCUPANCY" PER 2015 VCC 508.2.
- OVERALL BUILDING USE GROUPS WILL REMAIN F-1/B/S-1 PER VCC 508.2.1.
- BUILDING HEIGHT REQUIREMENTS TO REMAIN FOR THE F-1/B/S-1 USES PER VCC 508.2.2.
- BUILDING AREA REQUIREMENTS TO REMAIN FOR THE F-1/B/S-1 USES PER VCC 508.2.3.
- EXERCISE/GYM SPACE IS 392 S.F., WHICH IS LESS THAN 10% OF THE OVERALL BUILDING AREA.
- NO FIRE-RATED SEPARATION REQUIRED BETWEEN THE GYM/EXERCISE SPACE AND THE REST OF THE BUILDING PER VCC 508.2.4.
- SEE SHEET T1.1 FOR CODE ANALYSIS FOR MAIN BUILDING WITH F-1/B/S-1 USES.

FIRE PROTECTION SYSTEMS:

- EXERCISE/GYM SPACE DOES NOT REQUIRE SPRINKLER OR FIRE ALARM PROTECTION DUE F-1/B/S-1 USES FOR MAIN BUILDING.
- SEE SHEET T1.1 FOR CODE ANALYSIS FOR MAIN BUILDING WITH F-1/B/S-1 USES.

FIRE-RATING OF BLDG. ELEMENTS:

- EXERCISE/GYM SPACE DOES NOT REQUIRE FIRE-RATING/PROTECTION OF BUILDING ELEMENTS DUE F-1/B/S-1 USES FOR MAIN BUILDING.
- SEE SHEET T1.1 FOR CODE ANALYSIS FOR MAIN BUILDING WITH F-1/B/S-1 USES.

BUILDING OCCUPANT LOAD:

- 104 OCCUPANTS FOR MAIN BUILDING OCCUPANCY (SEE SHEET T1.1 AND A1.1)
- EXERCISE/GYM SPACE ADDS 8 OCCUPANTS (SEE CALCULATION THIS SHEET). (NOTE: THESE ARE ASSUMED TO BE CONSIDERED "B" USE OCCUPANTS)
- TOTAL BUILDING OCCUPANCY W/ GYM/EXERCISE SPACE WILL BE 112 OCCS.

EXIT REQUIREMENTS:

- ADDITIONAL OCCS. FROM EXERCISE/GYM SPACE DOES NOT INCREASE ANY CODE EXIT REQUIREMENTS.
- SEE SHEET T1.1 FOR CODE ANALYSIS FOR MAIN BUILDING WITH F-1/B/S-1 USES.

PLUMBING FIXTURE REQUIREMENTS (2015 VCC 2902.1):

- (32) B USE OCCS. + (49) F-1 USE OCCS. + (31) S-1 USE OCCS.= 112 OCCS.
- (16) OCCS. @ 1:25 + (40) OCCS. @ 1:100= (1) TOILET/LAV. REQ. PER SEX
- (4) TOILETS/LAVS PROVIDED THROUGHOUT BLDG., SEE PLAN
- SEE SHEET T1.1 FOR ANY OTHER PLUMBING REQUIREMENTS.

HVAC/VENTILATION AIR:

- NEW EXERCISE/GYM SPACE TO BE PROVIDED WITH REQUIRED VENTILATION AIR OR LOCAL EXHAUST PER 2015 VMC, SEE MECHANICAL DRAWINGS.

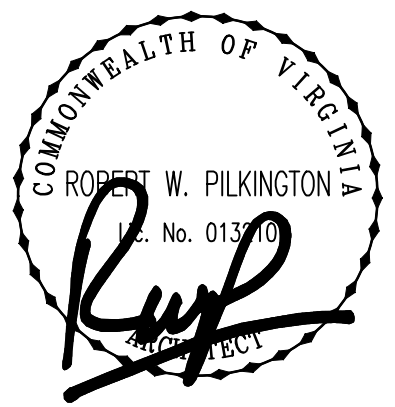


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ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

ALTERNATE BID GYM SPACE

5285 HOLMES ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY RWP
DESIGNED BY RWP
CHECKED BY --
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS

A3.1
PROJECT NO 032200330.00

AIR DEVICE SCHEDULE				
MARK	SERVICE	MOUNTING	FINISH	BASIS OF DESIGN
A	SUPPLY	LAY-IN	WHITE	PRICE, SCD - SQUARE CODE DIFFUSER
B	RETURN	WALL	WHITE	PRICE, SERIES 90 - HEAVY DUTY RETURN GYM GRILLE

OUTDOOR HEAT PUMP SCHEDULE							
				ELECTRICAL		WEIGHT (LBS.)	BASIS OF DESIGN (MANUFACTURER,MODEL#)
MARK	SEER	UNIT GROSS COOLING (MBH)	HEATING OUTPUT @ 47°F (MBH)	V / PH	MCA/MOCP (AMP.)		
HP-1	17	24.0	24.0	208 / 1	15/25	275	TRANE, XR17, MODEL 4TWR7024A1000C TWO STAGE HEAT PUMP

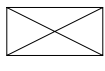
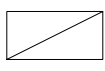


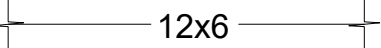
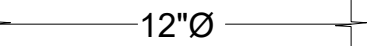

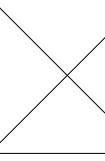
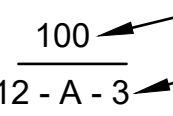
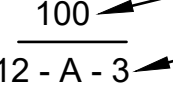
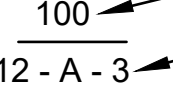
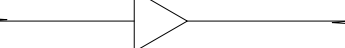
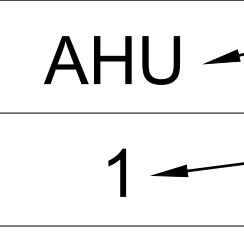
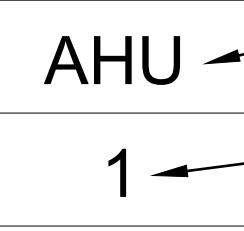
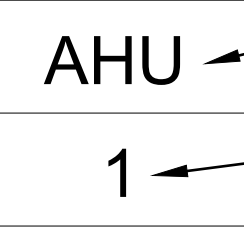


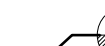

- NOTES:
1. PROVIDE 4" THICK CONCRETE PAD ON GRADE BELOW UNIT AND PROVIDE RUBBER ISOLATORS.

AIR HANDLER UNIT SCHEDULE									
MARK	SUPPLY AIR FLOW (CFM)	OUTSIDE AIR FLOW (CFM)	SUPPLY FAN PERFORMANCE		ELECTRIC HEATING PERFORMANCE		UNIT ELECTRICAL		WEIGHT (LBS.)
			ESP IN. WC	FAN HP	(KW)	V / PH	V / PH	MCA/MOCP (AMP.)	
AHU-1	800	135	0.5"	1/3	5.76	208/1	208 / 1	38/40	150

- NOTES:
1. PROVIDE COMPLETE HEATING/COOLING SYSTEM INCLUDING ELECTRIC HEATER INTERLOCKED WITH INDOOR HEAT PUMP COIL AND ASSOCIATED OUTDOOR HEAT PUMP UNIT.
 2. PROVIDE REFRIGERANT LINES TO/FROM OUTDOOR HEAT PUMP UNIT SIZED, ROUTED, AND INSULATED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
 3. PROVIDE WITH 7-DAY PROGRAMMABLE THERMOSTAT.
 4. UNITS SHALL HAVE SINGLE POINT POWER CONNECTION. ELECTRIC HEATER CAPACITY SHOWN AT 208V/1PH.
 5. ROUTE 3/4" CONDENSATE DRAIN TO EXTERIOR GRADE.
 6. AIR HANDLER SHALL BE MOUNTED HORIZONTALLY WITH RETURN INLET AT BOTTOM OF UNIT. PROVIDE RETURN AIR FILTER RACK AT INLET OF UNIT AND PROVIDE UNIT SUPPORTS AS NEEDED.
 7. PROVIDE FLEXIBLE DUCT CONNECTIONS IN SUPPLY AND RETURN DUCTS AT CONNECTIONS TO UNIT.

GENERAL MECHANICAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT 2015 UNIFIED VIRGINIA BUILDING CODE, ALL FEDERAL, STATE, AND CITY CODES, ORDINANCES, AND STANDARDS.
2. PROVIDE OPERATION AND MAINTENANCE MANUALS FOR ALL NEW EQUIPMENT TO OWNER.
3. ALL WORK PROVIDED UNDER THIS CONTRACT SHALL BE PROVIDED WITH A 1-YEAR WARRANTY.
4. IT IS THE INTENT OF THESE DOCUMENTS THAT THE CONTRACTOR PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS FOR THE COMPLETE INSTALLATION OF ALL WORK SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, INCLUDING ALL DEVICES AND CONTROLS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.
5. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. NOT ALL FITTINGS, OFFSETS, VENTS, OR DRAINS ARE SHOWN. THE CONTRACTOR SHALL INCLUDE ALL OFFSETS, VENTS, AND DRAINS AS REQUIRED FOR A FULLY FUNCTIONING SYSTEM.
6. IN AREAS WITH UNFINISHED CEILINGS, DUCTWORK AND PIPING SHALL BE ROUTED AS TIGHT TO THE STRUCTURE AS POSSIBLE.
7. ENSURE MECHANICAL EQUIPMENT IS INSTALLED TO PROVIDE SUFFICIENT CLEARANCE FOR COIL PULL, AND MINIMUM MANUFACTURER RECOMMENDED MAINTENANCE ACCESS TO EQUIPMENT.
8. ALL SUPPLY AIR DIFFUSERS, RETURN, AND EXHAUST GRILLES SHALL BE INSTALLED WITH BALANCING DAMPER LOCATED IN DUCT RUN OUT. DIFFUSERS AND GRILLES SHALL HAVE AN OPPOSED BLADE DAMPER ONLY WHEN DUCT DAMPERS ARE INACCESSIBLE.
9. ALL PIPING SHALL BE LABELED FOR ITS USAGE. ALL EQUIPMENT SHALL BE PROVIDED WITH AN ENGRAVED EQUIPMENT TAG.
10. ALL DUCTWORK CONSTRUCTION AND INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE SMACNA DUCT CONSTRUCTION HANDBOOK. DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED METAL.
11. DUCT INSULATION SHALL BE IN COMPLIANCE WITH THE 2015 IECC STANDARDS AND SHALL BE FIBERGLASS INSULATION, 1.0 LB. DENSITY, 0.27 BTUIN./SQ.FT./°F/HR. MAXIMUM "K" VALUE AT 75°F. WITH FACTORY APPLIED REINFORCED ALUMINUM FOIL VAPOR BARRIER. ALL SUPPLY DUCTWORK SHALL BE INSULATED AS WELL AS OUTSIDE AIR AND EXHAUST DUCTWORK FROM LOUVER TO ERV.
12. PROVIDE CAULKED SEAL AROUND ALL DUCT AND/OR PIPING PENETRATIONS THROUGH NON RATED FULL HEIGHT WALLS TO MINIMIZE SOUND TRANSFER.
13. PROVIDE ALL SUPPLY AIR SYSTEMS WITH A MINIMUM MERV 8 FILTER, UNLESS NOTED OTHERWISE. PROVIDE TEMPORARY AIR FILTERS IN AIR HANDLER UNITS AND RETURN AIR INLETS AND GRILLES DURING CONSTRUCTION AND REPLACE AT COMPLETION. FILTERS SHALL BE INSTALLED SUCH THAT THEY ARE ACCESSIBLE FOR REPLACEMENT AND LOCATED PRIOR TO ANY HEATING OR COOLING COILS.
14. FOR THE AIR CONDITIONING, HEATING AND VENTILATION SYSTEMS THE CONTRACTOR SHALL PROVIDE ALL SERVICES FOR TOTAL SYSTEM AIR TESTING AND BALANCING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING CHANGES IN PULLEYS, BELTS AND DAMPERS WHERE NECESSARY TO OBTAIN THE REQUIRED AIR VOLUME. THE CONTRACTOR SHALL PROVIDE ALL LABOR, ENGINEERING AND TEST EQUIPMENT REQUIRED TO ADJUST, TEST AND BALANCE ALL HEATING, VENTILATING, AIR CONDITIONING AND EXHAUST SYSTEMS. ALL PERSONNEL INVOLVED IN THE WORK SHALL BE EXPERIENCED AND TRAINED SPECIFICALLY IN THE TOTAL BALANCING OF MECHANICAL SYSTEMS. PROVIDE TYPED REPORT TO OWNER/ENGINEER FOR APPROVAL.

