



## **ADVERTISEMENT**

### **Bid Solicitation – Roads Division Building Remodel**

Worcester County is seeking Bids from qualified Vendors for the renovation of the Worcester County Roads Building located at 10146 Main Street, Berlin, Maryland in conformity with the requirements contained herein Bid Documents.

Bid Documents for the above referenced project may be obtained from the Worcester County Commissioner's Office by either e-mailing the Procurement Officer, Nicholas Rice, at [nrice@co.worcester.md.us](mailto:nrice@co.worcester.md.us) or by calling 410-632-1194 during normal business hours, or via the County's Bids page on the County's [website](#). Vendors are responsible for checking this website for addenda prior to submitting their bids. Worcester County is not responsible for the content of any Bid Document received through any third party bid service. It is the sole responsibility of the vendor to ensure the completeness and accuracy of their Completed Bid Documents.

A pre-bid meeting will be held at the Worcester County Roads Building on Wednesday, May 24, 2023 at 1:30 PM. The last day for questions will be noon on Tuesday, June 6<sup>th</sup>, 2023. Sealed Bid Documents are due no later than 2:30pm on Tuesday, June 13<sup>th</sup>, 2023 and will be opened and read aloud in the Office of the County Commissioners, Worcester County Government Center – Room 1103, One West Market Street, Snow Hill, Maryland 21863.

Late Bid Documents will not be accepted.

Minority vendors are encouraged to compete for award of the solicitation.

Nicholas W. Rice, CPPO, CPPB, NIGP-CPP  
Procurement Officer  
Worcester County, Maryland



# PROJECT MANUAL

RENOVATIONS FOR:

WORCESTER COUNTY ROADS BUILDING  
BERLIN, MARYLAND

BID SPECIFICATIONS



MARCH 2023

GMB FILE NO. 210241

**GMB**

GEORGE, MILES & BUHR, LLC

**ARCHITECTS/ENGINEERS**

206 WEST MAIN STREET  
SALISBURY, MD 21801  
410.742.3115

SALISBURY/BALTIMORE/SEAFORD



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# DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

## SECTION 00 11 16

### INVITATION TO BID

You are invited to bid on a General Contract for the renovation of the Worcester County Roads Building located at 10146 Main Street, Berlin, Maryland. First floor renovation to include removal of a spiral staircase, small partition addition and installation of new door and frame. The second-floor renovation will create new office space, update the bathroom to be accessible and a new janitor closet. The removal of the existing skylight and chimney and patching the roof with all necessary appurtenances. The completed work shall include masonry, wood framing, EIFS, roofing, drywall, mechanical, electrical and plumbing. The Contractor shall provide all necessary labor, equipment, tools, materials and incidentals, and shall perform all operations required to completely finish all of the work in the manner approved by the Architect.

Subcontractors shall be qualified and experienced in projects of similar size, type and complexity as this one, and shall be subject, if requested by the Owner, to submit evidence of same prior to execution of the construction contract.

Bids must be on a lump sum basis and may not be withdrawn for **60** days.

A pre-bid meeting will be held at the Worcester County Roads Building on Wednesday, May 24, 2023 at 1:30 PM. Attendance is recommended but not mandatory to bid. By submitting their bid, Bidders acknowledge they have examined the site in sufficient detail and familiarized themselves to prepare a complete and responsible bid for the specified work. No claims will be approved during construction for items that can be reasonably verified by field examination. Last day for questions is noon on Tuesday, June 6th, 2023. All questions shall be addressed to the County's Procurement Officer, Nicholas Rice at nrice@co.worcester.md.us.

**Sealed proposals will be accepted until 2:30 PM (EDT) on the 13th day, June, 2023 in the:** Office of the County Commissioners  
Worcester County Government Center  
One West Market Street; Room 1103  
Snow Hill, Maryland 21863

Envelops shall be marked **“Bid Enclosed – Worcester County Roads Building – Berlin, MD”** in the lower left-hand corner.

Electronic files can be located on the County's website, <https://www.co.worcester.md.us/commissioners/bids>.

Bidders must be registered to perform work in the State of Maryland and shall include their license number on the Bid Form.

Bid Security in the amount of five (5) percent of the Bid must accompany each bid in the Instructions to Bidders. The successful Bidder's security will be retained until he has signed the Contract and furnished a Performance Bond and a Payment Bond AIA Document A312, each in the amount of the contract sum.

Contractor is required, as an attachment to his bid, to provide a "Contractor's Qualification Statement", current AIA Document A305, including financial data. Bids received without this information will be considered non-responsive.

The right is reserved, as the interests of Worcester County may appear, to reject any and all bids, to waive any informality in bids received, and to accept or reject any items of any bid.

**END OF SECTION**

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

**SECTION 00 21 13**

**AIA DOCUMENT A701-2017  
INSTRUCTIONS TO BIDDERS**

Bidders shall comply with the requirements of the above document. Submitting a bid denotes acknowledgement by the Bidder that he has read and understands the content of this document.

**END OF SECTION**

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# **DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

## **SECTION 00 22 13**

### **SUPPLEMENTARY INSTRUCTIONS TO BIDDERS AIA DOCUMENT A701**

Supplementary Instructions contain changes and additions to AIA Document A701 2018 Edition. Where any part of the INSTRUCTIONS TO BIDDERS are modified or voided by the Supplementary Instructions, the unaltered provisions remain in effect.

#### **MODIFICATIONS**

#### **ARTICLE 2 - BIDDER'S REPRESENTATION**

**2.1** Add the following subparagraph to Paragraph 2.1:

2.1.7: This bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

#### **ARTICLE 3 - BIDDING DOCUMENTS**

#### **3.1 COPIES**

Delete Paragraphs 3.1.1 and 3.1.2 and substitute the following:

3.1.1: Bidders and Sub-bidders may purchase complete sets only of the Bidding Documents from the issuing office designated in the Invitation to Bid for a sum determined by the issuing office. The purchase sum is not refundable.

#### **3.3 SUBSTITUTIONS**

Delete Paragraphs 3.3.2.2 and 3.3.2.3 and substitute the following:

3.3.2.2: All requests for substitution prior to receipt of Bids shall be submitted on this attached "SUBSTITUTION REQUEST FORM, DOCUMENT 00 26 00".

#### **ARTICLE 4 - BIDDING PROCEDURES**

#### **4.1 PREPARATION OF BIDS**

Add the following sentence to Subparagraph 4.1.1:

Only one copy of the Bid is to be submitted.

#### **4.2 BID SECURITY**

Add the following subparagraph to Paragraph 4.2:

4.2.5: If a Bidder refuses to execute the Agreement and obtain the performance and payment bonds within the agreed time, the Owner may consider the Bidder in default, in which case the Bid Bond accompanying the Bid shall become the property of the Owner.

#### **4.4 MODIFICATION OR WITHDRAWAL OF BIDS**

Delete Subparagraph 4.4.1 and substitute the following:

4.4.1 No Bidder may withdraw, modify or cancel, a Bid within 60 calendar days after the actual date of the opening thereof. Should there be reasons why the Contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the Owner and the Bidder.

### **ARTICLE 5 - CONSIDERATION OF BIDS**

#### **5.3 ACCEPTANCE OF BID (AWARD)**

Delete Subparagraph 5.3.2 and substitute the following:

5.3.2 The Owner shall have the right to accept Alternates in the sequence or combinations listed and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates accepted.

**END OF SECTION**

**DIVISION 00 – BIDDING REQUIREMENTS, CONTRACT FORMS AND  
CONDITIONS OF THE CONTRACT**

**SECTION 00 26 00**

**SUBSTITUTION REQUEST FORM**

No substitution will be considered prior to receipt of Bids unless written request is made on this SUBSTITUTION REQUEST FORM at least ten days prior to the date for receipt of Bids. Requests for substitution after Contract award shall be done so at proposer's risk that item may be disapproved. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

**SUBSTITUTION REQUEST**

TO: \_\_\_\_\_

PROJECT: \_\_\_\_\_

SPECIFIED ITEM:

Section	Page	Paragraph	Description
---------	------	-----------	-------------

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION \_\_\_\_\_

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data includes a description of Changes to the Contract Documents which the proposed substitution will require for its proper installation.

The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:

1. The proposed substitution does not affect the dimensions shown on the drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing, and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.

The undersigned further states that the function, appearance and quality of the proposed substitution are equivalent or superior to the specified item.

Signature \_\_\_\_\_

**For use by the design consultant**

Firm \_\_\_\_\_

Accepted \_\_\_\_\_

Address \_\_\_\_\_

Accepted as noted \_\_\_\_\_

\_\_\_\_\_

Not accepted \_\_\_\_\_

Date \_\_\_\_\_

Received too late \_\_\_\_\_

Telephone \_\_\_\_\_

Remarks \_\_\_\_\_

Attachments \_\_\_\_\_

\_\_\_\_\_

**END OF SECTION**

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**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

**SECTION 00 41 23**

**BID FORM**

TO:

WORCESTER COUNTY PUBLIC WORKS  
6113 TIMMONS ROAD  
  
SNOW HILL, MARYLAND

RENOVATION TO:  
WORCESTER COUNTY ROADS  
BUILDING

I have received the construction documents titled Renovation to Worcester County Roads Building. I have also received Addenda Nos. \_\_\_\_\_, and have included their provisions in this Proposal. I have examined both the documents and the site and submit the following bid.

In submitting this bid, I agree:

1. To hold my bid open until 60 days after bids are opened.
2. To enter into and execute a Contract, if awarded on the basis of this bid, and to furnish Performance and Labor and Material Payment Bonds in accord with the Supplementary Instructions to AIA Document A701.
3. To accomplish the work in accord with the Contract Documents.
4. To complete the work to Substantial Completion as certified in writing by the Architect within \_\_\_\_\_ following receipt of written notice to proceed.
5. Bidder agrees to pay **\$1,000 per calendar day in Liquidated Damages** for not completing the work within the specified times.

**SCHEDULE A - LUMP SUM BID PRICE**

\_\_\_\_\_ will construct this project for the lump sum price of:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

Included within the lump sum price is \$ \_\_\_\_\_ for the full payment & performance bond premium.

I include a copy of my current Maryland Contractor's license or proof of application with my bid.

I include the required Bid Security with my bid.

**SCHEDULE B – BID ALTERNATES**

I include the following BID COST ALTERNATES. Worcester County reserves the right to incorporate alternates, in part or in total, it deems to be in its own best interests.

**DEDUCT ALTERNATE NO. 1:** Existing doors 208A to remain.

DEDUCT \$ \_\_\_\_\_

**DEDUCT ALTERNATE NO. 2:** Contractor to remove all HVAC work from contract. Contractor to coordinate with Worcester County who will provide HVAC work.

DEDUCT \$ \_\_\_\_\_

**DEDUCT ALTERNATE NO. 3:** Contractor to remove all electrical work from the contract. Contractor to coordinate with Worcester County who will provide electric work.

DEDUCT \$ \_\_\_\_\_

**DEDUCT ALTERNATE NO. 4:** Contractor to remove all low voltage work (access control, cameras, security and fire alarm) from the contract. Contractor to coordinate with Worcester County who will provide low voltage work.

DEDUCT \$ \_\_\_\_\_

**SCHEDULE C - ALLOWANCES**

I include the following ALLOWNACES in my Lump Sum Price.

1. Allow Six Hundred Dollars (\$600.00) to provide and install a new kitchen faucet and sprayer in the existing kitchen sink that is to be reused.
2. Allow Sixty Thousand Dollars (\$60,000.00) for running data/cable lines to the building.
3. Allow Thirty-six Thousand, Seven Hundred and Fifty Dollars (\$36,750.00) for Absolute Security to install the security alarm system, fire alarm system, keyscan access control and the IP camera system.

**SUBCONTRACTORS**

The undersigned BIDDER proposes to use the following named SUBCONTRACTORS:

MASONRY \_\_\_\_\_

CARPENTRY \_\_\_\_\_

ROOFING \_\_\_\_\_

EIFS \_\_\_\_\_

DRYWALL \_\_\_\_\_

FLOORING \_\_\_\_\_

PAINT \_\_\_\_\_

DOOR/HARDWARE \_\_\_\_\_

WINDOWS \_\_\_\_\_

HVAC \_\_\_\_\_

ELECTRICAL \_\_\_\_\_

PLUMBING \_\_\_\_\_

The following Corporation is chartered in the State of Maryland.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Signature

CORPORATE SEAL

\_\_\_\_\_  
Title

\_\_\_\_\_  
Firm Name

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Business Address

\_\_\_\_\_  
Maryland Contractor's License #

**END OF SECTION**

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**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

**SECTION 00 43 13**

**AIA DOCUMENT A310 - 2010  
BID SECURITY FORMS**

Bidders are required to submit an executed AIA DOCUMENT A310 – BID BOND as an attachment to their bid.

**END OF DOCUMENT**

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**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

**SECTION 00 52 53**

**AIA DOCUMENT A101-2017  
AGREEMENT FORM BETWEEN OWNER-DESIGN AND CONTRACTOR  
– STIPULATED SUM**

The successful bidder shall be required to execute the above named agreement. Submitting a bid denotes acknowledgement by the Bidder that he has read and understands the content of this document.

**END OF DOCUMENT**

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**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

**SECTION 00 61 13**

**AIA DOCUMENT A312 - 2010  
PERFORMANCE BOND AND PAYMENT BOND**

The successful bidder shall be required to execute the above named bonds as a requirement of the contract.

**END OF DOCUMENT**

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**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

**SECTION 00 65 19.13**

**AIA DOCUMENT G706 - 1994  
CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS**

At completion, and as a condition of final acceptance and payment, the contractor shall be required to submit documentation according to the requirements of the above document.

**END OF DOCUMENT**



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**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

**SECTION 00 65 19.16**

**AIA DOCUMENT G706A - 1994  
CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS**

At completion, and as a condition of final acceptance and payment, the contractor shall be required to submit documentation according to the requirements of the above document.

**END OF DOCUMENT**

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**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

**SECTION 00 72 00**

**AIA DOCUMENT A201-2017  
GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION**

The successful bidder shall be required to execute his contract according to the requirements of the above named document. Submitting a bid denotes acknowledgement by the Bidder that he has read and understands the content of this document.

**END OF SECTION**

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**DIVISION 00 – BIDDING REQUIREMENTS,  
CONTRACT FORMS AND CONDITIONS OF THE CONTRACT**

**SECTION 00 90 00**

**MODIFICATIONS TO THE GENERAL CONDITIONS**

These modifications contain changes and conditions to the General Conditions of the Contract for Construction AIA Document A201, 2017 Edition. Where any part of the General Conditions are modified or deleted by these modifications, the unaltered provisions remain in effect.

**MODIFICATIONS**

**ARTICLE 1 – GENERAL PROVISIONS**

Add 1.2.1.2: The Contractor shall be responsible for coordinating his own work with all the contract drawings and other trades affecting his work. A claim of limitation of responsibility by the contractor due to the failure to do such coordination is not acceptable.

**ARTICLE 3 - CONTRACTOR**

Add 3.13.2: The Contractor shall confine his work to the 'Limit of Construction'. He shall not obstruct public roads by delivery or other vehicles and shall work out material storage areas, vehicular access and work crew parking.

Paragraph 3.18.1, line 5, delete the phrase "other than the Work itself".

**ARTICLE 5 - SUBCONTRACTORS**

Add 5.2.5: Approval of Subcontractors. The Bid Form requires that the Contractor shall state the name of certain major subcontractors whom he proposes to employ. The Contractor shall be required to enter a subcontract with the subcontractors named in his proposal for these major divisions of the work, except those against whom the Architect or Owner shall have reasonable objection before the execution of the Contract. Subcontractors shall furnish suitable evidence of qualifications, experience, references and financial background, when requested by the Owner, to assist the Owner in its evaluation if such question should arise.

## **ARTICLE 7 – CHANGE ORDERS**

Add 7.2.3: Costs Excluded - The term Cost of the Work shall not include any of the following items:

- .1 Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- .2 Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- .3 Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- .4 Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- .5 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in the work.

## **ARTICLE 9 - PAYMENTS AND COMPLETION**

Add 9.3.1.3: Progress Payments will be 90% monthly and will cover the period up to the first day of each month and are to include payment for stored materials and equipment. Stored materials shall be only stored on site or in a bonded warehouse assigned to the Owner.

Add 9.3.1.4: In applying for payments, excluding the first payment and the final payment, the Contractor shall submit a written certificate in the exact wording that he has paid:

- .1 Labor to date.
- .2 Vendors and material suppliers in full to include items included in his previous statement and for which he received payment from the Owner.
- .3 Subcontractors in full, less the related 10%, to the amount included in his previous statement and for which he received payment from the Owner.

Contractor shall submit partial lien releases for work performed or materials provided by his subcontractors when work is complete and when requested by the Architect.

Add 9.3.1.5: Upon Substantial Completion of the entire work, the sum of the total payments will be required to equal 95% of the Contract Sum, less amounts for incomplete work and unsettled claims.

## **ARTICLE 11 - INSURANCE**

.1 Reference Exhibit A attached.

**END OF SECTION**



## EXHIBIT A

### Worcester County Maryland Standard Terms

The provisions below are applicable to all Worcester County (“County”) contracts. These provisions are not a complete agreement. These provisions must be attached to an executed document that identifies the work to be performed, compensation, term, incorporated attachments, and any special conditions (“Contract”). If the Standard Terms and any other part of the Contract conflict, then the Standard Terms will prevail.

1. **Amendment.** Amendments to the Contract must be in writing and signed by the parties.
2. **Bankruptcy.** If a bankruptcy proceeding by or against the Contractor is filed, then:
  - a. The Contractor must notify the County immediately; and
  - b. The County may cancel the Contract or affirm the Contract and hold the Contractor responsible for damages.
3. **Compliance with Law.** Contractor must comply with all applicable federal, state, and local law. Contractor is qualified to do business in the State of Maryland. Contractor must obtain, at its expense, all licenses, permits, insurance, and governmental approvals needed to perform its obligations under the Contract.
4. **Contingent Fee Prohibition.** The Contractor has not directed anyone, other than its employee or agent, to solicit the Contract and it has not promised to pay anyone a commission, percentage, brokerage fee, contingent fee, or other consideration contingent on the making of the Contract.
5. **Counterparts and Signature.** The Contract may be executed in several counterparts, each of which may be an original and all of which will be the same instrument. The Contract may be signed in writing or by electronic signature, including by email. An electronic signature, a facsimile copy, or computer image of the Contract will have the same effect as an original signed copy.
6. **Exclusive Jurisdiction.** All legal proceedings related to this Contract must be exclusively filed, tried, and maintained in either the District Court of Maryland for Worcester County, Maryland or the Circuit Court of Worcester County, Maryland. The parties expressly waive any right to remove the matter to any other state or federal venue and waive any right to a jury trial.
7. **Force Majeure.** The parties are not responsible for delay or default caused by fire, riot, acts of God, County-declaration-of-emergency, or war beyond their reasonable control. The parties must make all reasonable efforts to eliminate a cause of delay or default and must, upon cessation, diligently pursue their obligations under the Contract.
8. **Governing Law.** The Contract is governed by the laws of Maryland and the County.
9. **Indemnification.** The Contractor must indemnify the County and its agents from all liability, penalties, costs, damages, or claims (including attorney’s fees) resulting from personal injury, death, or damage to property that arises from or is connected to the performance of the work or failure to perform its obligations under the Contract. All indemnification provisions will survive the expiration or termination of the Contract.

#### 10. **Independent Contractor.**

- a. Contractor is an “Independent Contractor”, not an employee. Although the County may determine the delivery schedule for the work and evaluate the quality of the work, the County will not control the means or manner of the Contractor’s performance.
- b. Contractor is responsible for all applicable taxes on any compensation paid under the Contract. Contractor is not eligible for any federal Social Security, unemployment insurance, or workers’ compensation benefits under the Contract.
- c. Contractor must immediately provide the County notice of any claim made against Contractor by any third party.

#### 11. **Insurance Requirements.**

- a. Contractor must have Commercial General Liability Insurance in the amounts listed below. The insurance must include coverage for personal injury, discrimination, and civil rights violation claims. All insurance must name County, its employees, and agents as “ADDITIONAL INSURED”. A copy of the certificate of insurance must be filed with the County before the Contract is executed, providing coverage in the amount of \$1,000,000 per occurrence, \$2,000,000 general aggregate, and \$500,000 for property damage.
- b. Contractor must have automobile insurance on all vehicles used in the Contract to protect Contractor against claims for damages resulting from bodily injury, including wrongful death, and property damage that may arise from the operations in connection with the Contract. All insurance must name County, its employees, and agents as “ADDITIONAL INSURED”.
- c. Contractor must provide the County with a certification of Workers’ Compensation Insurance, with employer’s liability in the minimum amount required by Maryland law in effect for each year of the Contract.
- d. All insurance policies must have a minimum 30 days’ notice of cancellation. The County must be notified immediately upon cancellation.
- e. When insurance coverage is renewed, Contractor must provide new certificates of insurance prior to expiration of current policies.

12. **Nondiscrimination.** Contractor must not discriminate against any worker, employee, or applicant because of religion, race, sex, age, sexual orientation, physical or mental disability, or perceived disability. This provision must be incorporated in all subcontracts related to the Contract.

#### 13. **Ownership of Documents; Intellectual Property.**

- a. All documents prepared under the Contract must be available to the County upon request and will become the exclusive property of the County upon termination or completion of the services. The County may use the documents without restriction or without additional compensation to the Contractor. The County will be the owner of the documents for the purposes of copyright, patent, or trademark registration.

- b. If the Contractor obtains, uses, or subcontracts for any intellectual property, then it must provide an assignment to the County of ownership or use of the property.
- c. The Contractor must indemnify the County from all claims of infringement related to the use of any patented design, device, materials, or process, or any trademark or copyright, and must indemnify the County, its officers, agents, and employees with respect to any claim, action, costs, or infringement, for royalties or user fees, arising out of purchase or use of materials, construction, supplies, equipment, or services covered by the Contract.

14. **Payments.** Payments to the Contractor under the Contract will be within 30 days of the County's receipt of a proper invoice from the Contractor. If an invoice remains unpaid 45 days after the invoice was received, interest will accrue at 6% per year.

15. **Records.** Contractor must maintain fiscal records relating to the Contract in accordance with generally accepted accounting principles. All other relevant records must be retained by Contractor and kept accessible for at least three years after final payment, termination of the Contract, or until the conclusion of any audit, controversy, or litigation related to the Contract. All subcontracts must comply with these provisions. County may access all records of the Contractor related to the Contract.

16. **Remedies.**

- a. **Corrections of errors and omissions.** Contractor must perform work necessary to correct errors and omissions in the services required under the Contract, without undue delays and cost to the County. The County's acceptance will not relieve the Contractor of the responsibility of subsequent corrections of errors.
- b. **Set-off.** The County may deduct from any amounts payable to the Contractor any back-charges, penalties, or damages sustained by the County, its agents, or employees caused by Contractor's breach. Contractor will not be relieved of liability for any costs caused by a failure to satisfactorily perform the services.
- c. **Cumulative.** These remedies are cumulative and without waiver of any others.

17. **Responsibility of Contractor.**

- a. The Contractor must perform the services with the standard of care, skill, and diligence normally provided by a Contractor in the performance of services similar the services.
- b. Notwithstanding any review, approval, acceptance, or payment for the services by the County, the Contractor will be responsible for the accuracy of any work, design, drawings, specifications, and materials furnished by the Contractor under the Contract.
- c. If the Contractor fails to conform with subparagraph (a) above, then it must, if required by the County, perform at its own expense any service necessary for the correction of any deficiencies or damages resulting from the Contractor's failure. This obligation is in addition to any other remedy available to the County.