HVAC LEGEND	
DUCTWORK	
	SUPPLY AIR DUCT, (RECTANGULAR)
	RETURN AIR DUCT, (RECTANGULAR)
	TEMPERATURE SENSOR
	HUMIDITY SENSOR
	RECTANGULAR DUCTWORK (1ST FIG. SIDE SHOWN, 2ND SIDE NOT SHOWN)
	ROUND DUCTWORK
	FLEXIBLE DUCT, (ROUND)
	CEILING DIFFUSER (RECTANGULAR SUPPLY)
	AIR DEVICE TAG
	AIRFLOW (CFM)
	INLET SIZE - TAG - # OF THROW DIRECTIONS
	DUCT TRANSITION, RECTANGULAR OR ROUND
	EQUIPMENT TAG
	EQUIPMENT TYPE ABBREVIATION
	UNIT MARK #
	MVD, MANUAL VOLUME DAMPER
	MOTORIZED CONTROL DAMPER
	CONNECT TO EXISTING
	LIMITS OF DEMOLITION



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ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

MECHANICAL LEGEND, NOTES, AND SCHEDULES

5265 HOLLINS ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY ---
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS

GENERAL MECHANICAL SPECIFICATIONS

1. SCOPE:
PROVIDE ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO INSTALL AND MAKE READY FOR OWNER'S USE COMPLETE SYSTEMS OF HEATING, VENTILATION, AIR CONDITIONING (HVAC), PLUMBING, FOR THE PROPOSED WORK AND BUILDING RENOVATIONS AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THESE SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION WITH OTHER DIVISIONS OF WORK FOR THE FULL EXTENT OF THE SCOPE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL ASPECTS, COMPONENTS, SYSTEMS, ETC. AND ACCOMMODATE THE PERFORMANCE INTENT OF THE CONSTRUCTION DOCUMENTS THROUGHOUT THE PROJECT SCOPE.

2. BIDDERS RESPONSIBILITY:
EXAMINE THE DRAWINGS AND SPECIFICATIONS AND VISIT THE WORK SITE. BECOME FAMILIAR WITH THE CHARACTER OF THE WORK, THE COORDINATION WITH OTHER TRADES REQUIRED, AND ANY OTHER CONDITIONS THAT AFFECT THE COMPLETION OF THIS WORK. GENERAL CONTRACTOR SHALL BE REQUIRED TO COORDINATE WORK WITH TENANT FINISH CONTRACTOR IN A SIDE BY SIDE SCENARIO.

3. PERMITS, CODES AND LAWS:
APPLY FOR ALL PERMITS AND PAY ALL FEES.
ALL WORK SHALL BE IN ACCORDANCE WITH LATEST EDITIONS OF THE FOLLOWING RULES AND REGULATIONS, HEREIN REFERRED TO AS "CODES":
THE LATEST OR ADOPTED EDITION OF THE APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING, MECHANICAL, SANITATION, PLUMBING, ETC. CODES.
UNDERWRITER'S LABORATORIES, INC. (U.I.) NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A)
WHERE ANY OF THESE CODES ARE AT VARIANCE WITH THE DRAWINGS AND SPECIFICATIONS, THEIR REQUIREMENTS SHALL TAKE PRECEDENCE, UNLESS THE DRAWINGS AND SPECIFICATIONS REQUIREMENTS EXCEED THESE CODES. INCLUDE ANY COST NECESSARY TO MEET THESE CODES IN THE BID PRICE.

4. MECHANICAL PLANS:
THE MECHANICAL PLANS ARE DIAGRAMMATIC AND BASED ON ONE MANUFACTURER'S EQUIPMENT.
THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO BE USED. INSTALLATION SHALL BE WITHIN THE LIMITATIONS IMPOSED BY THE ARCHITECTURAL, STRUCTURAL, HVAC, ELECTRICAL, AND PLUMBING REQUIREMENTS WITH ADEQUATE SPACE FOR MAINTENANCE.

5. QUESTIONS AND CLARIFICATIONS OF BID DOCUMENTS:
BIDDERS SHALL NOT RELY ON ANY ORAL CLARIFICATION OF THE DRAWINGS OR SPECIFICATIONS. ANY QUESTIONS OR CLARIFICATIONS SHALL BE REFERRED IN WRITING TO THE ARCHITECT.

6. GUARANTEES:
ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL BE GUARANTEED IN WRITING FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. WARRANTIES SHALL BE IN WRITING AND SHALL INCLUDE FACTORY WARRANTIES FOR EACH PIECE OF EQUIPMENT. PROVIDE A CERTIFICATE FOR EACH PIECE OF EQUIPMENT. CLEARLY INDICATE ON EACH WARRANTY CERTIFICATE THE MODEL NO., SERIAL NO., LOCATION, AND OWNER'S NAME.

7. COMPLETE SYSTEM:
ALL PRODUCTS, MATERIALS AND ACCESSORIES SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR A COMPLETE SYSTEM READY FOR OWNER'S BENEFICIAL USE.

8. WORKMANSHIP:
ALL WORK SHALL BE PERFORMED BY COMPETENT MECHANICS USING PROPER TOOLS AND EQUIPMENT TO PRODUCE FIRST QUALITY WORK. ALL WORK SHALL BE NEATLY INSTALLED, ACCESSIBLE FOR MAINTENANCE, AND COMPLETE WITH ALL ACCESSORIES REQUIRED.

9. ACCESSIBILITY:
INSTALL ALL EQUIPMENT AND THEIR APPURTENANCES SUCH AS, BUT NOT LIMITED TO, VALVES, COILS, DRAIN PANS, DRAINS, DAMPERS, CONTROLS, MOTORS, CONTROLLERS, ETC., SO THAT THEY CAN BE SERVICED, RESET, REPLACED OR RECALIBRATED, ETC. INSTALL ALL NECESSARY ACCESS PANELS AND BUILDING ACCESS DOORS, AS BELOW, WHERE REQUIRED TO ACCOMPLISH THIS. IF ANY EQUIPMENT OR COMPONENTS DO NOT FIT WHERE INTENDED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING, REQUESTING FURTHER GUIDANCE.
PROVIDE BUILDING ACCESS DOORS FOR ALL MECHANICAL EQUIPMENT REQUIRING SERVICE, INCLUDING BUT NOT LIMITED TO, AHU'S, FANS, DAMPERS, DUCT ACCESS PANELS, CONTROLS, PIPING, VALVES, REGULATORS, TRAPS, ETC., INSTALLED ABOVE HARD CEILINGS, BEHIND WALLS, AND BELOW FLOORS, FOR INSTALLATION BY OTHER DIVISIONS OF THE WORK. BUILDING ACCESS DOORS ARE NOT REQUIRED WHERE THE MECHANICAL EQUIPMENT IS INSTALLED ABOVE LAY-IN AND ACCESSIBLE SPLINE CEILINGS. OTHER TYPES OF SPLINE CEILINGS REQUIRE BUILDING ACCESS DOORS. SIZE THE BUILDING ACCESS DOORS FOR THE USE INTENDED, BUT NOT LESS THAN 12 INCHES BY 12 INCHES. WHERE HUMAN ACCESS IS REQUIRED, PROVIDE 24 INCHES BY 24 INCHES, OR LARGER. WHERE BUILDING ACCESS DOORS CANNOT BE INSTALLED FOR STRUCTURAL OR ARCHITECTURAL REASONS, NOTIFY THE ARCHITECT. PRIME COAT BUILDING ACCESS DOORS IN PAINTED AREAS WITH FINISH PAINTING AS SPECIFIED IN OTHER DIVISIONS. IN WET AREAS, TOILET ROOMS, OR AREAS WITH CERAMIC TILE FLOORS OR WALLS, PROVIDE STAINLESS STEEL BUILDING ACCESS DOORS. PROVIDE BUILDING ACCESS DOORS WITH A CONCEALED KEY OPERATED LOCK AND CONCEALED HINGES. ALL LOCKS SHALL BE KEyed ALIKE. PROVIDE BUILDING ACCESS DOORS AS SPECIFIED IN OTHER DIVISIONS OF THE WORK OR PROVIDE MILCOR DOORS, OR EQUIVALENT, SUITABLE FOR THE INSTALLATION INTENDED. PROVIDE FIRE RATED DOORS FOR ALL FIRE RATED WALLS, PARTITIONS, AND CEILINGS.

10. WORK BY OTHER TRADES:
FURNISH ALL SLEEVE FRAMES, BUILDING ACCESS DOORS, PREFABRICATED EQUIPMENT CURBS, ROOF CURBS, ETC. FOR INSTALLATION BY OTHER TRADES.
INSTALL ALL MOTORS AND FURNISH THE STARTING EQUIPMENT AND DISCONNECTS TO THE DIVISION 26000 SUBCONTRACTOR FOR INSTALLATION. CONTROL WIRING, INCLUDING SWITCHES, THERMOSTATS, INTERLOCKS, ETC. SHALL BE FURNISHED BY DIVISION 23000. ENSURE THAT THE ELECTRICAL EQUIPMENT MOUNTED NEAR THE MECHANICAL EQUIPMENT DOES NOT BLOCK ACCESS TO SERVICE AREAS OF THE MECHANICAL EQUIPMENT. DO NOT ALLOW ANY EQUIPMENT TO BE INSTALLED ON THE HVAC EQUIPMENT ENCLOSURES.

11. FIRE STOPPING:
ALL PENETRATIONS OF FLOORS AND OTHER FIRE-RATED ASSEMBLIES SHALL BE FIRE AND SMOKE-STOPPED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES.

12. FOUNDATIONS AND SPECIAL SUPPORTS:
FURNISH AND INSTALL ALL SPECIAL FOUNDATIONS AND SUPPORTS REQUIRED FOR EQUIPMENT INSTALLED UNDER THIS SECTION, UNLESS THEY ARE A PART OF THE BUILDING STRUCTURE AND ARE SHOWN IN OTHER SECTIONS.