18. **Severability/Waiver.** If a court finds any term of the Contract to be invalid, the validity of the remaining terms will not be affected. The failure of either party to enforce any term of the Contract is not a waiver by that party.
19. **Subcontracting or Assignment.** The Contractor may not subcontract or assign any part of the Contract without the prior written consent of the County. The County may withhold consent for any reason the County deems appropriate.
20. **Termination.** If the Contractor violates any provision of the Contract, the County may terminate the Contract by written notice. All finished or unfinished work provided by the Contractor will, at the County's option, become the County's property. The County will pay the Contractor fair compensation for satisfactory performance that occurred before termination less the amount of damages caused by the Contractor's breach. If the damages are more than the compensation payable to the Contractor, the Contractor will remain liable after termination and the County can affirmatively collect damages.
21. **Termination of Contract for Convenience.** Upon written notice, the County may terminate the Contract when the County determines termination is in the County's best interest. Termination for convenience is effective on the date specified in the County's written notice. The County will pay for reasonable costs allocable to the Contract for costs incurred by the Contractor up to the date of termination. But the Contractor will not be reimbursed for any anticipatory profits that have not been earned before termination.
22. **Termination of Multi-year Contract.** If funds are not available for any fiscal period of the Contract after the first fiscal period, then the Contract will be terminated automatically as of the beginning of unfunded fiscal period. Termination will discharge the Contractor and the County from future performance of the Contract, but not from their rights and obligations existing at the time of termination.
23. **Third Party Beneficiaries.** The County and Contractor are the only parties to the Contract and are the only parties entitled to enforce its terms. Nothing in the Contract gives any benefit or right to third persons unless individually identified by name and expressly described as intended beneficiaries of the Contract.
24. **Use of County Facilities.** Contractor may only County facilities that are needed to perform the Contract. County has no responsibility for the loss or damage to Contractor's personal property which may be stored on County property.
25. **Whole Contract.** The Contract, the Standard Terms, and attachments are the complete agreement between the parties and supersede all earlier agreements, proposals, or other communications between the parties relating to the subject matter of the Contract.

# **DIVISION 01 – GENERAL REQUIREMENTS**

## **SECTION 01 11 00**

### **SUMMARY OF WORK**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Award of the following work to one (1) General Contractor for single source responsibility. This firm shall engage other specialist firms to perform any part of the work which they are not equipped or qualified to perform properly with their own personnel.

1. Do not engage any firm unacceptable to manufacturers of products to be used.
2. General Contractor is responsible for coordination of materials/data submission, production/delivery, installation, warranties and guarantees, and administration of subcontracts
3. Do not engage any firm unacceptable to Architect or Owner.

B. Furnish labor and materials to construct the project as specified in the construction documents.

C. The Owner reserves the right, without penalty, not to award a Contract.

##### **1.02 CONTRACT**

A. The specified work is to be accomplished under a single Base Bid.

##### **1.03 EXCLUSIVE VENDOR CONTRACTS**

A. The owner has elected to engage the services of a select list of specialist vendor/subcontractors for this project.

B. The General Contractor shall enter into subcontracts with the named specialist vendor/subcontractor firms as part of the general construction contract.

1. Bids by firms other than those listed herein will not be accepted

C. List of approved Exclusive Specialist Vendor/Subcontractors:

1. Fire and Carbon Monitoring System:
  - a. Absolute Security Group, Inc., 300 Mill Street Suite A, Salisbury, Maryland 21801, 410-860-0620, [www.absolutesecuritygroup.com](http://www.absolutesecuritygroup.com).

#### **1.04 WORK SCHEDULE**

- A. A construction schedule based upon the base bid shall be submitted for approval by the Owner along with the Contractor's bid prior to start of construction.
- B. Contractor shall update his construction schedule on a monthly basis or as otherwise requested by the owner.

#### **1.05 USE OF PREMISES**

- A. Use of premises by Contractor to be limited to the specified work areas and Owner approved storage area.

#### **1.06 OWNER OCCUPANCY**

- A. The Contractor shall work toward substantial completion of all work concurrently.

#### **1.07 CODES**

- A. All work shall be performed in accordance with the applicable codes and rules and regulations of the regulatory agencies which have jurisdiction over this project and its location.

#### **1.08 PROGRESS MEETINGS**

- A. In addition to a pre-construction meeting, progress meetings will be held during the course of the project at dates and times to be announced.

#### **1.09 PERMITS AND LICENSES**

- A. All required permits shall be paid for and obtained by the Contractor.
- B. All Contractors must be licensed by the State of Maryland.

### **PART 2 – PRODUCTS**

Not used.

**PART 3 – EXECUTION**

Not used.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 21 00**

### **ALLOWANCES**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. This section includes administrative and procedural requirements governing allowances.

B. Certain materials and equipment are specified in the contract documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.

C. Allowance amounts are for materials only. Installation shall be covered in Base Bid unless noted otherwise.

##### **1.02 SELECTION AND PURCHASE**

A. At the earliest practical date after award of the Contract, advise Owner of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the work.

B. At Owner's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products selected by Owner from the designated supplier.

##### **1.03 SUBMITTALS**

A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.



## **1.04 UNUSED MATERIALS**

- A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner after installation has been completed and accepted.
- B. If requested by Architect, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Architect, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

## **PART 2 - PRODUCTS**

Not used.

## **PART 3 – EXECUTION**

### **3.01 EXAMINATION**

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

### **3.02 PREPARATION**

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

### **3.03 SCHEDULE OF ALLOWANCES**

#### **A. ALLOWANCE NO. 1:**

1. Allow Two Six Hundred Dollars (\$600.00) for providing a new kitchen faucet and sprayer in the existing kitchen sink that is being reused.

#### **B. ALLOWANCE NO. 2:**

1. Allow Sixty Thousand Dollars (\$60,000.00) for running data/cable lines to the building.

**C ALLOWANCE NO 3:**

1. Allow Thirty-six Thousand, Seven Hundred and Fifty Dollars (\$36,750.00) for Absolute Security including fire and carbon monitoring system.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 23 00**

### **ALTERNATES**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Changes to be incorporated into the work, only when that Alternate is made a part of the work by specific provisions in the Owner-Contractor Agreement. The Owner reserves the right to incorporate alternates, or parts of alternates, deemed to be in the Owner's best interest.

B. Referenced Sections of specifications stipulate pertinent requirements for products and methods to achieve the work stipulated under each Alternate.

C. Coordinate pertinent related work and modify surrounding work as required to properly integrate the work under each Alternate, and to provide the complete construction required by Contract Documents.

D. The alternates are described in Section 00 41 23, Bid Form.

#### **PART 2 - PRODUCTS**

Not used.

#### **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

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# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 29 00**

### **PAYMENT PROCEDURES**

#### **1.01 SECTION INCLUDES**

A. Payment for the work completed under this Contract will be made at the lump sum, contingent/unit, and allowance prices bid, which prices shall include the furnishing of all labor, tools, equipment and materials and the performance of all work required to complete the project as indicated and specified in accordance with all requirements of the Contract Documents.

B. All incidental minor and miscellaneous items, work and materials for which no specific lump sum or unit price bid item is shown and which are necessary to complete the work and to maintain and/or repair the work, shall be done and furnished by the Contractor without extra charge.

#### **1.02 PAYMENT**

A. After the award of the Contract, the Contractor will develop an itemized breakdown of the bid amount according to specific work activities. The Contractor will be required to submit an itemized breakdown of his bid for approval within 14 days after the Pre-construction Conference. At the end of each pay period, the Contractor shall submit to the Owner or his authorized representative for approval an invoice showing percent complete for each item on the breakdown.

B. With each Application for Payment, the Contractor shall submit a Form of Waiver and Release of Mechanic's Liens relating to the work for which they are to be paid with the proceeds of such Application of Payment.

C. The Contractor shall promptly pay each Subcontractor (including suppliers, laborers and material men) performing labor or furnishing material for the work upon receipt of payment from the Owner out of the amount paid to the Contractor on account of the work for each subcontractor, supplier, laborer, or material men, the amount to which said subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such work.

D. The Owner may, on request and at his discretion, furnish to any subcontractor, if practicable, information regarding the percentages of completion or the amounts applied for by the Contractor and the action taken thereon by the Owner on account of work done by such contractor.

E. The Owner shall not have any obligation to pay or to see to the payment of any monies to any subcontractor except as may otherwise be required by law.

F. No progress payment or any partial or entire use of occupancy of the Project by the Owner shall constitute an acceptance of any work which is not in accordance with the Contract Documents.

### **1.03 PAYMENTS WITHHELD**

A. The Owner may decline to pay all or any part thereof or, because of subsequent observations, it may nullify the whole or any part of any payment previously issued, to such extent as may be necessary in its opinion to protect the Owner from loss because of:

1. Defective work not remedied.
2. Third party claims filed or reasonable evidence indicating probable filing of such claims.
3. Failure of the Contractor to make payments properly to subcontractors or for labor, material or equipment.
4. Reasonable evidence that the work cannot be completed for unpaid balance of the Contract Sum.
5. Damage to the Owner or another Contractor.
6. Reasonable evidence that the work will not be or has not been completed within the Contract time.
7. Failure to carry out the work in accordance with the Contract Documents.
8. Cancellation, material change or lapse of required insurance as specified in the Contract Documents.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 31 19**

### **PROJECT MEETINGS**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Owner's Representative, known hereafter as the Project Manager (PM), will schedule and administer pre-construction meeting, call progress meetings throughout progress of the work, and will:

1. Prepare agenda for meetings.
2. Set meeting date.
3. Make arrangements for meeting room.
4. Preside at meetings.
5. Record minutes; include significant proceedings and decisions.
6. Reproduce and distribute copies of minutes within five days after each meeting.
  - a. To participants in meeting.
  - b. To parties affected by decisions made at meeting.

B. Representatives of contractors and subcontractors attending meeting shall be qualified and authorized to act on behalf of entity each represents.

##### **1.02 PRE-CONSTRUCTION MEETING**

A. Schedule within 15 days after date of Notice to Proceed.

B. Location: As announced.

C. Attendance:

1. Owner's Representative (Project Manager).
2. Architect and his professional consultants.
3. Contractor's Superintendent.
4. Major Subcontractors.
5. Others as appropriate.

D. Suggested Agenda:

1. Discussion of:
  - a. Contract.
  - b. Certificates of Insurance.
  - c. Bonds.
  - d. List of major subcontractors and suppliers.
  - e. Projected Construction Schedule.
2. Critical work sequencing.
3. Project Coordination.
  - a. Designation of responsible personnel.
  - b. Architect's representative.
  - c. Owner's representative.
  - d. Contractor's superintendent.
4. Procedures and processing of:
  - a. Field decisions.
  - b. Proposal requests.
  - c. Substitutions.
  - d. Installation procedures.
  - e. Closeout procedures.
  - f. Submittals.
    - (1) Shop drawings – To be submitted as PDF electronic files.
    - (2) Samples.
  - g. Change Orders.
  - h. Monthly Applications for Payment.
    - (1) How many copies?
    - (2) Who approves same?
    - (3) Schedule of values.
    - (4) Stored material payments. (Off-site) (Insurance)
5. Adequacy of distribution of Contract Documents.
6. Procedures for maintaining Record Documents.
7. Use of premises.
  - a. Office, work and storage areas.
  - b. Owner's requirements.
8. Construction facilities, controls and construction aids.
9. Temporary utilities.
10. Safety and first-aid procedures.
11. Security procedures.
12. Housekeeping procedures.
13. Contractor's after-hours telephone number (3 key people).
14. Temporary usage of permanent elevator.
15. Other business.

### **1.03 PROGRESS MEETINGS**

- A. Schedule as called.



- B. Location of meetings: As Announced.
- C. Attendance:
  - 1. Same personnel as at pre-construction meeting.
  - 2. Others as appropriate.
- D. Suggested Agenda:
  - 1. Review, approval of minutes of previous meeting.
  - 2. Review of work progress since previous meeting.
  - 3. Field observations, problems, and conflicts.
  - 4. Problems which impede Construction Schedules.
  - 5. Corrective measures and procedures to regain projected schedule.
  - 6. Revisions to Construction Schedule.
  - 7. Plan progress, schedule, during succeeding work period.
  - 8. Coordination of schedules.
  - 9. Review submittal schedules; expedite as required.
  - 10. Maintenance of quality standards.
  - 11. Review proposed changes for effect on Construction Schedule on completion date.
  - 12. Other business.

#### **1.04 FINAL INSPECTION**

- A. Schedule as called.
- B. Attendance:
  - 1. Same personnel as at pre-construction meeting.
  - 2. Others as appropriate.
- C. Suggested agenda for walk-through:
  - 1. The final inspection and acceptance of the work will focus largely on the appearance of the finished work.

#### **PART 2 – PRODUCTS**

Not used.

#### **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

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# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 32 00**

### **CONSTRUCTION DOCUMENTATION**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Construction schedule updating reports.
  2. Daily construction reports.
  3. Site condition reports.
  4. Unusual event reports.

##### **1.02 INFORMATIONAL SUBMITTALS**

- A. Format for Submittals: Submit required submittals in PDF electronic files.  
B. Construction Schedule Updating Reports: Submit with Applications for Payment.  
C. Daily Construction Reports: Submit at weekly intervals.  
D. Site Condition Reports: Submit at time of discovery of differing conditions.  
E. Unusual Event Reports: Submit at time of unusual event.

#### **PART 2 - PRODUCTS**

##### **2.01 DAILY CONSTRUCTION REPORTS**

- A. Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
  2. List of separate contractors at Project site.
  3. Approximate count of personnel at Project site per contractor and subcontractor.
  4. Equipment at Project site.
  5. Material deliveries.
  6. High and low temperatures and general weather conditions, including presence of rain or snow.
  7. Accidents.
  8. Meetings and significant decisions.

9. Unusual events.
10. Stoppages, delays, shortages, and losses.
11. Meter readings and similar recordings.
12. Emergency procedures.
13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Construction Change Directives received and implemented.
16. Services connected and disconnected.
17. Equipment or system tests and startups.
18. Partial completions and occupancies.
19. Substantial Completions authorized.

## **2.02 SITE CONDITION REPORTS**

A. Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents

## **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

# DIVISION 1 – GENERAL REQUIREMENTS

## SECTION 01 33 00

### SUBMITTAL PROCEDURES

#### PART 1 - GENERAL

##### 1.01 SECTION INCLUDES

A. Shop drawings are generally defined as all fabrication and erection drawings, diagrams, brochures, schedules, bills or material and other data prepared by the Contractor, his subcontractors, suppliers or manufacturers which illustrate the manufacturer, fabrication, construction and installation of the work, or a portion thereof.

B. All costs necessary for compliance with the requirements of this Section of the Specifications shall be included under the lump sum price bid.

C. Detailed shop drawings, data, literature for fabricated materials or equipment to be incorporated in the work shall be submitted to the Architect for review for general compliance with the Contract Documents before fabrication. The Contractor shall obtain and check manufacturer's shop drawings, certified prints and other pertinent data for conformance with all requirements of the Plans and Specification and in ample time to permit satisfactory progress of the work. After the completion of such checking and verification by the Contractor, the Contractor shall sign or stamp such drawing, which stamp shall state as follows:

Checked by \_\_\_\_\_  
(Contractor's Name)

Signed by \_\_\_\_\_  
(Checker's Name)

D. All data, drawings and correspondence from subcontractors, manufacturers or suppliers shall be routed through the Contractor. The Architect shall review only such data and details as are transmitted to him by the Contractor. All correspondence from the Contractor to the Architect shall refer to the appropriate section of these specifications containing the subject matter of the inquiry.

E. All shop drawings shall be in conformity with all requirements of the plans and specifications. All shop drawings, except diagrams, brochures, schedules and illustrations, shall be to an appropriate scale, no smaller than 1/8 inch = 1 foot 0 inches,

and shall give all dimensions necessary for installation and incorporation in the work. All shop drawings shall be accurate and complete, showing outline and section views, details, materials, accessories, appurtenances and related items.

F. The Contractor shall submit to the Architect PDF electronic files of shop drawings and approval data. The Architect's notation of the action taken will be noted on the returned PDF electronic file. At the time of each submission, the Contractor shall call to the Architect's attention, in writing, any deviations that the shop drawings may have from the requirements of the Plans and Specifications. At conclusion of the project, the Contractor shall provide (1) print copy and (1) combined PDF electronic file of all electronic file submittals.

G. Within fourteen (14) days of the Pre-construction Conference, the Contractor shall submit a list of all shop drawings to be submitted. This list can then be used as a check to ensure that all items are submitted.

## **1.02 OPERATION AND MAINTENANCE MANUALS**

A. The Contractor shall furnish the Architect six (6) copies of a complete instruction manual for installation, operation, maintenance and lubrication of each component of all equipment. The operation and maintenance manual shall be submitted at least ninety (90) days prior to the anticipated completion of the project.

## **PART 2 – PRODUCTS**

Not used.

## **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 40 00**

### **QUALITY REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

###### **A. General:**

1. The Contractor shall give all necessary notices, obtain all permits (except those referenced above) and pay all governmental taxes, fees and other costs in connection with the work, file all necessary plans, prepare all documents and obtain all necessary approvals of all governmental departments having jurisdiction, obtain all required Certificates of Inspection and Approval for the work and deliver same to the Architect, except as otherwise noted herein.

B. Compliance: All materials furnished and all work installed shall comply with the requirements of all governmental departments having jurisdiction.

##### **1.02 STANDARDS**

A. Any reference to standards in the Contract Documents shall always refer to the latest issue in effect, including all revisions at the time bids are taken, of said standards unless otherwise stated.

##### **1.03 VERIFICATION OF DIMENSIONS**

A. The Contractor shall be responsible for field verification of all dimensions of existing facilities and other items which are shown on the Contract Drawings.

B. The Contractor shall be responsible for cross checking dimensions between different drawings as facilities are being laid out. Any discrepancies shall immediately be brought to the attention of the Architect.

#### **PART 2 – PRODUCTS**

Not used.

**PART 3 – EXECUTION**

Not used.

**END OF SECTION**



# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 41 00**

### **REGULATORY REQUIREMENTS**

#### **PART 1 – GENERAL**

##### **1.01 SECTION INCLUDES**

A. Contractor shall select, employ and pay for services of an Independent Testing Laboratory to perform specified inspection, sampling and testing where specified in the various sections of the specifications.

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

##### **1.02 LABORATORY DUTIES**

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

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

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

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

D. Promptly submit five (5) copies of written report of each test and inspection to Architect. Each report shall include:

1. Date issued.
2. Project title and number.
3. Testing laboratory name, address and telephone number.
4. Name and signature of laboratory inspector.
5. Date and time of sampling or inspection.

6. Record of temperature and weather conditions.
7. Date of test.
8. Identification of product and specification section.
9. Location of sample or test in the Project.
10. Type of inspection or test.
11. Results of tests and compliance with Contract Documents.
12. Interpretation of test results, when requested by Architect.

E. Perform additional tests as required by Owner or the Owner.

### **1.03 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY**

A. Laboratory is not authorized to:

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

### **1.04 CONTRACTOR RESPONSIBILITIES**

A. Cooperate with laboratory personnel and provide access to Work.

B. Furnish incidental labor and facilities:

1. To provide access to Work to be tested and to maintain traffic in order to provide laboratory personnel a safe work site.
2. To obtain and handle samples at Project site or at source of product to be tested.
3. To facilitate inspections and tests.
4. For storage and curing of test samples.

C. Inspection and testing exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor, at no additional cost to the Owner.

## **PART 2 – PRODUCTS**

Not used.

## **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

# DIVISION 1 – GENERAL REQUIREMENTS

## SECTION 01 42 00

### REFERENCES

#### PART 1 - GENERAL

##### 1.01 SECTION INCLUDES

- A. Where "as shown", "as indicated", "as detailed", or words of similar import are used, it is understood that reference to the drawings accompanying this specification is made unless stated otherwise.
- B. Where "as directed", "as required", "as selected", "permitted", "acceptance", or words of similar import are used, it is understood that direction, requirement, selection, permission or acceptance by the Architect and compliance with codes and regulations are intended unless stated otherwise.
- C. Where used "provide" is understood to mean "provide complete in place"; that is "furnished and installed".
- D. Where "items of material, equipment, work, etc." and "methods of installation, finish, and accomplishment, etc." are referred to in this specification it is understood to refer to all such "items, materials, equipment, work, finish, etc."
- E. Where "includes" is used, it is understood to mean "includes, but is not limited to".
- F. Where "Engineer" and "Architect" are used, they shall be understood to have the same meaning and to be the same reference.

##### 1.02 SPECIFICATION REFERENCE

- A. Materials or operations specified by reference to specification of a manufacturer or society or institute or other standard must comply with requirements of current specification or standard listed.
- B. In case of conflict between referenced specification or standard, the one having the more stringent requirement governs.

### **1.03 INSTITUTE, SOCIETY, ASSOCIATION AND STANDARDS ABBREVIATION**

AAMA	Architectural Aluminum Manufacturer's Association
ACI	American Concrete Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
AWS	American Welding Society
FM	Factory Mutual
FS	Federal Standard
NEC	National Electrical Code
NRCA	National Roofing Contractors Association
OSHA	Occupational Safety and Health Act
SIGMA	Sealed Insulating Glass Manufacturer's Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Steel Structures Painting Council
UL	Underwriter's Laboratories

Not all of the above names are necessarily referenced in the specifications.

### **PART 2 – PRODUCTS**

Not used.

### **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 51 00**

### **TEMPORARY UTILITIES**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Furnishing, installing and maintaining temporary utilities required for construction; remove on completion of work.

##### **1.02 REQUIREMENTS OF REGULATORY AGENCIES**

A. Comply with National Electric Code.

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

#### **PART 2 - PRODUCTS**

##### **2.01 GENERAL**

A. Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

##### **2.02 TEMPORARY ELECTRICITY AND LIGHTING**

A. Contractor to tie into existing service for temporary power and lighting at the owner's expense.

B. Provide adequate artificial lighting for areas of work when natural light is not adequate.

C. Provide and maintain necessary temporary night lighting devices to properly mark hazards and obstructions and to maintain security of property and materials.

## **2.03 TEMPORARY HEAT AND VENTILATION**

- A. Provide temporary heat and ventilation, if necessary, to maintain adequate environmental conditions to facilitate progress of work, to meet specified minimum conditions for installation of materials, and to protect materials and finishes from damage due to temperature or humidity.
- B. Use of portable heaters when required shall be standard approved units complete with controls. Fuel costs shall be paid by Contractor.

## **2.04 TEMPORARY WATER**

- A. Contractor to tie into existing service at no charge.

## **2.05 SANITARY FACILITIES**

- A. Provide temporary sanitary facilities in compliance with laws and regulations.
- B. Service, clean and maintain facilities and enclosures.

## **PART 3 - EXECUTION**

### **3.01 GENERAL**

- A. Maintain and operate systems to assure continuous service.
- B. Modify and extend systems as work progress requires.