13. CLEANING AND PAINTING:
THOROUGHLY CLEAN ALL EQUIPMENT AND REMOVE ALL TRASH, CARTONS, ETC. MAKE ANY NECESSARY CORRECTIONS OR REPAIR/REPLACE ANY DAMAGED MATERIALS OR EQUIPMENT. LEAVE THE ENTIRE SYSTEM IN A THOROUGHLY CLEAN AND ORDERLY MANNER.
ANY FINISHED SURFACES THAT HAVE BEEN SCRATCHED OR DISCOLORED SHALL BE TOUCHED-UP OR REPAINTED BREAK TO BREAK WITH PAINT TO MATCH THE ORIGINAL COLOR. TOUCH UP PAINTED SURFACES OR REPAINT THE ENTIRE PAINTED SURFACE IF TOUCH UP IS UNACCEPTABLE. SEE ARCHITECTURAL PAINTING SPECIFICATIONS.
ALL METAL ITEMS SUBJECT TO RUSTING, INSIDE OR EXPOSED TO WEATHER SHALL BE GIVEN ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER AS SOON AS INSTALLED. APPLY TWO FINISH COATS WITH COLOR TO BE SELECTED BY THE ARCHITECT.
FOR ALL INTERIOR OR EXTERIOR STRUCTURAL GALVANIZED STEEL, COLD GALVANIZE ALL EXPOSED METAL CUT ENDS, HOLES, WELDS, SCRATCHES, ETC., OR HOT DIP GALVANIZE THE ENTIRE STRUCTURE OR FRAME AFTER FABRICATION AND MOUNTING HOLES ARE CUT.
UPON COMPLETION OF THE INSTALLATION, BUT NOT BEFORE, AND BEFORE ACCEPTANCE, THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, PIPING, DUCTWORK, INSULATION JACKETS, ETC.,

REMOVING ALL STICKERS, LABELS, MARKING, WRITING, FABRICATION MARKINGS, IDENTIFICATION, ADHESIVE, SEALER, GLUE, RUST, CORROSION, ETC., FROM THEIR EXTERIOR SURFACES.
THE CLEANLINESS AND PAINTING ACCEPTABILITY IS AT THE SOLE DISCRETION OF THE ARCHITECT AND MAY REQUIRE ADDITIONAL CLEANING AND COATS OF PAINT BEFORE ANY SURFACE IS ACCEPTED.

14. SUBMITTAL AND SHOP DRAWINGS:
SUBMIT MANUFACTURER'S CERTIFIED DATA RELATIVE TO ALL EQUIPMENT, PIPING, CONTROLS, ETC. REQUIRED FOR THE INSTALLATION OF THE HVAC, PLUMBING AND FIRE PROTECTION SYSTEMS. SUBMIT FOR REVIEW ALL NECESSARY ENGINEERING, PRODUCT AND INSTALLATION DATA, SHOP DRAWINGS, SAMPLES ETC. FOR ALL EQUIPMENT, MATERIAL, AND SYSTEMS TO ASCERTAIN COMPLIANCE WITH THE TECHNICAL REQUIREMENTS OF THE CONTRACT DOCUMENTS. SUBMIT SIX (6) COPIES OF ALL NECESSARY DATA, CUTS, MANUFACTURER'S SELECTIONS, CATALOGS, BULLETINS, INSTALLATION INSTRUCTIONS, DRAWINGS, DIAGRAMS, CURVES, ETC. CLEARLY INDICATE ON THE SUBMITTED DATA, THE MANUFACTURER'S NAME, PRODUCT NUMBER(S), OPTIONS, EQUIPMENT CAPACITY, DIMENSIONAL DATA, WEIGHTS, AND OTHER APPLICABLE TECHNICAL DATA FOR THE PROJECT.
TRADE NAMES, MANUFACTURERS, AND CATALOGUE NUMBERS ARE MENTIONED HEREIN AND ON THE DRAWINGS SOLELY IN ORDER TO ESTABLISH A STANDARD FOR THE TYPE, GENERAL DESIGN, AND QUALITY OF PRODUCT REQUIRED. OTHER PRODUCTS SIMILAR IN DESIGN OF EQUIVALENT QUALITY CAPABLE OF FITTING WITHIN THE SPACES ALLOCATED AND COMPLYING WITH THE DRAWINGS AND SPECIFICATIONS WILL BE CONSIDERED AFTER THE CONTRACT IS LET UNLESS "PRIOR APPROVAL" REQUIREMENTS ARE SET FORTH IN THESE DOCUMENTS.
WHERE TWO OR MORE MANUFACTURERS OR MATERIALS ARE NAMED, THE CONTRACTOR MAY SUBMIT ANY OF THOSE NAMES, PROVIDED THEY CONFORM TO THE SPECIFICATIONS AND DESIGN INTENT. CONTRACTOR SHALL INCLUDE WITH THE SUBMITTAL A LIST OF ALL COMPARATIVE FEATURES INDICATING COMPLIANCE WITH THE SPECIFICATIONS.
THE ARCHITECT AND/OR ENGINEER MAY REQUIRE THE SUBMISSION OF SAMPLES, PARTICULARLY WHEREVER EQUIPMENT OR APPLIANCES ARE VISIBLE IN FINISHED AREAS, SUCH AS CEILINGS, INTERIOR AND EXTERIOR WALLS. THE CONTRACTOR AND SUPPLIER SHALL ARRANGE FOR DEMONSTRATIONS OF THE INSTALLATION OF ANY OF THESE PRODUCTS AND THEIR ABILITY TO PERFORM AS SPECIFIED, IF REQUIRED.
REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR FITTING THE EQUIPMENT IN THE SPACE ALLOTTED WITH SPACE FOR ALL CONNECTIONS AND SERVICING AND FOR THE COORDINATION OF THE WORK WITH WORK OF OTHER TRADES.

THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS AND SHOP DRAWINGS AND INDICATE BY STAMP OR LETTER THAT HE HAS REVIEWED THEM, BEFORE FORWARDING THEM TO THE ARCHITECT AND/OR ENGINEER. SUBMITTALS AND DRAWINGS WILL BE RETURNED AFTER REVIEW INDICATING WHETHER EXCEPTIONS ARE TAKEN, THE SUBMITTAL RETURNED WITH CORRECTIONS, OR IS COMPLETELY REJECTED. RESUBMISSION OF REVISED SUBMITTALS AND SHOP DRAWINGS, IF REQUIRED, SHALL BE DONE BEFORE INSTALLATION AND CONSTRUCTION IS BEGUN.
CORRECTIONS OR COMMENTS MADE ON THE SUBMITTALS AND DRAWINGS DURING THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THIS REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES, TECHNIQUES OF CONSTRUCTION, COORDINATING THE WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING WORK IN A SAFE AND SATISFACTORY MANNER. REVIEW OF THE SUBMITTALS SHALL NOT PERMIT ANY DEVIATION FROM PLANS AND SPECIFICATIONS.
SUBMITTALS FOR A SPECIFIC CLASS OF PRODUCTS, SYSTEMS, INSTALLATION PROCEDURES, SHOP DRAWINGS, ETC. WILL BE REVIEWED BY THE ENGINEER ONE TIME AND ITS RESUBMITTAL ONE TIME, IF NECESSARY, AS ABOVE, AT NO COST TO THE CONTRACTOR. THE CONTRACTOR WILL BEAR THE FULL COST FOR ALL SUBSEQUENT RESUBMITTAL REVIEWS AT THE ENGINEER'S STANDARD HOURLY RATES. PAYMENT WILL BE REQUIRED AT COMPLETION OF RESPECTIVE REVIEW.
REQUIRED SHOP DRAWINGS:
SUBMIT THE FOLLOWING SHOP DRAWINGS BEFORE ANY MECHANICAL DUCTWORK, PIPING, EQUIPMENT, ETC. IS FABRICATED AND INSTALLED. SUBMIT THESE SHOP DRAWINGS IN 1/4 INCH PER FOOT MINIMUM SCALE WITH NECESSARY PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ISOMETRICS. SUBMIT SIX (6) PAPER COPIES AND ONE (1) CD-ROM WITH ALL THESE DRAWINGS IN AUTOCAD DRAWING DWG FILES, LATEST AUTOCAD FORMAT.
SOON AFTER AWARD OF THE CONTRACT, DETERMINE WHERE THERE MAY BE INSTALLATION, SPACE CONCERNS, AND/OR WHERE OTHER CONFLICTS MAY OCCUR. SUBMIT COORDINATION DRAWINGS, RELATING TO THESE CONFLICTS WITH THE MECHANICAL EQUIPMENT, DUCT, PIPING, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL SYSTEMS ETC., SHOWING CLEARANCES AND RELATIONSHIP TO STRUCTURAL MEMBERS, PIPING, LIGHTS, CONDUITS, ELECTRICAL EQUIPMENT, AND BUILDING COMPONENTS. IN PREPARING THESE SHOP DRAWINGS, ESTABLISH LINES AND LEVELS FOR ALL DIVISIONS OF THE WORK IN THE AFFECTED AREA. IMMEDIATELY CALL TO THE ATTENTION OF THE ARCHITECT ANY INTERFERENCE OR CONFLICT FOR CLARIFICATION IN WRITING.
SUBMIT SHOP DRAWINGS FOR ALL DUCTWORK. SUBMIT LAYOUT DRAWINGS OF EACH MECHANICAL SYSTEM SHOWING THE LOCATION, ARRANGEMENT, ETC. OF ALL EQUIPMENT, ALL TRADES, ETC. TO BE INSTALLED RELATED TO THE RESPECTIVE SYSTEM.

15. AS-BUILT DRAWINGS:
MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT THREE COPIES, ONE REPRODUCIBLE.

16. OPERATION AND MAINTENANCE MANUALS:
UPON COMPLETION OF THE PROJECT, SUBMIT THREE COPIES OF ALL OPERATION AND MAINTENANCE MANUALS, WARRANTIES, SPARE PARTS LIST, AS-BUILT DRAWINGS, TEST AND BALANCE REPORTS, AND LETTER OF GUARANTEE ALL BOUND IN THREE RING BINDERS, CLEARLY SHOWING WHICH EQUIPMENT WAS SUPPLIED TO THE JOB.

17. PROJECT COMPLETION:
BEFORE STARTING AND TESTING ANY SYSTEM, HVAC, OR PLUMBING, TO PREVENT INADVERTENT OPERATION OF THE MECHANICAL EQUIPMENT BEFORE THE MANUFACTURER'S INSPECTION AND TESTING, THE CONTRACTOR SHALL:
VERIFY THAT ALL ELECTRICAL POWER IS OFF TO ALL MECHANICAL EQUIPMENT, INCLUDING THE AHU'S, ACCU'S, BOOSTER PUMPS, FIRE PUMPS, ETC.
LOCK OUT EACH SYSTEM USING SETON MODEL NUMBER 70329; "DO NOT OPERATE" LOCK ON LOCKOUT TAGS, OR EQUIVALENT. INSTALL LOCKOUT TAGS AT EACH PIECE OF EQUIPMENT, ELECTRICAL DISCONNECTS, STARTERS, SWITCHES, ETC.
REMOVE THESE TAGS ONLY WHEN THE MANUFACTURER APPROVES OF THE EQUIPMENT INSTALLATION IN WRITING. EACH MANUFACTURER OR THEIR REPRESENTATIVE SHALL INSPECT THEIR EQUIPMENT FOR COMPLIANCE TO THEIR INSTALLATION REQUIREMENTS AND RECOMMENDATIONS. IN ADDITION, THE COMPRESSOR MANUFACTURER SHALL INSPECT EACH REFRIGERANT PIPING INSTALLATION FOR ADHERENCE TO THE APPROVED REFRIGERANT PIPING DIAGRAMS, ROUTING. EACH MANUFACTURER SHALL PREPARE A PUNCH LIST OF ALL DEFICIENCIES, IN WRITING WITH COPIES TO THE ARCHITECT AND CONTRACTOR.
EACH MANUFACTURER SHALL REINSPECT THE EQUIPMENT AFTER THE CONTRACTOR HAS CORRECTED ALL DEFICIENCIES. WHEN THE MANUFACTURER HAS GIVEN THEIR WRITTEN APPROVAL WITH COPIES TO THE ARCHITECT AND CONTRACTOR, THE CONTRACTOR MAY REMOVE THE LOCKOUT TAGS, SAFELY START, AND TEST THE EQUIPMENT, AS REQUIRED HEREIN.
CONTRACTOR SHALL PROVIDE FOR ALL NECESSARY DRILLING OF WALL STUDS, CEILING JOISTS, PLATES, FINISHES, ETC. TO ACCOMMODATE ROUTING AND INSTALLATION OF ALL PIPING, DUCT,

ETC.
HVAC EQUIPMENT, METHODS AND MATERIALS

18. DUCTWORK GENERAL:
DUCT SIZES SHOWN ON THE DRAWINGS ARE INSIDE DIMENSIONS AND DO NOT TAKE INTO ACCOUNT LINING THICKNESS. DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH GAUGES, CONSTRUCTION DETAILS AND INSTALLATION ACCORDING TO N.F.P.A. STANDARD 90A, ASHRAE, AND SMACNA DUCT CONSTRUCTION MANUALS AND REQUIREMENTS. PROVIDE FLEXIBLE CONNECTIONS AT AIR HANDLING UNITS AND FANS. PROVIDE SINGLE THICKNESS TURNING VANES IN ELBOWS. PAINT DUCTS, SLEEVES, PLENUMS, ETC., INTERIORS VISIBLE THROUGH AIR DEVICES WITH A MINIMUM OF ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER, SUITABLE FOR GALVANIZED STEEL, AND TWO FINISH COATS OF FLAT BLACK PAINT.

19. DUCT CONSTRUCTION MATERIALS:
ALL EXPOSED, SUPPLY AND RETURN DUCTWORK, SHALL BE DOUBLE-WALLED INTERNALLY INSULATED DUCT WITH PERFORATED INTERNAL LINER, 1" ACOUSTIC INSULATION AND GALVANIZED SHEET METAL EXPOSED ON EXTERIOR. ALL OUTSIDE AIR DUCTWORK SHALL BE INSULATED. ALL EXPOSED DUCTWORK SHALL BE SPIRAL SHEET METAL DUCTWORK.
FLEXIBLE DUCT: PRE-INSULATED FLEXIBLE DUCT. NO FLEXIBLE DUCT RUNS LONGER THAN 5 FEET.

20. FABRICATION, ERECTION, AND SUPPORT:
ALL DUCTWORK SHALL BE FABRICATED, ERECTED, BRACED, AND SUPPORTED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA AND ASHRAE REQUIREMENTS.

21. ACOUSTIC LINED DUCTWORK:
ACOUSTICALLY AND THERMALLY LINE RETURN, AND EXHAUST DUCT (WITHIN 10FT OF FANS) AND PLENUMS WITH 1" THICK, 1 1/2 PCF FIBERGLASS DUCT LINER, APPLIED PER THE MANUFACTURER'S AND NAIMA REQUIREMENTS. DUCT LINER SHALL MEET AND/OR EXCEED ASHRAE'S I.A.Q. STANDARD 62. USE WELDED STICK CLIPS, IN LIEU OF ADHESIVE TYPE FASTENERS AND FULL COVERAGE ADHESIVE. PROVIDE EDGE NOSINGS WHERE REQUIRED. COAT ALL EXPOSED FIBERGLASS WITH HARDCAST "LAG-GRIP 671".

22. JOINT SEALING:
SEAL ALL DUCT JOINTS AND SEAMS (LONGITUDINAL AND TRANSVERSE) WITH HIGH PRESSURE DUCT SEALER, HARDCAST "IRON-GRIP 601" OR APPROVED EQUIVALENT. REINFORCED FOIL BACKED TAPES, CLOTH OR PLASTIC BACKED TAPES (DUCT TAPE) ARE NOT ACCEPTABLE.

23. FLEXIBLE AIR DUCT:
DUCT SHALL BE UL LISTED UL-181, CLASS I AIR DUCT MATERIAL AND SHALL COMPLY WITH N.F.P.A 90A AND 90B AND ALL LOCAL REQUIREMENTS. DUCT SHALL HAVE AN OPERATING AIR PRESSURE OF 6 INCHES WG POSITIVE AND 4 INCHES WG NEGATIVE, ACOUSTICAL DOUBLE LAMINATED INNER FABRIC BONDED TO A STEEL HELIX WIRE. OUTER JACKET FIRE RETARDANT REINFORCED ALUMINUM MYLAR WITH FIBERGLASS INSULATION. FLEXMASTER TYPE "8M" ACOUSTICAL INSULATED OR EQUIVALENT.
MAKE ALL FLEXIBLE DUCT CONNECTIONS TO HARD DUCT USING STAINLESS STEEL SCREW CLAMPING BANDS AND SEALED AIR TIGHT WITH HIGH PRESSURE DUCT SEALER. PLASTIC BANDS ARE NOT ACCEPTABLE.
SEAL FLEXIBLE DUCT VAPOR BARRIER TO HARD DUCT AND/OR ADJACENT INSULATION. NO EXPOSED FIBERGLASS SHALL BE VISIBLE.

24. AIR DISTRIBUTION DEVICES:
COORDINATE THE EXACT LOCATIONS OF ALL AIR DEVICE NEEDS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION. COORDINATE THE EXACT LOCATION OF EACH OUTLET WITH THE ARCHITECT WITH REGARD TO CEILING AND WALL SPACING, CENTERING ALONG SOFFITS, WALLS, ETC. FURNISH AND INSTALL WHERE SHOWN ON THE DRAWINGS ALL DIFFUSERS, GRILLES, AND REGISTERS OF THE SIZE, TYPE, AND CAPACITY AS INDICATED IN THE AIR DEVICE SCHEDULE. ELBOWS:

25. TURNING VANES AND SMOOTH RADIUS ELBOW (WITHOUT VANES):
AT ALL DUCT TURNS OF 45 DEGREES OR MORE, PROVIDE SINGLE THICKNESS TURNING VANES PER SMACNA REQUIREMENTS. ALTERNATIVELY, USE SMOOTH RADIUS ELBOW (R/W = 1.5).

26. BRANCH TAKEOFF FITTINGS:
AT ALL MAIN TO BRANCH DUCT TAPS, TAKEOFFS, OR RUN-OUTS, PROVIDE 45 DEGREE ENTRANCE TAPS, AS DETAILED BY SMACNA STANDARDS.

27. DUCT MOUNTED ACCESS PANELS:
INSTALL ACCESS PANELS AS FOLLOWS:
AT INLET OF EACH DUCT MOUNTED FIRE AND MOTORIZED DAMPER.
FOR DUCT MOUNTED CONTROLS.
AS REQUIRED AND DIRECTED BY THE TEST AND BALANCE CONTRACTOR.
WHERE REQUIRED FOR DUCT INSPECTION, MAINTENANCE, AND CLEANING.
ACCESS PANELS SHALL BE 18 INCHES X 18 INCHES OR LARGEST DUCT WILL ALLOW. NORMALLY CENTER THE ACCESS PANEL IN THE BOTTOM OF THE DUCT AS CLOSE AS POSSIBLE TO THE DUCT MOUNTED DEVICE. ACCESS PANELS MAY BE INSTALLED ON THE SIDE OF THE DUCT, WHERE NECESSARY.
ACCESS PANELS SHALL BE DOUBLE WALL INSULATED HINGED WITH NEOPRENE GASKETS AND CAM LOCKS ON EACH UNHINGED SIDE. WHERE REQUIRED BECAUSE OF PANEL OPENING CLEARANCE, SUBSTITUTE UNHINGED ACCESS PANELS WITH CAM LOCKS ON EACH SIDE AND CAPTIVE CHAIN. ACCESS PANELS SHALL BE FLEXMASTER "TBSM-TAB DOOR" GREENHECK MODEL "HAD-10", OR EQUIVALENT.

28. REFRIGERANT PIPING:
REFRIGERANT PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE SAFETY CODES FOR MECHANICAL REFRIGERATION AND REFRIGERANT PIPING AND THE MANUFACTURER REQUIREMENTS.
RUN ALL PIPING SQUARE TO BUILDING LINES WHEREVER POSSIBLE. FIELD ROUTE PIPING IN ORDER TO PROVIDE FOR EASE OF ACCESS TO VALVES AND OTHER APPURTENANCES.
SUPPORT INTERIOR PIPING FROM THE BUILDING STRUCTURE USING COPPER OR PVC COATED HANGERS. SUPPORT REFRIGERANT PIPING 4 FOOT ON CENTER AND AT EACH CHANGE OF DIRECTION. PROVIDE 4" WIDE INSULATION SADDLES.
SUBMIT REFRIGERANT PIPING LAYOUT SHOP DRAWINGS FOR EACH UNIQUE SYSTEM, REVIEWED AND APPROVED BY THE MANUFACTURER, IN WRITING. SHOW ALL FILTERS, DRIERS, SIGHT-GLASSES, VALVES, ETC. AS REQUIRED BY THE MANUFACTURER.
USE REFRIGERANT GRADE, TYPE "K" HARD DRAWN COPPER PIPE WITH LONG RADIUS ELBOWS. NO CAST FITTINGS ARE ACCEPTABLE.
INSTALL FILTER DRIER EQUIVALENT TO SPORLAN CATCH-ALL.
INSTALL SIGHT GLASSES WITH MOISTURE INDICATORS COVERED BY A PROTECTIVE CAP. LOCATE THE SIGHT GLASSES INSIDE THE BUILDINGS, CLOSE TO THE FAN COIL IN THEIR RESPECTIVE MECHANICAL CLOSETS.
PROVIDE EXTERNAL FRONT SEATED BRASS SERVICE VALVES WITH SWEAT CONNECTIONS, WITH SERVICE PORTS FOR CHECKING OPERATING REFRIGERANT PRESSURES.
COPPER SHALL BE CLEANED AND SHINED BEFORE BRAZING. BRAZE USING J.W. HARRIS "DYNAFLOW" 6% SILVER BRAZING ALLOY.
PIPING SHALL BE PURGED WITH DRY NITROGEN WHILE BRAZING TO PREVENT OXIDATION. UPON COMPLETION OF A WELD, THE WELD SHALL BE WIPED WITH A DAMP RAG TO REMOVE FLUX WHILE STILL HOT.
ALL PIPING SHALL BE TESTED FOR 24 HOURS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND PROVEN TIGHT:
DISCHARGE AND LIQUID REFRIGERANT PIPING--300 PSIG, NITROGEN.
SUCTION REFRIGERANT PIPING--150 PSIG NITROGEN.
REFRIGERANT PIPING, AFTER PROVEN TIGHT, SHALL BE EVACUATED BY MEANS OF AN APPROVED VACUUM PUMP TO A VACUUM OF 2.5 MM HG ABSOLUTE. SYSTEMS SHALL STAND UNDER VACUUM WITH VACUUM PUMP OFF FOR A MINIMUM OF 12 HOURS. SYSTEMS MAY BE CHARGED WITH PROPER REFRIGERANT AFTER ARCHITECT'S APPROVAL OF VACUUM TEST. A DEHYDRATOR SHALL BE USED IN CHARGING HOSE DURING CHARGING OF SYSTEMS WITH REFRIGERANT.

29. GENERAL
THIS SECTION APPLIES TO ALL MECHANICAL WORK.
ALL INSULATION SHALL BE IN STRICT ACCORDANCE WITH ASHRAE STANDARDS AND ALL LOCAL

AND STATE ENERGY CODES.
THE INSULATION WORK SHALL BE PERFORMED BY A FIRM REGULARLY ENGAGED IN THIS TYPE WORK USING MECHANICS SKILLED IN THE TRADE.
INSTALL ALL MATERIALS AS RECOMMENDED BY THE MANUFACTURER FOR THE SERVICE INTENDED. ALL INSULATION MATERIAL, INCLUDING SEALER MATERIAL, ADHESIVES, COVERING MATERIAL, FINISH, ETC. SHALL HAVE A U.L. LISTED FLAME SPREAD RATING NOT OVER 24 WITHOUT EVIDENCE OF CONTINUED PROGRESSIVE COMBUSTION AND WITH A SMOKE DEVELOPED RATING NOT HIGHER THAN 50. ALL COATINGS AND COVERINGS FOR HOT SERVICE SHALL BE BREATHER TYPE AND VAPOR BARRIER TYPE FOR COLD SERVICE.
HVAC PIPING:
INSULATE REFRIGERANT SUCTION LINES AND ALL CONDENSATE DRAIN LINES WITH 1" THICK CLOSE CELLED ELASTOMERIC INSULATION INSTALLED PER THE MANUFACTURERS REQUIREMENTS. PAINT EXTERIOR INSULATION WITH TWO COATS OF PAINT AS REQUIRED BY THE INSULATION MANUFACTURER.
EXTERNALLY INSULATED DUCTS:
EXTERNALLY INSULATE ALL ROUND SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST DUCTWORK WITH 1 1/2" THICK (3/4 LBS/CU. FT. DENSITY) DUCT WRAP WITH ALUMINUM ALL SERVICE JACKET, VAPOR BARRIER, EXCEPT PRE-INSULATED FLEXIBLE DUCT.