### **3.02 REMOVAL**

- A. Completely remove temporary materials and equipment when their use is no longer required.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities.
- C. Restore existing facilities used for temporary services to specified, or to original, condition.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 52 13**

### **FIELD OFFICES AND SHEDS**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. At the contractor's discretion, furnish, install and maintain temporary field office and storage sheds during construction period.
- B. At completion of work, remove field offices, sheds and contents.

##### **1.02 REQUIREMENTS OF REGULATORY AGENCIES**

- A. Comply with requirements of Federal, State and local codes and regulations.

##### **1.03 OTHER REQUIREMENTS**

- A. Prior to installation of offices and sheds, consult with Owner on location, access and related facilities. Location must be approved by the Public Work Department prior to placement.

#### **PART 2 – PRODUCTS**

Not used.

#### **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

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## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 01 54 00**

#### **CONSTRUCTION AIDS**

##### **PART 1 - GENERAL**

###### **1.01 SECTION INCLUDES**

A. Furnishing, installing and maintaining construction aids; remove on completion of work.

###### **1.02 SAFETY REQUIREMENTS**

A. Except as modified by governing codes and by this Specification comply with applicable provisions and recommendations of following standards.

1. ANSI A10.2, Safety Code for Building Construction.
2. ANSI A10.8, Safety Requirements for Scaffolding.
3. ANSI A10.10, Safety Requirements for Temporary and Portable Space Heating Devices and Equipment Used in the Construction Industry.
4. ANSI A14.2, Safety Requirements for Portable Metal Ladders.

B. Comply with Federal, State and local codes and regulations.

C. Upon request, contractor shall furnish written certification that he has adhered to the referenced standards in the performance of his work on this project.

##### **PART 2 - PRODUCTS**

###### **2.01 CONSTRUCTION AIDS**

A. Provide and maintain in good condition required temporary ladders, ramps, chutes, scaffolding, and platforms as required.

B. Temporary Enclosures: Provide as required for protecting the work. Provide for both exterior and interior openings, for passageways, and any other location where temporary enclosures and protection may be required.

## **PART 3 - EXECUTION**

### **3.01 PREPARATION**

A. Review site conditions and factors which affect construction procedures and construction aids.

### **3.02 GENERAL**

A. Relocate construction aids as required by progress of construction, by storage or work requirements, and to accommodate legitimate requirements of Owner.

### **3.03 REMOVAL**

A. Completely remove temporary materials, equipment and services at completion of project.

B. Clean, repair damage caused by installation or by use of temporary facilities.

C. Restore existing facilities used for temporary purposes to specified, or to original, condition.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 56 00**

### **TEMPORARY BARRIERS AND ENCLOSURES**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Furnishing, installing and maintaining suitable barriers as required to prevent entry, and to protect the work and existing facilities from construction operations; remove when no longer needed, or at completion of work.

##### **1.02 REQUIREMENTS OF REGULATORY AGENCIES**

A. Comply with federal, state and local codes and regulations.

#### **PART 2 - PRODUCTS**

##### **2.01 MATERIALS**

A. Materials may be new or used, suitable for the intended purpose, and shall comply with the requirements of applicable codes and standards.

##### **2.02 BARRIERS**

A. Contractor's option, as appropriate to serve the required purpose.

#### **PART 3 - EXECUTION**

##### **3.01 GENERAL**

A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for the required purposes.

B. Maintain during entire construction period.

C. Relocate as required by progress of construction.

### **3.02 REMOVAL**

A. Completely remove barricades when construction has progressed to the point that they are no longer needed, and when approved by the Architect.

B. Clean and repair damage caused by installation.

**END OF SECTION**

# **DIVISION 1 - GENERAL REQUIREMENTS**

## **SECTION 01 70 00**

### **EXECUTION AND CLOSEOUT REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Substantial Completion: The project will be considered substantially complete when building and all equipment has been completed, installed and tested and the building is ready to be used for its intended use.

##### **1.02 CLEANUP**

A. Upon completion of the work and before Final Acceptance will be made, the work site, storage areas, and other areas occupied by the Contractor during construction shall be cleaned, and all surplus and discarded materials, false work and rubbish placed thereon by the Contractor shall be removed by the Contractor. The Contractor's storage area shall be top soiled, seeded and mulched. No separate payment will be made for the work as all such costs shall be included in the lump sum price bid.

##### **1.03 TOOLS, ACCESSORIES AND SPARE PARTS**

A. The Contractor shall, unless otherwise stated, furnish with each type, kind and size of equipment, one complete set of any special tools and appliances which may be needed to adjust, operate, maintain or repair the equipment.

B. Each piece of equipment shall be provided with a substantial name plate, which is securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture and principal rating data.

C. Where the Specifications require spare parts to be furnished by the Contractor, said spare parts for each item of equipment shall be kept separate and tagged to identify the specific item of equipment to which they belong, shall be packaged so as to preclude damage from handling and storage, and shall be bagged or packaged together where items are small in dimension.

#### **1.04 DELAYS AND EXTENSIONS OF TIME**

A. The Contractor shall not be entitled to payment or compensation of any kind from the Owner for direct, indirect or impact damages, including but not limited to costs of acceleration arising because of hindrance or delay from any cause whatsoever, whether such hindrances or delays be reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable; provided, however, that this provision shall not preclude recovery by the Contractor of damages for hindrances or delays due solely to fraud or bad faith on the part of the Owner or his agents.

B. In the event the Contractor requests an extension of the Contract Time, he shall furnish such justification and supporting evidence as the Owner may deem necessary for a determination of whether or not the Contractor is entitled to an extension of time under the provisions of the Contract. The Owner shall base his findings of fact and decision on such justification and supporting evidence and shall advise the Contractor in writing thereof. If the Owner finds that the Contractor is entitled to any extension of the Contract Time, the Owner's determination of the total number of days' extension shall be based upon the currently approved progress schedule and on all data relevant to the extension. Such data will be incorporated into the schedule in the form of a revision thereto, accomplished in a timely manner. The Contractor acknowledges and agrees that the actual delays in activities or time that are required to execute change order activities which, according to the schedule, do not affect the critical path and therefore do not have any effect upon Contract completion time, will not be a basis for an extension of time.

#### **1.05 WARRANTY AND GUARANTEE**

A. After the project is substantially complete and the Architect has issued the Certificate of Substantial Completion, all guarantees and warranties shall commence.

B. The Contractor warrants to the Owner the following for a period of one year:

1. That all materials and equipment provided under this Contract are new, unless otherwise specified.
2. That all work is of good quality and free from faults and defects and in accordance with the requirements of the Contract Documents.
3. That all equipment and systems and each and every part thereof, shall operate (with proper care and attention) in a satisfactory and efficient manner, and in accordance with the Contract Documents.
4. That the Contractor shall, upon receipt of written notice from the Owner, promptly replace with workmanship and materials which comply with these Specifications, and re-execute, correct or repair, without cost to the Owner, all work which may be found to be not in accordance with the Contract Documents.

5. That the guarantee obligations assumed by the Contractor under these Contract Documents shall not be held or taken to be in any way impaired because of the Specifications, indication or approval by or on behalf of the Owner of any articles, materials, means, combinations of things used or to be used in the construction, performance and completion of the work, or any part thereof.
6. That no use or acceptance by the Owner of the work or any part thereof, nor any failure to use the same, nor any repairs, adjustments or corrections made by the Owner due to the Contractor's failure to comply with any of his obligations under the Contract Documents, shall impair in any way the guarantee obligations of the Contractor under these Contract Documents.

C. If the Contractor fails to make repairs during the guarantee period, the Owner may cause such damaged or defective work to be repaired and made good at the cost and expense of the Contractor, including, but not limited to, compensation if required for additional professional Owners. The Contractor shall also bear the expenses of making good all work destroyed or damaged by the correction, removal or replacement of his defective work.

## **1.06 TESTING OF EQUIPMENT AND SYSTEMS**

### **A. Preliminary Testing**

1. When the Contractor has completed the installation of all equipment including electrical appurtenances, he shall perform preliminary testing on each piece of equipment.
2. Contractor shall provide for the inspection of each piece of equipment by authorized and qualified manufacturer's representatives. These manufacturer's representatives shall verify that all equipment has been installed properly.
3. Manufacturer's representatives shall verify that the individual equipment and/or components are functioning in accordance with the Contract Documents.
4. The manufacturer of each piece of equipment shall provide a manufacturer's certificate in accordance with Section 01 33 00 - SUBMITTALS.

### **B. Pre-Final Testing**

1. Pre-final testing shall include the actual running of equipment to ensure that all electric and controls are properly connected. This testing shall be done under the supervision of the manufacturer's representative.

## **1.07 FINAL ACCEPTANCE**

A. Upon completion of all work under this Contract, the Contractor shall request, in writing, final acceptance by the Owner.

B. Prior to this request, all specified operation and maintenance instructions and training shall have been provided for the plant personnel and all certificates, spare parts, test equipment, record drawings, and other items required to be delivered shall have been provided.

C. Upon receipt of the request, the Architect, the Owner, and the Contractor will make an inspection of the Project to determine the status of completion as follows:

1. If the Architect does not consider the Project to be complete, the Architect will notify the Contractor in writing of this fact, and will include the reasons why the Project is not considered complete.
2. Any items that are not satisfactorily completed or unsatisfactory as determined by the Architect, shall be promptly remedied or completed.
3. Upon satisfactory correction of defects or incomplete information or work, the Architect will certify to the Owner that the plant is finally complete.

## **PART 2 – PRODUCTS**

Not used.

## **PART 3 – EXECUTION**

Not used.

**END OF SECTION**



# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 73 29**

### **CUTTING AND PATCHING**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Provision for cutting, removing, replacing, patching, restoration, refinishing and similar type work as necessary to work scheduled to remain. Restore existing facilities damaged as a result of construction activities to a condition equivalent to that prior to the start of work, except where otherwise specified.

B. Extent of work includes removal and replacement of defective work and installation of new work to be installed in existing construction.

##### **1.02 SUBMITTALS**

A. Submit procedures proposed for accomplishment of cutting, patching and repairing when such work affects:

1. The structural value of or structural integrity of any element of the project.
2. Integrity of effectiveness of weather-exposed or moisture-resistant elements or systems.
3. Efficiency and operational life, maintenance or safety of operational elements.
4. Visual qualities of sight-exposed elements.

B. The submittals shall include:

1. Identification of project.
2. Description of affected work.
3. Necessity for cutting, patching or alteration.
4. Effect on structural or weatherproof integrity of project.
5. Alternatives to cutting, patching or repairing.

#### **PART 2 - PRODUCTS**

##### **2.01 MATERIALS**

A. Materials for replacement, repairing, patching, restoration and similar type work shall conform to applicable sections of the specifications. Waste materials resulting from cutting and removal work shall be removed from the job site.

## **PART 3 – EXECUTION**

### **3.01 INSPECTION AND PREPARATION**

A. Inspect existing conditions of work for possible movement or damage during cutting or uncovering procedures. After uncovering work, inspect conditions affecting installation of new products. Do not proceed with further cutting, patching or repair work if defects are observed or if any unsafe condition exists.

B. Prior to cutting or uncovering work provide shoring, bracing and supports as required to maintain structural integrity of project. Prior to restoration work properly prepare existing surfaces to receive new materials such as to provide a proper bond or joining.

### **3.02 CUTTING**

A. Cutting shall be performed by hand or power tools. Cut holes and slots neat and to the size required, with a minimum disturbance of adjacent work.

B. Saw cut patch perimeters ¼” deep minimum to prevent feathering of patch material.

### **3.03 PATCHING AND REPAIRS**

A. Existing work shall be cut, altered, removed, temporarily removed and replaced as required for performance of work specified. Work remaining in place that is damaged or defaced by reason of alteration or renovation shall be restored to a condition equivalent or better than that prior to start of work. Contractor shall be responsible for coordinating patching and repairing involving the various trades, whether or not specifically mentioned under the respective sections.

B. Restore surfaces affected by patching and repairing work to match existing adjacent surfaces. Repainting of affected areas or surfaces shall match color and shade of existing painted surfaces.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 74 00**

### **CLEANING AND WASTE MANAGEMENT**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Cleaning, during progress of the Work, and at completion of the Work, as required by General Conditions.

##### **1.02 DISPOSAL REQUIREMENTS**

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

#### **PART 2 - PRODUCTS**

##### **2.01 MATERIALS**

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

B. Use only those cleaning materials and methods recommended by manufacturer on the surface material to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

#### **PART 3 - EXECUTION**

##### **3.01 DURING CONSTRUCTION**

A. Execute daily cleaning to keep Work, site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from renovation operations.

B. Provide on-site containers for collection of waste materials, debris and rubbish.

C. Remove waste materials, debris and rubbish from site periodically and dispose of at legal disposal areas away from site.

### **3.02 FINAL CLEANING**

A. Employ skilled workmen for final cleaning.

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

C. Wash and shine glazing.

D. Polish glossy surfaces to a clear shine.

E. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.

F. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify that the entire work is clean.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 78 39**

### **PROJECT RECORD DOCUMENTS**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Maintain at site one record copy of:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change orders and other modifications to contract.
  - 5. Architect field orders or written instructions.
  - 6. Approved shop drawings, product data and samples.
  - 7. Field test reports.

##### **1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES**

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
  - 1. Provide files and racks for storage of documents.
  - 2. Provide secure storage space for storage of samples.
- B. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.

##### **1.03 MARKING DEVICES**

- A. Provide felt tip marking pens for recording information.

##### **1.04 RECORDING**

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Record information concurrently with construction progress.
- C. Drawings: Legibly mark to record actual construction.

D. Specifications and Addenda: Legibly mark each section to record

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by Field Order or by Change Order.

#### **1.05 SUBMITTAL**

A. Submit electronic copies of the as-built Record Documents to the Architect at the end of the project.

B. At contract close out, deliver paper and electronic copies of the Record Documents to Architect or Owner as directed. Final payment will not be due and payable until acceptable Record Documents are submitted to the Architect.

C. Accompany submittal with transmittal letter in duplicate, containing:

1. Date.
2. Project title and number.
3. Contractor's name and address.
4. Title and number of each Record Document.
5. Signature of Contractor or his authorized representative.

#### **PART 2 – PRODUCTS**

Not used.

#### **PART 3 – EXECUTION**

Not used.

**END OF SECTION**

# **DIVISION 1 – GENERAL REQUIREMENTS**

## **SECTION 01 80 00**

### **PERFORMANCE REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

A. Owner's expectations for the performance, quality, workmanship, management and cooperation of the General Contractor and his Sub-Contractors in the execution of the Construction Contract of this project.

##### **1.02 OWNER'S PROJECT REQUIREMENTS**

A. The completed facility shall provide comfortable conditions in an energy efficient way.

B. The completed facility shall be an environment that does not promote the propagation of mold.

C. The completed facility shall be constructed in compliance with all applicable building standards.

D. The completed facility will operate efficiently, and in full compliance with the intent of the plans and specifications, to ensure 100% utilization by the Owner at all times.

E. The completed building work will be aesthetically acceptable to the owner/architect. Unacceptable work will be corrected by the contractor without additional cost to the owner. The contractor will use the most cost effective practices and exhibit pride of workmanship of the builders and workers who construct the project.

##### **1.03 CONTRACTING OF LOCAL SUBCONTRACTORS**

A. The Contractor shall make good faith efforts to encourage the participation of qualified local sub-contractors and personnel in bidding and performance of his Contract.

##### **1.04 WORK SCHEDULE**

A. An executed Contract shall denote acknowledgment by the Contractor and his Sub-Contractors that they understand the critical need of constructing the project within the required schedule, in a professional and efficient manner.

1. The construction schedule and requirements for Liquidated Damages are defined in Section 00 41 23, Bid Form.

**END OF SECTION**

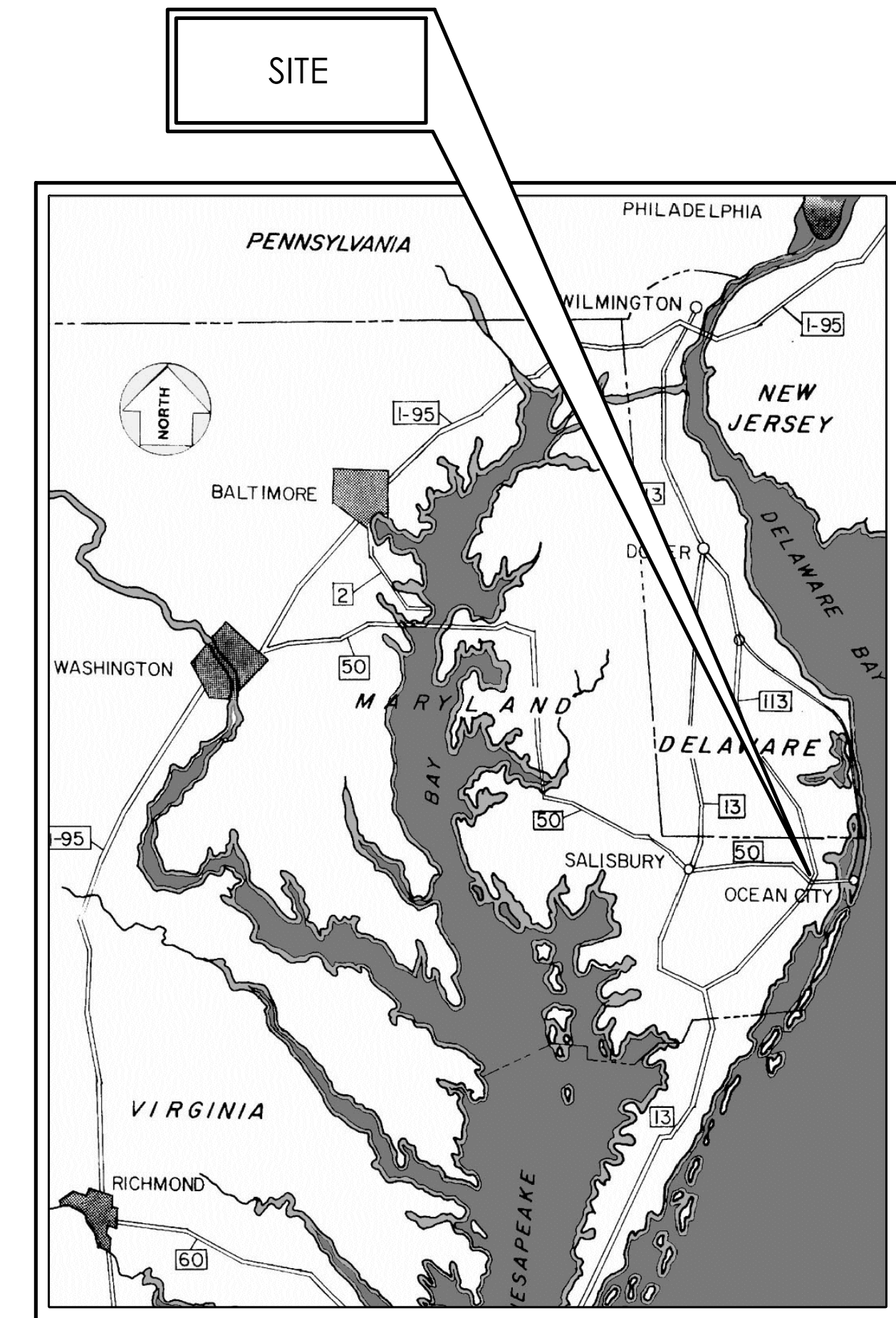


Berlin Yard Building		
International Building Code 2018		
National Existing Building Code 2018		
NFPA 101 - Life Safety Code 2018		
TOPIC	DESCRIPTION	CODE REFERENCE
OCCUPANCY GROUP	BUSINESS (B) STORAGE (S-1)	IBC SECT. 304, 311.2 NFPA 6.1.11, 6.1.13
CLASSIFICATION OF WORK	ALTERATION - LEVEL 2 (RECONFIGURATION DOES NOT EXCEED 50% OF EXISTING BUILDING AREA 1,643 SF. ALTERATION = 30% OF EXISTING 5,513 SF. BUILDING AREA 1 HOUR ENCLOSURES REQUIRED FOR VERTICAL OPENINGS NOT TO EXCEED THREE STORIES DEAD-END CORRIDORS SHALL NOT EXCEED 35 FEET MEANS OF EGRESS COMPLYING WITH BUILDING CODE UNDER WHICH IT WAS CONSTRUCTED SHALL BE CONSIDERED COMPLIANT IF CODE OFFICIAL DEEMS IT DOES CONSTITUTE A DISTINCT HAZARD SINGLE HAND RAIL ALLOW ON EXIT STAIR UNDER 66 INCHES IN WIDTH LEVEL 2 ALTERATION ARE PERMITTED WITHOUT REQUIRING BUILDING TO COMPLY WITH ENERGY REQUIREMENTS OF THE IECC	IEBC CHAPTER 8 IEBC SECT. 802.2.1 IEBC 805.6 IEBC 805.2.2 IEBC 805.9.1 IEBC 810.1
CONSTRUCTION CLASSIFICATION	SHELL IS EXISTING, INTERIOR FIT-OUT ONLY TYPE V-B, NONSPRINKLED TYPE V-000, NONSPRINKLED	IBC TABLE 601 NFPA 220
AREAS	FIRST FLOOR (B) 1,787 S.F. FIRST FLOOR (S-1) 2,053 S.F. SECOND FLOOR (B) 1,623 S.F. TOTAL 5,513 S.F. MAX. AREA: B/S-1=9,000 S.F.	IBC TABLE 506.2
OCCUPANT LOAD	FIRST FLOOR AREA (B) = 1787 SF/150 OCC. LOAD FACTOR 12 OCC. FIRST FLOOR AREA (S-1) = 2053/500 OCC. LOAD FACTOR 4 OCC. SECOND FLOOR AREA (B) = 1673 SF/150 OCC. LOAD FACTOR 11 OCC. TOTAL OCCUPANT LOAD 27 OCC.	IBC TABLE 1004.5 NFPA TABLE 7.3.1.2
MAX TRAVEL DISTANCE	200 FEET (UNSPRINKLERED)	IBC TABLE 1017.2 NFPA 39.2.6.2
OCCUPANCY SEPARATION	S-1 & B = NO SEPARATION REQUIRED	IBC TABLE 508.4
CORRIDOR WIDTH	36 INCHES (OCCUPANT LOAD UNDER 50)	IBC TABLE 1020.2
NUMBER OF EXITS	SINGLE EXIT FROM EACH STORY PERMITTED SINCE LESS THAN 30 OCCUPANT LOAD AND TRAVEL DISTANCE IS UNDER 100 FEET	IBC 1006.3.3.1 NFPA 38.2.4.2



# RENOVATION OF: WORCESTER COUNTY ROADS BUILDING

10146 MAIN STREET  
BERLIN, MARYLAND



VICINITY MAP  
N.T.S.



LOCATION MAP  
N.T.S.