30. EQUIPMENT:
CAPACITY, PERFORMANCE AND CHARACTERISTICS OF EQUIPMENT SHALL BE AS INDICATED ON THE DRAWINGS AND AS SPECIFIED OR IMPLIED HEREIN. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY INCREASED COST TO HIMSELF OR OTHERS FOR EQUIPMENT WHICH DEVIATES FROM THAT SCHEDULED OR IMPLIED HEREIN. REGARDLESS OF COST AFFECT, THE ARCHITECT MUST APPROVE ANY DEVIATION FROM THE DRAWINGS AND THE SPECIFICATION.

31. MOTORS AND STARTERS:
ALL ELECTRIC MOTORS SHALL BE HIGH EFFICIENCY TYPE WITH MAXIMUM OF 1750 RPM WITH OPEN DRIP PROOF OR TEFC ENCLOSURES, UNLESS OTHERWISE NOTED. MOTORS LOCATED ON AIR HANDLING UNITS SHALL BE MOUNTED IN RUBBER SUPPORTS OR THE FAN SHALL BE INDEPENDENTLY SUPPORTED ON SPRING ISOLATORS. MOTORS LOCATED IN THE CONDITIONED SPACE SHALL BE SELECTED FOR QUIET OPERATION AND SHALL NOT PRODUCE AN OBJECTIONABLE "MOTOR NOISE" IN THE SPACE.
ELECTRICAL CHARACTERISTICS SHALL BE VERIFIED FROM THE ELECTRICAL DRAWINGS, PRIOR TO BIDDING, AND VERIFIED ON THE JOB WITH THE ELECTRICAL SUB-CONTRACTOR. IF A CONFLICT ARISES, THE ELECTRICAL DRAWINGS SHALL BE THE AUTHORITY.
PROVIDE MOTOR STARTERS AND PROPER HEATER ELEMENTS SIZED IN ACCORDANCE WITH NFPA 70. STARTERS SHALL BE SQUARE-D OR EQUIVALENT WITH OVERLOAD TRIP ELEMENT IN EACH PHASE. LARGER MOTORS AND THEIR STARTERS SHALL MEET THE REQUIREMENTS OF THE UTILITY COMPANY AS TO INRUSH ALLOWABLE AND THE TYPE OF STARTING PERMITTED.
SHOULD ANY MECHANICAL EQUIPMENT REQUIRE EXTRA WORK BY OTHER TRADES, FOR PROPER INSTALLATION, THIS CONTRACTOR SHALL BEAR ALL COSTS, SUCH AS INCREASED ELECTRICAL, STRUCTURAL, ROOFING, ETC.

32. SYSTEMS TEST AND BALANCE:
THE REQUIRED TEST & BALANCE OF THE HVAC SYSTEM SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING AGENCY AS SPECIFIED BELOW.
AGENCY QUALIFICATIONS:
TEST & BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AGENCY ENGAGED SOLELY IN TEST AND BALANCE WORK. AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) AND NATIONAL ENVIRONMENTAL BALANCING BUREAU, (NEBB). SUBMIT A WRITTEN REPORT WITHIN 30 DAYS OF COMMENCING WORK, WITH ANY RECOMMENDED CHANGES TO INSURE BALANCING CAPABILITY. SUBMIT A DETAILED TEST PLAN TO THE ARCHITECT ILLUSTRATING ALL FORMATS, DRAWINGS, AND TEST PROCEDURE TO BE USED FOR TESTING THE COMPLETED SYSTEM. THE APPROVED PLAN WILL BE USED FOR TESTING THE SYSTEMS. PROCEDURES SHALL INCLUDE REQUIREMENTS LISTED IN AABC/NEBB STANDARDS. LATEST EDITION AND ANY SPECIAL REQUIREMENTS FOR THIS PROJECT. MAKE PROJECT VISITS AS REQUIRED DURING CONSTRUCTION PERIOD INSPECTING FOR PROPER INSTALLATION OF THE SYSTEM AND RELATED BALANCING DEVICES. PROJECT VISIT REPORTS SHALL BE MADE TO THE ARCHITECT IN WRITING.
CONTRACTORS REQUIREMENTS PRIOR TO TEST & BALANCE:
THE CONTRACTOR SHALL PERFORM ALL REQUIRED PRELIMINARY TESTS AND OTHER PREPARATORY WORK, INCLUDING BUT NOT LIMITED TO:
MAKE SURE ALL FANS ARE OPERATING, CHECK ROTATION, RPM, AND AMPS.
CHECK ALL DAMPERS FOR OPERATION.
PUT ALL HVAC EQUIPMENT IN FULL OPERATION INCLUDING AIR UNITS AND FANS.
MAKE SURE ALL HVAC CONTROLS ARE INSTALLED AND FULLY OPERATIONAL.
CLEAN/REPLACE FILTERS JUST PRIOR TO TESTING.
PROVIDE ALL BALANCING DEVICES AND DRIVE CHANGES THAT ARE DEEMED NECESSARY BY T&B AGENCY FOR BALANCE AT NO ADDITIONAL COST TO THE OWNER.
TEST & BALANCE AGENCY SHALL BALANCE ALL AIR SYSTEMS FOR OPERATION WITHIN DESIGN CRITERIA. PRIME MOVERS SHALL BE WITHIN 5% OF DESIGN AND TERMINALS WITHIN 10% OF DESIGN.
AIR SYSTEMS SHALL BE BALANCED AS DESCRIBED HEREIN.
TEST REPORT: THE FINAL TAB REPORT SHALL BE SUBMITTED IN PDF FORMAT. REPORT SHALL BE INDEXED.
TABLE OF CONTENTS SHALL LIST ALL REPORTS.
ALL AIR OUTLETS SHALL BE LOCATED ON CODED DRAWINGS PREPARED BY THE T&B AGENCY. AIR OUTLETS FORMS SHALL BE PREPARED AND CORRELATED TO THE CODED DRAWINGS.
TEST SUMMARY SHALL DESCRIBE FINAL TEST PROCEDURES AND SPECIAL CONDITIONS DURING TESTS (SUCH AS THERMOSTAT OUTSIDE/RETURN AIR RELATIONSHIP), AND DUCT STATIC PRESSURE.
DESCRIBE OTHER DATA THAT MAY ASSIST OPERATING PERSONNEL IN THE CONTINUING OPERATION OF THE SYSTEM.
T&B CONTRACTOR SHALL TAKE AND RECORD ALL NECESSARY READINGS AT THE FINAL BALANCE POINTS, SUCH AS BUT NOT LIMITED TO: AIR QUANTITIES, PRESSURES, SETPOINTS, ENTERING AND LEAVING COIL TEMPERATURES, SPACE INDOOR AND OUTSIDE WET AND DRY BULB TEMPERATURES, OUTDOOR WEATHER CONDITIONS, ELECTRICAL READINGS OF ALL NEW AND EXISTING MOTORS, COMPRESSORS, ETC.
TEST REPORT SHALL CONTAIN TBA CERTIFICATION OF TEST DATA AND SYSTEM CONDITIONS. SUBMIT THE TEST REPORTS, FOR REVIEW, BEFORE SUBSTANTIAL COMPLETION.
END OF MECHANICAL SPECIFICATIONS.



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Roanoke, VA 24018
540.772.9580



ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG

BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE

MECHANICAL SPECIFICATIONS

5285 HOLLIS ROAD
ROANOKE COUNTY, VIRGINIA 24019

DRAWN BY	JNB
DESIGNED BY	JNB
CHECKED BY	--
DATE	06/22/2022
SCALE	AS INDICATED
REVISIONS	



**BALZER
& ASSOCIATES**
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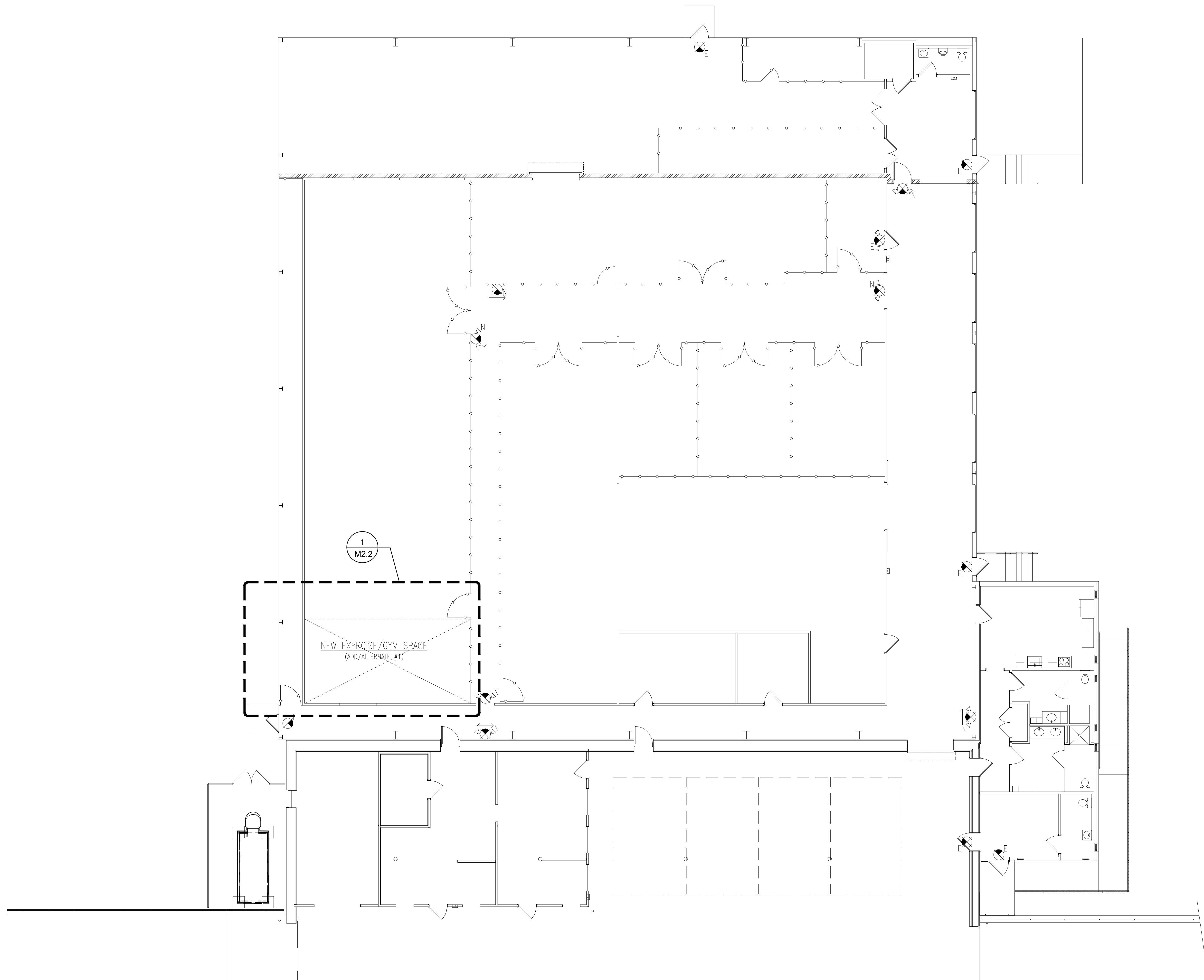


ROANOKE CO. PUBLIC SERVICES - STORAGE BLDG
BUILDING INTERIOR RENOVATIONS & CHANGE-OF-USE
MECHANICAL OVERALL PLAN

5265 HOLLINS ROAD
ROANOKE COUNTY, VIRGINIA 24019

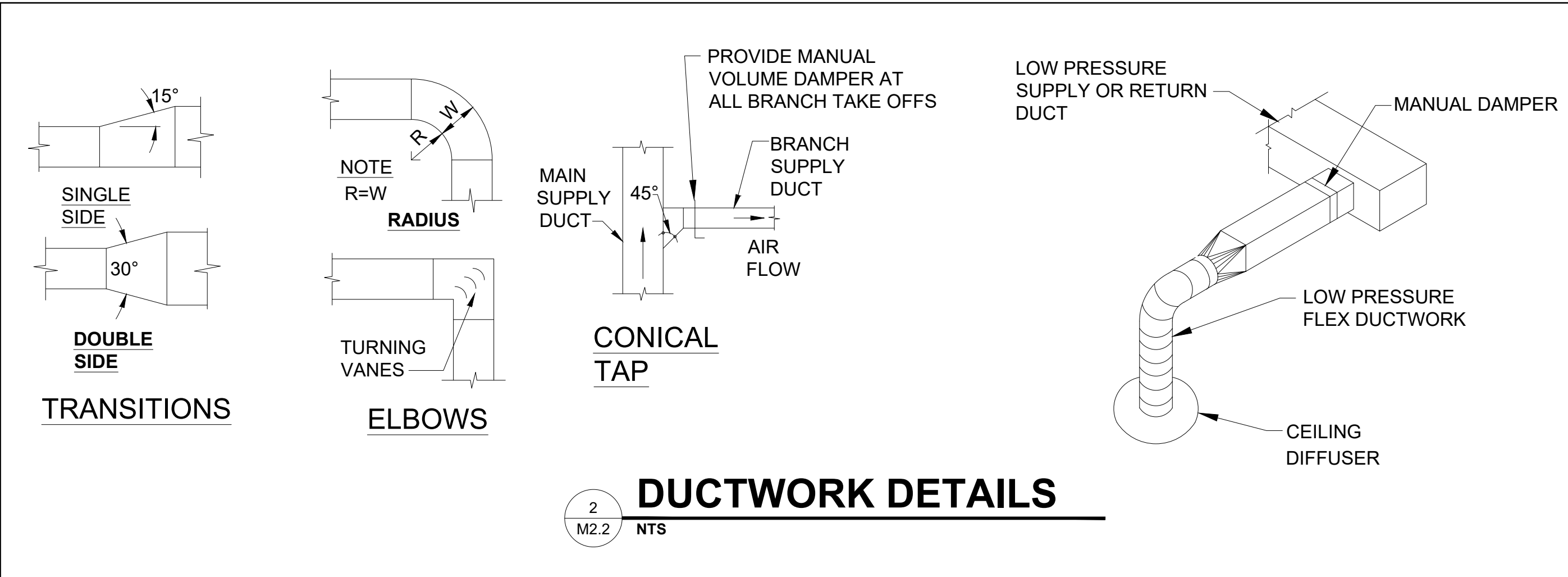
DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY ---
DATE 06/22/2022
SCALE AS INDICATED
REVISIONS

M2.1
PROJECT NO 03220033.00



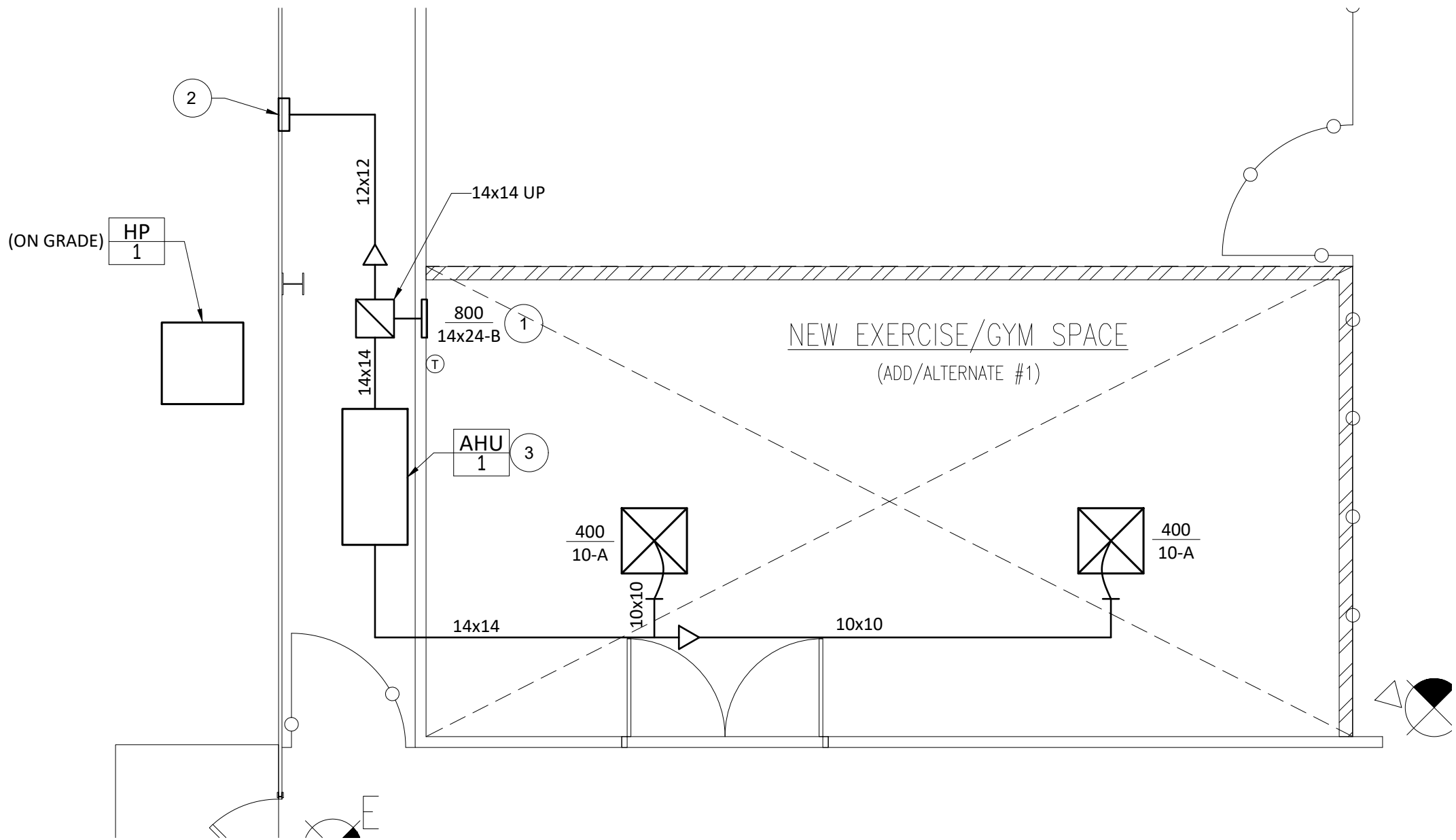
MECHANICAL OVERALL PLAN
1 M2.1 SCALE = 1/8"=1'-0"

**STOTTSBERG
ENGINEERING**



NEW WORK KEYED NOTES:

1. LOW LEVEL SIDEWALL RETURN GRILL. BOTTOM OF GRILLE TO BE 8" ABOVE FINISHED FLOOR. PROVIDE FULL SIZE PLENUM BEHIND GRILLE, 12 INCHES DEEP.
2. 12x12 SIDEWALL INTAKE LOUVER MOUNTED AT 12FT ABOVE FINISHED FLOOR. LOUVER SHALL HAVE MIN. 50% FREE AREA, CONSTRUCTED OF EXTRUDED ALUMINUM, BIRD SCREEN, DRAINABLE, AND EQUIVALENT TO RUSKIN MODEL ELF375DXH. PROVIDE FRAMING AROUND LOUVER AS REQUIRED FOR SUPPORT. PROVIDE FULL SIZE PLENUM BEHIND LOUVER, 12 INCHES DEEP.
3. MOUNT AIR HANDLER HORIZONTALLY AT 12 FT ABOVE FLOOR. SUSPEND UNIT FROM ROOF STRUCTURE. ROUTE REFRIGERANT LINES TO HEAT PUMP ON GRADE. SPILL 3/4" CONDENSATE TO EXTERIOR GRADE. PROVIDE SECONDARY DRAIN PAN BELOW UNIT.



ENLARGED MECHANICAL PARTIAL PLAN

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

IFB # 2023-011

ATTACHMENT F: Asbestos & Lead Inspection Report

Dated April 20, 2022
5285 Hollins Road, Roanoke, Virginia



Solutions for all your Environmental and OSHA Concerns

April 20, 2022

Asbestos & Lead Inspection Report

Project Location:

5285 Hollins Road
Roanoke, Virginia

Prepared For:

Roanoke County General Services
Roanoke, VA

Prepared By:


Fred Danner
Interim Lead Inspector

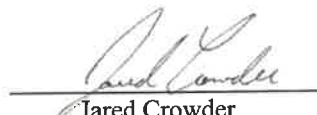

Jared Crowder
Asbestos Inspector

TABLE OF CONTENTS

SCOPE OF WORK

ASBESTOS INSPECTION

- **SAMPLE SUMMARY**
- **LABORATORY REPORT**

LEAD INSPECTION

- **LEAD BASED PAINT TESTING RESULTS**

APPLICABLE LICENSES

Scope of Work

HDH Technical, Inc. was contracted by Roanoke County to provide an asbestos inspection and lead-based paint screening of the structure located at 5285 Hollins Road, Roanoke, Virginia. The inspection was conducted by personnel trained and licensed in accordance with the regulations of the Environmental Protection Agency (EPA) and the Commonwealth of Virginia. This inspection was performed using current EPA AHERA standards. This protocol was used for the determination, sampling and analysis of suspected Asbestos Containing Materials (ACM). Only those parts of the structure scheduled to undergo renovation, as directed by the client, were included in this inspection.

Also included in this report is a Lead-Based Paint Screening at this location. The term "screening" is used as opposed to "inspection" due to the fact that a complete HUD type paint inspection of each surface in every space was not performed. Generally speaking, each differing type of interior and exterior component and each differing type of paint was tested, although each component was not tested in each room. This "screening" will be referred to as an "inspection" throughout this report and was conducted in accordance with accepted industry standards and applicable regulations established by OSHA and the EPA. This inspection only identifies lead-based paint that is accessible through non-destructive methods. It does not identify lead-based paint materials located within walls, concrete decks, subfloors, or other generally inaccessible areas.

ASBESTOS INSPECTION

An inspection of 5285 Hollins Road was performed on April 14, 2022 by representatives of HDHT. The objective of this inspection was to determine the location of asbestos-containing building materials (ACBM) currently located on the interior of this structure that may be disturbed in conjunction with upcoming renovation activities at this structure.

The inspection was conducted by personnel trained and licensed in accordance with the regulations of the Environmental Protection Agency (EPA) and the Commonwealth of Virginia. This inspection meets the protocol outlined in current EPA AHERA regulations. This protocol was used for the determination, sampling and analysis of suspect asbestos containing materials.

As the sample summary indicates, **NONE** of the suspect materials sampled were reported to be asbestos containing by the laboratory.

This information should be provided to all contract personnel for their use in meeting current OSHA requirements. Every attempt was made to gain access to all areas or to assess representative materials entering or leaving the area. HDH Technical, Inc. accepts no liability nor makes any claims regarding ACBM which was not accessible during the inspection process if such material was located behind or within walls, concrete decks, subfloors, or was generally inaccessible without destructive sampling. If any additional suspect materials are identified during the course of the project, the contractor is to immediately stop work and contact the Owner for further direction.