## GENERAL NOTES:

- THE CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS AND OBTAIN ALL PERMITS AND CERTIFICATIONS OF APPROVALS REQUIRED IN CONNECTION WITH ALL WORK UNDER THIS CONTRACT.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE FINAL CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND PROJECT CONDITIONS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, CONFLICTS AND OMISSIONS THAT WOULD INTERFERE WITH THE SATISFACTORY COMPLETION OF THE PROJECT.
- BASE INFORMATION INDICATED ON THESE DRAWINGS WAS DERIVED FROM VISUAL AND CASUAL OBSERVATIONS AND ALL DIMENSIONS ARE APPROXIMATE. THIS BASE INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT TO BE CONSTRUED AS A RE-MEASURED OR "AS-BUILT" PLAN BY THE ARCHITECT, BUT RATHER AS REFERENCED DATA WHICH FROM ALL SURFACE APPEARANCES OBSERVED AT THE SITE IS BASICALLY ACCEPTABLE FOR THE PURPOSES OF THIS PROJECT.
- A STRUCTURAL ASSESSMENT WAS NOT PERFORMED AS PART OF THIS PROJECT.
- AFTER DEMOLITION AND REMOVALS ARE COMPLETED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, IN WRITING, OF ANY CONDITIONS THAT ARE MADE EVIDENT THAT WILL CONFLICT WITH THE COMPLETION OF THE PROJECT OR REQUIRE ADDITIONAL DEMOLITION TO MEET THE REQUIREMENTS OF THE NEW SCOPE OF WORK REQUIRED BY THE CONTRACT.
- THE CONTRACTOR AGREES TO WORK WITH THE ARCHITECT IN RESOLVING CONFLICTS IN A TIMELY MANNER, INCLUDING CONCEALED OR UNANTICIPATED CONDITIONS THAT AFFECT THE WORK OF THIS CONTRACT.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS OF THE GOVERNING AGENCIES HAVING JURISDICTION OVER THE PROJECT.
- THE CONTRACTOR SHALL TAKE ADEQUATE CARE TO PROTECT ALL AREAS OF THE BUILDING WHERE THE WORK OF THIS ALTERATION IS LOCATED AS WELL AS AREAS ADJACENT TO THE AREA OF WORK OF THIS PROJECT SO AS TO PREVENT DAMAGE TO LIFE OR PROPERTY AS A RESULT OF THIS ALTERATION AND NEW CONSTRUCTION. PROVIDE ALL NECESSARY SAFEGUARDS, BARRICADES, FENCES, SIGNAGE, ETC., AS REQUIRED TO PROTECT THE OCCUPANTS, PUBLIC AND EMPLOYEES FROM ANY POSSIBLE INJURY RESULTING FROM THE WORK.
- IN ALL CASES, DRAWINGS SHALL NOT BE SCALED FOR INFORMATION. FIGURED DIMENSIONS SHALL GOVERN THE WORK AND ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD.
- THE CONTRACTOR AND EACH SUB-CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ANY MODIFICATION OR DEVIATIONS FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL DELIVER TO THE ARCHITECT A COMPLETE SET OF "AS-BUILT" DRAWINGS PRIOR TO APPROVAL OF FINAL PAYMENT.
- THE CONTRACTOR SHALL NOT MAKE, CAUSE TO BE MADE, OR PERMIT A SUBCONTRACTOR OR STAFF MEMBER OR LOCAL REPRESENTATIVE OF THE OWNER TO MAKE ANY CHANGES TO WHAT IS SPECIFIED ON THE DRAWINGS WITHOUT SPECIFIC AUTHORIZATION OF THE ARCHITECT.
- REPAIR OR REPLACE ALL AREAS DAMAGED AS A RESULT OF THE WORK TO THE SATISFACTION OF THE OWNER.
- EXISTING DOCUMENTATION SHOWN PROVIDED BY OWNER THEREFORE GMB DOES NOT TAKE ANY RESPONSIBILITY FOR ERRORS AND OMISSIONS OF THE GRAPHIC INFORMATION PROVIDED WHICH IS FOR PERMIT AND REVIEW.
- REFER TO OWNER SPEC FOR FINISH/COLOR CHOICES, FIXTURE AND EQUIPMENT MANUFACTURERS, DEMOLITION AND REPAIR INSTRUCTIONS AND OTHER MISCELLANEOUS ITEMS.
- MECHANICAL, ELECTRICAL AND PLUMBING DESIGN BUILD BY OTHERS.

## CONTACTS:

OWNER REP.:	WORCESTER COUNTY PUBLIC WORKS 6113 TIMMONS ROAD SNOW HILL, MD 21863 410-632-5623
	MR. DALLAS BAKER DIRECTOR OF PUBLIC WORKS
ARCHITECT/ STRUCTURAL:	GEORGE, MILES & BUHR, LLC 206 W. MAIN STREET SALISBURY, MD 21801 410-742-3115
	MORGAN H. HELFRICH, AIA, LEED AP - ARCHITECTURAL A. REGGIE MARINER, JR., P.E. - STRUCTURAL
MECHANICAL/ ELECTRICAL/ PLUMBING:	ALLEN + SHARIFF ENGINEERING, LLC 205 E. MARKET STREET SALISBURY, MD 21801 443-545-1300
	DONALD HOCKING, P.E.

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NO.	REVISION	DATE
1	OWNER REVIEW	4-12-22
	OWNER REVIEW	1-17-23

RENNOVATION OF:  
WORCESTER COUNTY  
ROADS BUILDING  
BERLIN, MARYLAND

COVER SHEET

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: LKVV
CHECKED BY	: MHH
GMB FILE	: 210241
DATE	: 12-6-21

G1.0



## OUTLINE SPECIFICATIONS

### GENERAL

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE CODES, AND RULES AND REGULATIONS OF THE REGULATORY AGENCIES HAVING JURISDICTION OVER THIS PROJECT AND ITS LOCATION.
- FURNISH REQUIRED CONSTRUCTION AIDS, BARRIERS, TEMPORARY ENCLOSURES AND SAFETY AIDS NECESSARY TO ACCOMPLISH THE WORK IN A SAFE AND EFFICIENT MANNER, IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. REMOVE UPON COMPLETION OF WORK.
- EXECUTE PROPER CLEANING DAILY DURING THE PROGRESS OF THE WORK AND AT COMPLETION OF THE JOB.
- ALL CONTRACTORS SHALL BE LICENSED IN THE STATE OF MARYLAND.
- CONTRACTOR SHALL SELECT, EMPLOY AND PAY FOR SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM SPECIFIED INSPECTION, SAMPLING AND TESTING WHERE SPECIFIED IN BID DOCUMENTS.
- COMPLY WITH FEDERAL, STATE AND LOCAL CODES AND REGULATIONS FOR FURNISHING REQUIRED CONSTRUCTION AIDS AND BARRIERS FOR PERFORMANCE OF THE WORK.

### SUBSTITUTIONS

- WHERE SPECIFIC MANUFACTURERS AND MODEL NUMBERS ARE SHOWN, OWNER MAY CONSIDER SUBSTITUTION REQUESTS, PRIOR TO BID, OF EQUIVALENT OR SUPERIOR FUNCTION, APPEARANCE AND QUALITY, WHEN CERTIFIED IN WRITING BY PROPOSER AND ACCEPTED IN WRITING BY THE ARCHITECT/ENGINEER

### 02 41 00 - DEMOLITION

- DEMOLITION OF SYSTEMS MUST OCCUR IN A MANNER THAT ALLOWS OWNER'S OPERATIONS TO CONTINUE DURING CONSTRUCTION. THE CONTRACTOR SHALL DEMOLISH, REMOVE, AND OR DISPOSE OF ALL ITEMS NECESSARY FOR THE ACCOMPLISHMENT OF THE PROJECT.
- PERSONNEL SAFETY - PERFORM WORK IN A SAFE MANNER IN ORDER TO AVOID ACCIDENTS AND PROPERTY DAMAGE. WORKMEN MUST BE EXPERIENCED IN THIS TYPE OF WORK. EQUIPMENT SHOULD BE OF SUITABLE TYPE, IN GOOD WORKING CONDITION, AND OPERATED BY SKILLED OPERATORS.
- PREVENT ACCESS OF UNAUTHORIZED PERSONS.
- UTILITY REMOVAL, RELOCATION, ETC., SHALL BE SEQUENCED SUCH THAT UTILITY SERVICE TO EXISTING BUILDING SHALL NOT BE INTERRUPTED WITHOUT PROPER NOTIFICATION TO OTHER TENANTS OR PUBLIC SPACES.
- SALVAGE - CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL CONDUCT WALK THROUGH OF BUILDING PRIOR TO COMMENCEMENT OF WORK TO IDENTIFY NECESSARY ITEMS.

### 06 10 00 - ROUGH CARPENTRY

- STRUCTURAL FRAMING: SOUTHERN PINE #1200 FIBER STRESS FOR EXTERIOR, SPF #2 FOR INTERIOR (BENDING STRESS, Fb = 875 PSI, MIN.)
- PRESERVATIVE TREATED WOOD: PRESSURE TREATED WITH ALKALINE COPPER QUATERNARY (ACQ) CONFORMING TO AWPA STANDARD C2.2 FOR RESIDENTIAL AND COMMERCIAL CONSTRUCTION.
- TREATED FRAMING LUMBER: SOUTHERN YELLOW PINE, SPIB GRADE #2
- MACHINE BOLTS: ASTM A307
- LAG SCREWS: FED. SPEC. FF-B-561
- NAILS: FED. SPEC. FF-N-10S (USE GALVANIZED OR STAINLESS 304 OR 316 FASTENERS AT EXTERIOR LOCATIONS AND WITH PRESERVATIVE TREATED LUMBER)
- PLYWOOD SHEATHING: APA RATED (C-D RATED WITH WATER-PROOF GLUE, EXPOSURE 1
- FRAMING ANCHORS: FABRICATED OF GALVANIZED STEEL. PROVIDE SIZE AND TYPE RECOMMENDED BY MANUFACTURER FOR EACH USE, INCLUDING RECOMMENDED NAILS. "STRONG TIE" MANUFACTURED BY SIMPSON, SAN LEANDRO, CA OR APPROVED SUBSTITUTION.

### 06 20 00 - FINISH CARPENTRY

- FINISH CARPENTRY WORK AS SHOWN ON THE DRAWINGS AND IN SCHEDULES. SIZES: AS SHOWN ON DRAWINGS.
- CONDITION WOODWORK TO AVERAGE PREVAILING HUMIDITY CONDITIONS IN INSTALLATION AREAS PRIOR TO INSTALLING.
- INSTALL MATERIALS PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. SHIM AS REQUIRED USING CONCEALED SHIMS. CUT TO FIT TO EXACT SIZE. WHERE WOODWORK ADJUTS OTHER FINISHED WORK, SCRIBE AND CUT FOR ACCURATE FIT. BEFORE MAKING CUTOUTS, DRILL PILOT HOLES AT CORNERS.

### 06 41 00 - ARCHITECTURAL WOOD CASEWORK

- PLASTIC LAMINATE CASEWORK: AWI PREMIUM GRADE. FACE CONSTRUCTION AS INDICATED ON THE DRAWINGS (DRAWER FRONTS, DOORS AND FIXED PANELS PARTIALLY CONCEALED CASEWORK BEHIND). EXPOSED EDGES TO MATCHING PLASTIC LAMINATE PANEL SURFACE. EASE EXPOSED EDGE OF OVERLAP SHEET. COLOR AND PATTERN TO BE SELECTED BY OWNER FROM MANUFACTURER'S STANDARD SATIN-FINISHED SHEETS
- PLASTIC LAMINATE COUNTERS: SAME AWI GRADE AS CASEWORK. COUNTER CONSTRUCTION TO BE 4" HIGH INTEGRAL BACK-SPLASH AND END SPLASH, TOP MOUNTED SQUARE BUTT JOINT, FULLY COVERED WITH MATCHING PLASTIC LAMINATE EASED EDGES. EXPOSED EDGE TO BE COVERED WITH PLASTIC LAMINATE MATCHING SURFACE. COLOR AND PATTERN TO BE SELECTED BY OWNER FROM MANUFACTURER'S STANDARD SATIN-FINISHED SHEETS
- CASEWORK HARDWARE: SHELF SUPPORTS FOR LINED DRILLED APPLICATIONS; 50-LB DRAWER SLIDES WITH BALL BEARING NYLON WHEEL ROLLERS; MAGNETIC CABINET CATCHES; INVISIBLE HINGES; FINISH FOR HARDWARE: 626 - BRUSHED CHROME.