Asbestos Sample Summary

5285 Hollins Road

LAB #	SAMPLE ID	SAMPLE DESCRIPTION	RESULT	%
22018595 -001	BM 1.1	Baseboard Mastic	ND	-
22018595 -002	BM 1.2	Baseboard Mastic	ND	-
22018595 -003	CK 2.1	Caulk - Walk-in Door Covering	ND	-
22018595 -004	CK 2.2	Caulk - Walk-in Door Covering	ND	-
22018595 -005	FT 3.1	Floor Tile - 12x12 - Beside Walk-in	ND	-
22018595 -006	FT 3.2	Floor Tile - 12x12 - Beside Walk-in	ND	-
22018595 -007	FT 4.1	Floor Tile - 12x12 - Restroom - Top Layer	ND	-
22018595 -008	FT 4.2	Floor Tile - 12x12 - Restroom - Top Layer	ND	-
22018595 -009	TM 5.1	Tile Mastic - FT 4	ND	-
22018595 -010	TM 5.2	Tile Mastic - FT 4	ND	-
22018595 -011	FT 6.1	Floor Tile - 12x12 - Restroom - Bottom Layer	ND	-
22018595 -012	FT 6.2	Floor Tile - 12x12 - Restroom - Bottom Layer	ND	-
22018595 -013	TM 7.1	Tile Mastic - FT 6	ND	-
22018595 -014	TM 7.2	Tile Mastic - FT 6	ND	-
22018595 -015	SR 8.1	Sheetrock	ND	-
22018595 -016	SR 8.2	Sheetrock	ND	-
22018595 -017	SR 8.3	Sheetrock	ND	-
22018595 -018	JC 9.1	Joint Compound	ND	-
22018595 -019	JC 9.2	Joint Compound	ND	-
22018595 -020	JC 9.3	Joint Compound	ND	-
22018595 -021	CT 10.1	Ceiling Tile - 2x4	ND	-
22018595 -022	CT 10.2	Ceiling Tile - 2x4	ND	-
22018595 -023	CT 10.3	Ceiling Tile - 2x4	ND	-

ND = NONE DETECTED

NA = NOT ANALYZED
POSITIVE STOP

■ = CHRYSOTILE

▲ = AMOSITE

● = OTHER

Laboratory Report



10501 Trade Ct., Suite 100
N. Chesterfield, VA 23139
804-897-1177 / 888-895-1175
Fax 804-897-0070
www.sanair.com

Asbestos
Chain of Custody

SanAir ID Number

22018595

Company: HDH Technical, Inc		Project #: Roanoke County	Collected by: Crowder
Address: 1305 Radford Street		Project Name: 5285 Hollins Rd	Phone #: 540-381-7999
City, St, Zip: Christiansburg, VA 24073		Date Collected: 4/14/2022	Email: rriebal@hdhassociates.com
State of Collection: VA Account #: 1769		P.O. Number:	Email: jcrowder@hdhassociates.com

Bulk			Air			Soil/Vermiculite		
ABB	PLM EPA 600/R-93/116	<input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400	<input type="checkbox"/>	ABSE	PLM EPA 600/R-93/116 (Qual.)	<input type="checkbox"/>
	Positive Stop	<input type="checkbox"/>	ABA-2	OSHA w/ TWA	<input type="checkbox"/>	ABSP	PLM CARB 435 (LOD <1%)	<input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count	<input type="checkbox"/>	ABTEM	TEM AHERA	<input type="checkbox"/>	ABSP1	PLM CARB 435 (LOD 0.25%)	<input type="checkbox"/>
ABB1K	PLM EPA 1000 Point Count	<input type="checkbox"/>	ABATN	TEM NIOSH 7402	<input type="checkbox"/>	ABSP2	PLM CARB 435 (LOD 0.1%)	<input type="checkbox"/>
ABBEN	PLM EPA NOB	<input type="checkbox"/>	ABT2	TEM Level II	<input type="checkbox"/>			
ABBCH	TEM Chatfield	<input type="checkbox"/>						
ABBTM	TEM EPA NOB	<input type="checkbox"/>						

Water			New York ELAP			Dust		
ABHE	EPA 100.2	<input type="checkbox"/>	PLM NY	PLM EPA 600/M4-82-020	<input type="checkbox"/>	ABWA	TEM Wipe ASTM D-6480	<input type="checkbox"/>
			ABEPA2	NY ELAP 198.1	<input type="checkbox"/>	ABDMV	TEM Microvac ASTM D-5755	<input type="checkbox"/>
			ABENY	NY ELAP 198.6 PLM NOB	<input type="checkbox"/>	Matrix	Other	<input type="checkbox"/>
			ABBNY	NY ELAP 198.4 TEM NOB	<input type="checkbox"/>			<input type="checkbox"/>

Turn Around Times	3 HR (4 HR TEM)	<input type="checkbox"/>	6 HR (8HR TEM)	<input type="checkbox"/>	12 HR	<input type="checkbox"/>	24 HR	<input checked="" type="checkbox"/>
	2 Days	<input type="checkbox"/>	3 Days	<input type="checkbox"/>	4 Days	<input type="checkbox"/>	5 Days	<input type="checkbox"/>

Special Instructions:	
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SAMPLE ID	SAMPLE DESCRIPTION
BM 1.1	Baseboard Mastic
BM 1.2	Baseboard Mastic
CK 2.1	Caulk - Walk-In Door Covering
CK 2.2	Caulk - Walk-In Door Covering
FT 3.1	Floor Tile - 12x12 - Beside Walk-In
FT 3.2	Floor Tile - 12x12 - Beside Walk-In
FT 4.1	Floor Tile - 12x12 - Restroom - Top Layer
FT 4.2	Floor Tile - 12x12 - Restroom - Top Layer
TM 5.1	Tile Mastic - FT 4
TM 5.2	Tile Mastic - FT 4
FT 6.1	Floor Tile - 12x12 - Restroom - Bottom Layer

Special Instructions	
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Relinquished by	Date	Time	Received by	Date	Time
Crowder	4/14/2022	12:15 PM	UPS	4/14/2022	12:15 PM
			EDR	4/15/22	10:40 a.m.

Unless scheduled, the turn around time for all samples received after 3 pm EST Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed to Recipient will be charged a \$10 shipping fee.

22018595

[illegible]

Relinquished by	Date	Time	Received by	Date	Time
Crowder	4/14/2022	12:15 PM	UPS	4/14/2022	12:15 PM
			EDR	4/15/22	10:40 a.m.

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SanAir ID Number

22018595

FINAL REPORT

4/18/2022 1:31:28 PM

Name: HDH Technical, Inc.
Address: P.O. Box 6158
Christiansburg, VA 24073
Phone: 540-381-7999

Project Number: Roanoke County
P.O. Number:
Project Name: 5285 Hollins Rd
Collected Date: 4/14/2022
Received Date: 4/15/2022 10:40:00 AM

Analyst: Campos, Angie

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic	Components		Asbestos Fibers
	Appearance	% Fibrous	% Non-fibrous	
BM 1.1 / 22018595-001 Baseboard Mastic	Off-White Non-Fibrous Homogeneous		100% Other	None Detected
BM 1.2 / 22018595-002 Baseboard Mastic	Off-White Non-Fibrous Homogeneous		100% Other	None Detected
CK 2.1 / 22018595-003 Caulk - Walk-In Door Covering	White Non-Fibrous Homogeneous		100% Other	None Detected
CK 2.2 / 22018595-004 Caulk - Walk-In Door Covering	White Non-Fibrous Homogeneous		100% Other	None Detected
FT 3.1 / 22018595-005 Floor Tile - 12x12 - Beside Walk-In	Beige Non-Fibrous Homogeneous		100% Other	None Detected
FT 3.2 / 22018595-006 Floor Tile - 12x12 - Beside Walk-In	Beige Non-Fibrous Homogeneous		100% Other	None Detected
FT 4.1 / 22018595-007 Floor Tile - 12x12 - Restroom - Top Layer	Tan Non-Fibrous Homogeneous		100% Other	None Detected
FT 4.2 / 22018595-008 Floor Tile - 12x12 - Restroom - Top Layer	Tan Non-Fibrous Homogeneous		100% Other	None Detected
TM 5.1 / 22018595-009 Tile Mastic - FT 4	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
TM 5.2 / 22018595-010 Tile Mastic - FT 4	Yellow Non-Fibrous Homogeneous		100% Other	None Detected

Analyst:

Approved Signatory:

Analysis Date: 4/18/2022

Date: 4/18/2022



SanAir ID Number
22018595
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4/18/2022 1:31:28 PM

Name: HDH Technical, Inc.
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Analyst: Campos, Angie

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic	Components		Asbestos Fibers
	Appearance	% Fibrous	% Non-fibrous	
FT 6.1 / 22018595-011 Floor Tile - 12x12 - Restroom - Bottom Layer	Blue Non-Fibrous Homogeneous		100% Other	None Detected
FT 6.2 / 22018595-012 Floor Tile - 12x12 - Restroom - Bottom Layer	Blue Non-Fibrous Homogeneous		100% Other	None Detected
TM 7.1 / 22018595-013 Tile Mastic - FT 6	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
TM 7.2 / 22018595-014 Tile Mastic - FT 6	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
SR 8.1 / 22018595-015 Sheetrock	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
SR 8.2 / 22018595-016 Sheetrock	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
SR 8.3 / 22018595-017 Sheetrock	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
JC 9.1 / 22018595-018 Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
JC 9.2 / 22018595-019 Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
JC 9.3 / 22018595-020 Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected

Analyst:

Approved Signatory:

Analysis Date: 4/18/2022

Date: 4/18/2022



SanAir ID Number
22018595
FINAL REPORT
4/18/2022 1:31:28 PM

Name: HDH Technical, Inc.
Address: P.O. Box 6158
Christiansburg, VA 24073
Phone: 540-381-7999

Project Number: Roanoke County
P.O. Number:
Project Name: 5285 Hollins Rd
Collected Date: 4/14/2022
Received Date: 4/15/2022 10:40:00 AM

Analyst: Campos, Angie

Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic	Components		Asbestos Fibers
	Appearance	% Fibrous	% Non-fibrous	
CT 10.1 / 22018595-021 Ceiling Tile - 2x4	White Fibrous Homogeneous	60% Cellulose 20% Glass	20% Other	None Detected
CT 10.2 / 22018595-022 Ceiling Tile - 2x4	White Fibrous Homogeneous	60% Cellulose 20% Glass	20% Other	None Detected
CT 10.3 / 22018595-023 Ceiling Tile - 2x4	White Fibrous Homogeneous	60% Cellulose 20% Glass	20% Other	None Detected

Analyst:

Approved Signatory:

Analysis Date: 4/18/2022

Date: 4/18/2022

Disclaimer

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Samples are held for a period of 60 days. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations.

For NY state samples, method EPA 600/M4-82-020 is performed.

NYELAP Disclaimer:

Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Asbestos Certifications

NVLAP lab code 200870-0

City of Philadelphia: ALL-460

PA Department of Environmental Protection Number: 68-05397

California License Number: 2915

Colorado License Number: AL-23143

Connecticut License Number: PH-0105

Massachusetts License Number: AA000222

Maine License Number: LB-0075, LA-0084

New York ELAP lab ID: 11983

Rhode Island License Number: PCM00126, PLM00126, TEM00126

Texas Department of State Health Services License Number: 300440

Commonwealth of Virginia 3333000323

Washington State License Number: C989

West Virginia License Number: LT000616

Vermont License: AL166318

Louisiana Department of Environmental Quality: 212253, Cert 05088

Revision Date: 8/14/2020



SanAir ID Number

22018595

FINAL REPORT

4/18/2022 1:31:28 PM

Name: HDH Technical, Inc.
Address: P.O. Box 6158
Christiansburg, VA 24073
Phone: 540-381-7999

Project Number: Roanoke County
P.O. Number:
Project Name: 5285 Hollins Rd
Collected Date: 4/14/2022
Received Date: 4/15/2022 10:40:00 AM

Dear Crowder,

We at SanAir would like to thank you for the work you recently submitted. The 23 sample(s) were received on Friday, April 15, 2022 via UPS. The final report(s) is enclosed for the following sample(s): BM 1.1, BM 1.2, CK 2.1, CK 2.2, FT 3.1, FT 3.2, FT 4.1, FT 4.2, TM 5.1, TM 5.2, FT 6.1, FT 6.2, TM 7.1, TM 7.2, SR 8.1, SR 8.2, SR 8.3, JC 9.1, JC 9.2, JC 9.3, CT 10.1, CT 10.2, CT 10.3.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

A handwritten signature in black ink that reads "Sandra Sobrino". The signature is written in a cursive, flowing style.

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:

- 23 samples in Good condition.

LEAD INSPECTION

On April 14, 2022 a Lead-Based Paint inspection was also conducted at 5285 Hollins Road. The inspection was conducted to identify potential lead-based paint concerns involved in this renovation project. The areas were inspected by Fred Danner.

The inspection determined that NONE of the surfaces tested contain lead greater than or equal to 1.0 mg/cm, and are NOT considered to be lead-based paint surfaces as defined by the Virginia Department of Professional and Occupational Regulation (DPOR) and the Environmental Protection Agency (EPA).

If lead is present, regardless of quantity, OSHA regulations are applicable. All persons involved in the disturbance of lead based or lead containing painted surfaces should be adequately trained to do so. All contractors should be provided with the results for their use in meeting current OSHA requirements for the protection of their workers and the environment.

This inspection was in compliance with the Virginia Lead-based Paint Activities Regulations, October 1, 1995. The Inspector is properly trained, licensed, and met the competency requirements spelled out in those regulations.

LEAD COMPONENT:

For informational purposes, the following material was sampled and identified to be a lead component. Although not included in the Virginia Lead-based Paint Activities Regulations, the contractor should be provided this information in the event it is removed for disposal purposes:

- **Orange Cross Bracing on Shelving Units**

FIELD VERIFICATION

Fred Danner, Interim Lead Inspector, under the direction of Robin H. Liebal, inspected the structure on April 14, 2022.

A total of thirty-two (32) X-Ray Florescence (XRF) readings, including calibrations, were taken in substantial conformance with industry standards and other applicable federal and state regulations.

Robin H. Liebal's Virginia Lead Risk Assessor license number is 3356000422.
Fred Danner's Interim Lead Inspector license number is 3342001012.

A complete copy of all tested surfaces and results are included in this report. All positive samples are listed in BOLD.

HDH Technical, Inc. (HDHT) used the Heuresis Corporation model Pb200i (Serial#1609) X-Ray Fluorescence (XRF) instrument for the screening. This unit was resourced in February 2020. The instrument is not substrate dependent according to that performance characteristic sheet, so no substrate corrections were required during this screening.

The XRF was calibrated prior to use and at the end of the testing, or every four hours, whichever came first. All calibrations were conducted on a 1.10 ± 0.1 mg/cm² NIST SRM paint film. All calibrations are noted on the x-ray fluorescence data sheets.

For the purposes of this inspection lead-based paint is defined as greater than or equal to 1.0 mg/cm². The Heuresis Corporation instrument (model Pb200i) used in this survey have published threshold values of 1.0 mg/cm² on all substrates and do not require substrate correction. Paint chip confirmation of inconclusive samples was not necessary since no inconclusive surfaces were identified during sampling with this X-ray Fluorescence Analyzer. Lastly, this report detailing the findings of the inspection report was written to document the inspection and provide a permanent record of the evaluation.

Qualifications

The inspection was conducted by Fred Danner, interim lead inspector, under the direction of Robin H. Liebal, Licensed Lead Risk Assessor #3356000422. The inspection was conducted in accordance with applicable Local, State, and Federal regulations.

Methodologies

This inspection was conducted in accordance with accepted industry standards and applicable regulations established by OSHA and the EPA. This inspection only identifies lead-based paint that is accessible through non-destructive methods. It does not identify lead-based paint materials located within walls, concrete decks, subfloors, or other generally inaccessible areas.

Disclaimer

This inspection report is written for and intended for the use of the Owner and its representatives only. HDHT is not responsible nor will be held liable for any interpretation made, opinions formed, or conclusions drawn by any third party as a result of examining the lab results, inspection results or this report. Any interpretations, opinions, and conclusions will be those made, formed, and drawn solely by that third party.

A lead inspector/risk assessor properly trained by a training institution utilizing an approved HUD curriculum and subsequently licensed to perform inspections by the Commonwealth of Virginia performed the inspection of this structure. HDHT accepts no liability nor makes any claims regarding lead based painted surfaces which were not tested and lead -based painted surfaces which were not accessible during the inspection process if such material was located behind or within walls, concrete decks, sub-floors, chases, or was otherwise generally inaccessible without destructive sampling.

Lead Based Paint Testing Results



1305 Radford Street
Christiansburg, Virginia 24073
Telephone: (540) 381-7999

Lead Testing for Construction

County of Roanoke, Virginia
Roanoke County Administration Center
Roanoke, Virginia

5285 Hollins Road
Roanoke, Virginia

READING	CONCENTRATION	UNITS	RESULTS	DATE	TIME	USER	SITE	ROOM CHOICE	STRUCTURE	MEMBER	SUBSTRATE	CONDITION
1	1	mg/cm2	Positive	4/14/2022	10:33:31	HDHT	5285 Hollins Rd	Calibration				
2	0	mg/cm2	Negative	4/14/2022	10:36:51	HDHT	5285 Hollins Rd	Room 1	Column		Metal	Intact
3	0.1	mg/cm2	Negative	4/14/2022	10:37:51	HDHT	5285 Hollins Rd	Room 1	Column		Metal	Intact
4	0.2	mg/cm2	Negative	4/14/2022	10:38:42	HDHT	5285 Hollins Rd	Room 1	Column		Metal	Intact
5	1.4	mg/cm2	Positive	4/14/2022	10:39:46	HDHT	5285 Hollins Rd	Room 1	Shelving	Horiz	Metal	Intact
6	0.1	mg/cm2	Negative	4/14/2022	10:40:20	HDHT	5285 Hollins Rd	Room 1	Shelving	Vert	Metal	Intact
7	0	mg/cm2	Negative	4/14/2022	10:41:26	HDHT	5285 Hollins Rd	Room 1	Shelving	Vert	Metal	Intact
8	0	mg/cm2	Negative	4/14/2022	10:42:23	HDHT	5285 Hollins Rd	Room 1	Shelving	Vert	Metal	Intact
9	0	mg/cm2	Negative	4/14/2022	10:43:35	HDHT	5285 Hollins Rd	Room 1	Wall	Wall	Sheetrock	Intact
10	0.1	mg/cm2	Negative	4/14/2022	10:46:19	HDHT	5285 Hollins Rd	Room 2	Door	Casing	Metal	Intact
11	0.1	mg/cm2	Negative	4/14/2022	10:46:47	HDHT	5285 Hollins Rd	Room 2	Door	Casing	Metal	Intact
12	0	mg/cm2	Negative	4/14/2022	10:48:38	HDHT	5285 Hollins Rd	Room 2	Door	Casing	Metal	Intact
13	0	mg/cm2	Negative	4/14/2022	10:49:19	HDHT	5285 Hollins Rd	Room 2	Door	Casing	Metal	Intact
14	0	mg/cm2	Negative	4/14/2022	10:49:50	HDHT	5285 Hollins Rd	Room 2	Door	Casing	Metal	Intact
15	0.1	mg/cm2	Negative	4/14/2022	10:50:41	HDHT	5285 Hollins Rd	Room 2	Door	Casing	Metal	Intact
16	0.1	mg/cm2	Negative	4/14/2022	10:51:18	HDHT	5285 Hollins Rd	Room 2	Door	Casing	Metal	Intact
17	0	mg/cm2	Negative	4/14/2022	10:51:50	HDHT	5285 Hollins Rd	Room 3	Door	Casing	Metal	Intact
18	0.1	mg/cm2	Negative	4/14/2022	10:52:38	HDHT	5285 Hollins Rd	Room 3	Door	Casing	Metal	Intact
19	1.4	mg/cm2	Positive	4/14/2022	10:53:12	HDHT	5285 Hollins Rd	Room 3	Shelving	Horiz	Metal	Intact
20	0.1	mg/cm2	Negative	4/14/2022	10:54:32	HDHT	5285 Hollins Rd	Room 3	Shelving	Vert	Metal	Intact
21	0.2	mg/cm2	Negative	4/14/2022	10:54:53	HDHT	5285 Hollins Rd	Room 3	Shelving	Vert	Metal	Intact
22	0.1	mg/cm2	Negative	4/14/2022	10:55:30	HDHT	5285 Hollins Rd	Room 4	Wall	Wall	Metal	Intact
23	0.1	mg/cm2	Negative	4/14/2022	10:57:32	HDHT	5285 Hollins Rd	Room 4	Wall	Wall	Sheetrock	Intact
24	0	mg/cm2	Negative	4/14/2022	10:59:14	HDHT	5285 Hollins Rd	Room 4	Door	Casing	Metal	Intact
25	0.1	mg/cm2	Negative	4/14/2022	11:00:26	HDHT	5285 Hollins Rd	Room 5	Shelving	Horiz	Metal	Intact
26	0	mg/cm2	Negative	4/14/2022	11:01:39	HDHT	5285 Hollins Rd	Room 5	Shelving	Vert	Metal	Intact
27	0.1	mg/cm2	Negative	4/14/2022	11:02:04	HDHT	5285 Hollins Rd	Room 5	Shelving	Vert	Metal	Intact
28	0	mg/cm2	Negative	4/14/2022	11:02:25	HDHT	5285 Hollins Rd	Room 5	Wall	Wall	Metal	Intact
29	0	mg/cm2	Negative	4/14/2022	11:03:28	HDHT	5285 Hollins Rd	Room 5	Wall	Wall	Sheetrock	Intact
30	0	mg/cm2	Negative	4/14/2022	11:04:01	HDHT	5285 Hollins Rd	Room 5	Door	Casing	Metal	Intact
31	0	mg/cm2	Negative	4/14/2022	11:05:32	HDHT	5285 Hollins Rd	Room 6	Door	Wall	Sheetrock	Intact
32	0.1	mg/cm2	Negative	4/14/2022	11:05:58	HDHT	5285 Hollins Rd	Room 6	Door	Casing	Metal	Intact

Photos

5285 Hollins Road



The horizontal metal components (painted orange) of this modular shelving system were found to utilize lead-based paint.

Applicable Licenses

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

11-30-2022

NUMBER

3356000422

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
LEAD RISK ASSESSOR LICENSE



ROBIN H LIEBAL
4659 HEAVENER RD.
RADFORD, VA 24141-0000

DPOR

Mary Broz-Vaughan
Mary Broz-Vaughan, Director

Status can be verified at <http://www.dpor.virginia.gov>

DPOR-LIC (02/2017)

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR License Lookup License Number 3342001012

License Details

Name	DANNER, FREDERICK REED
License Number	3342001012
License Description	Interim Lead Inspector License
Rank	Interim Lead Abatement Inspector
Address	CHRISTIANSBURG, VA 24073-0000
Initial Certification Date	2021-12-17
Expiration Date	2022-05-31

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DPOR License Lookup License Number 3303004480

License Details

Name	CROWDER, JARED ALLEN
License Number	3303004480
License Description	Asbestos Inspector License
Rank	Asbestos Inspector
Address	PULASKI, VA 24301
Initial Certification Date	2018-12-05
Expiration Date	2022-12-31

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