### 07 21 16 - BATT INSULATION

- UN-FACED GLASS FIBER FOR SOUND BATT, ASTM C655, TYPE I. INSULATION BLANKETS, THERMAL (MINERAL FIBER) OF THE INDICATED THICKNESS.
  - OWENS CORNING, TOLEDO, OH 43659

### 07 21 16 - INSULATION FOR THERMOPLASTIC POLYOLEFIN ROOFING

- RIGID POLYISOCYANURATE BOARD: COMPRESSIVE STRENGTH 25 PSI CONFORMING TO ASTM C 1289, TYPE I OR II. FACER TO COMPLY WITH ROOFING MEMBRANE MANUFACTURER. APPROVAL SUBJECT TO MEETING THERMOPLASTIC POLYOLEFIN ROOFING TOTAL SYSTEM WARRANTY - SEE PROJECT MANUAL SECTION 07 54 23 THERMOPLASTIC POLYOLEFIN ROOFING (TPO). EVERGUARD POLYISO INSULATION
- PROVIDE BOARD WITH TAPER WHERE REQUIRED. SLOPE AS INDICATED
- MISCELLANEOUS MATERIALS: ADHESIVE, MASTIC, FASTENERS, ETC. AS RECOMMENDED BY ROOF MEMBRANE MANUFACTURER.
  - GAF, PARSIPPANY, NJ 07054

### 07 92 00 - SEALANTS AND CAULKING

- ONE-PART ACETOXY SILICONE, HIGH-MODULUS ACID CURE, FDA APPROVED OR AS RECOMMENDED BY MANUFACTURER OF SPECIFIC SYSTEMS OR APPLICATIONS.
  - PECORA CORPORATION, HARLEYSVILLE, PA 19438.

### 08 14 00 - WOOD PANEL INTERIOR DOORS

- TRADITIONAL 6-PANEL HOLLOW-CORE DOOR, PRE-HUNG SPLIT-JAMB, WITH SATIN NICKEL HINGES
- MANUFACTURER TO PROVIDE 1 YEAR WARRANTY.
  - MASONITE INTERNATIONAL, TAMPA, FL 33605

### 08 14 16 - RATED FLUSH WOOD DOORS

- NATURAL BIRCH VENEER FACES WITH PARTICLEBOARD CORE, HARDWOOD STYLES AND RAILS, FIVE PLY CONSTRUCTION, TYPE I ADHESIVE. RATED DOORS TO BEAR UL LABEL.
- GLASS OPENING (RATED DOOR): FACTORY OPENING WITH APPROVED FRAME SHIPPED WITH DOOR ON THE SAME BILL OF LADING. INSTALL WITH POSTS ON CORRIDOR SIDE AND SCREWS ON OCCUPANCY SIDE. FRAME TYPE 115. ALLOW FOR 1/4 INCH GLAZING MATERIAL.
- MANUFACTURER SHALL EXTEND A LIMITED LIFETIME WARRANTY.
  - VT INDUSTRIES, HOLSTEIN, IA 51025.

### 08 11 13 - HOLLOW METAL DOORS & FRAMES

- EXTERIOR DOORS: INSULATED TUBULAR STILE AND RAIL STEEL DOOR. DOORS TO BE LEVEL 2, MODEL 2, AND COMPLY WITH ANSI A250.8. PROVIDE MANUFACTURER'S STANDARD FOAM INSULATED CORE CONSTRUCTION WITH U-VALUE OF AT LEAST 0.48 (R2.72) WHEN TESTED IN ACCORDANCE WITH SDI 113. 16 GA STEEL, SEAMLESS WITH WELDED CORNERS. FINISH TO BE A60 GALVANIZED, FACTORY PRIMED.
- FRAMES: LEVEL 2 HEAVY-DUTY SEAMLESS DESIGN, 16 GAUGE FRAMES. PROVIDE WELDED UNIT TYPES. SLIP-ON TYPES ACCEPTABLE AT DRYWALL PARTITIONS ONLY.
- SHEET STEEL FOR DOORS AND FRAMES: COLD ROLLED STEEL: ASTM A366 OR A620; HOT ROLLED STEEL: ASTM A569, TYPE B. GALVANIZED STEEL: ASTM A 653 WITH A40/ZF120 COATING MINIMUM.
- FINISH: DOORS AND FRAMES ARE CLEANED, PHOSPHATIZED AND PRIMED WITH A COAT OF FORCE CURED RUST INHIBITING PRIMER THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ANSI A250.10. PROVIDE UNITS OF GALVANIZED STEEL WHERE INDICATED ON THE DOOR SCHEDULE.
  - CECO DOOR PRODUCTS, MILAN, TN 38358.

### 08 71 00 - DOOR HARDWARE

- HINGES, LEVER STYE LOCKSETS, THRESHOLDS, CLOSERS, WEATHERSTRIPPING AND OTHER HARDWARE REQUIRED FOR A COMPLETED ASSEMBLY.
- HEAVY DUTY USAGE COMFORMING TO APPLICABLE PROVISIONS OF BHMA A 156 FOR RATED AND EXTERIOR DOORS
- FINISH SATIN STAINLESS STEEL, BHMA CODE 630 FOR EXTERIOR HARDWARE.

### 08 54 13 - ALUMINUM WINDOWS

- HEAVY COMMERCIAL GRADE, THERMAL BREAK, INULATED, FIXED ALUMINUM WINDOW. SERIES 8225TL ISOLOCK.
- FASTENERS TO BE ALUMINUM OR STAINLESS STEEL
- ANCHORS, CLIPS AND ACCESSORIES TO CONFORM TO ASTM A 386
- COMPRESSION TYPE GLAZING STRIPS AND WEATHERSTRIPPING. MANUFACTURER'S OPTION OF NEOPRENE OF EPDM GASKETS COMPLYING WITH AAMA 56-1 OR MOLDED PVC GASKETS COMPLYING WITH ASTM D 2287 OR MOLDED EXPANDED EPDM GASKETS COMPLYING WITH ASTM C509, GRADE 4.
- SLIDING TYPE WEATHERSTRIPPING COMPLYING WITH AAMA 701.2.
- FINISH TO MATCH EXISTING STOREFRONT
  - KAWNEER COMPANY, INC., NORCROSS GA 30092

### 08 80 00 - GLAZING

- TEMPERED GLASS: CLEAR FLOAT, 1/4 INCH THICK (ASTM C 1036 AND ANSI A 97.1-1975)
- INSULATED GLASS UNITS: ONE LIGHT OF 1/4 INCH THICK TINTED GLASS ON EXTERIOR AND ONE LIGHT OF 1/4 INCH THICK CLEAR GLASS WITH LOW-E COATING ON INTERIOR. SEPARATED BY A 1/2 INCH SPACER FILLED WITH MOISTURE ABSORBING DESICCANT SPACE BETWEEN LIGHTS HERMETICALLY SEALED USING DOUBLE SEALED ORGANIC SEALANTS. CORNERS FUSED.
  - SUBMIT GLAZING SAMPLE FOR COLOR MATCHING TO EXISTING GLAZING. FINAL SELECTION SHALL BE BY OWNER.
- EXTERIOR GLASS LAYER: COLOR OF TINT SELECTED BY OWNER.
- INTERIOR GLASS LAYER: CLEAR GLASS. SOLARBAN 60 SOLAR CONTROL LOW-E.
  - PPG INDUSTRIES, PITTSBURGH, PA 15222

### 09 21 16 - GYPSUM BOARD SYSTEMS

- CONFORM TO ASTM C 36, 5/8 INCH THICK, TAPERED EDGES, TYPE-X.
- PROVIDE MANUFACTURER RECOMMENDED JOINT TAPE, JOINT COMPOUND, FASTENERS, AND ACCESSORIES AS RECOMMENDED BY MANUFACTURER.
- FINISH U.O.N.: LEVEL 4 PER ASTM C840.
- PROVIDE MANUFACTURER RECOMMENDED JOINT TAPE, JOINT COMPOUND, FASTENERS, AND ACCESSORIES AS RECOMMENDED BY MANUFACTURER.
- WET-ROOM WALLBOARD: WATER RESISTANT WALL BOARD, CONFORM TO ASTM C 1396 WATER-REPELLENT-TREATED CORE, MOLD RESISTANT, TAPERED EDGE, 5/8 INCH THICK, TYPE-X.
- USG FIBEROCK INTERIOR PANEL OR APPROVED SUBSTITUTION.
  - U.S. GYPSUM CO., CHICAGO, IL 60606.

### 09 65 16 - RESILIENT SHEET FLOORING

- RESIDENTIAL WOOD OR MARBLE STYLE VINYL SHEET FLOORING, 10 MIL. WEAR LAYER, TO BE INSTALLED OVER WOOD SUBSTRATE.
- COLORS/STYLE TO BE SELECTED BY OWNER.
  - MOHAWK INDUSTRIES, INC., CALHOUN, GA 30701

### 09 68 00 - CARPETING

- CARPET: BROADLOOM; COLORSTRAND SD NYLON WITH MOHAWK PROTECTION PLUS STAIN WITH CUT AND LOOP APPEARANCE. ALADDIN METRO GRID 1M47.
  - MACHINE GAUGE (PITCH): 1/12".
  - STITCHES/INCH: 11.6
  - PILE WEIGHT/SQUARE YARD: 28 OUNCES.
  - BACKING: WELDLÖK
  - FLAMMABILITY: ASTM E 648 CLASS 1 (GLUE DOWN).
- COLORS SHALL BE SELECTED BY THE OWNER.
  - MOHAWK GROUP, CALHOUN, GA

### 09 91 00 - PAINT

- CLEAN SURFACES TO BE PAINTED AS REQUIRED TO REMOVE DUST, DIRT OR OTHER SURFACE CONTAMINATION.
- GYPSUM WALLBOARD: SATIN FINISH. ONE COAT PROMAR 200 INTERIOR LATEX PRIMER, TWO COATS PROMAR 200 INTERIOR LATEX. WALLS MUST BE PAINTED/FINISHED FROM TRUE FLOOR TO TRUE CEILING.
- CEILING: SATIN FINISH. ONE COAT PROMAR 200 INTERIOR LATEX PRIMER, TWO COATS PROMAR 200 INTERIOR LATEX.
- STEEL (UNPRIMED OR SHOP PRIMED): SEMI-GLOSS FINISH. ONE COAT PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER (TOUCH-UP ONLY ON SHOP PRIMED), TWO COATS SOLO ACRYLIC SEMI-GLOSS. GALVANIZED STEEL: TWO COATS SOLO ACRYLIC SEMI-GLOSS.
- OBTAIN PAINT AND COATING PRODUCTS FROM A SINGLE MANUFACTURER. COLOR: TO BE SELECTED FROM MANUFACTURER'S FULL RANGE OF STANDARD COLORS.
  - SHERWIN WILLIAMS PAINTS, INC., CLEVELAND, OH 44115
- COLORS SHALL BE SELECTED BY OWNER.

### 10 14 00 - INTERIOR SIGNAGE

- MOHAWK GRAPHIC PROCESS SERIES 200A - SAND CARVED, USING FORMAT D.
- TACTILE CHARACTERS SHALL BE RAISED THE REQUIRED 1/32" FROM SIGN FACE. GLUE-ON LETTERS OR ETCHED BACKGROUNDS ARE NOT ACCEPTABLE.
- ALL TEXT SHOULD BE ACCOMPANIED BY GRADE 2 BRAILLE. BRAILLE SHALL BE SEPARATED 1/2" FROM THE CORRESPONDING RAISED CHARACTERS OR SYMBOLS.
- ALL LETTERS, NUMBERS AND SYMBOLS SHALL BE LIGHT ON A DARK BACKGROUND, WITH NON-GLARE FINISH.
  - MOHAWK SIGN SYSTEMS, SCHENECTADY, NY, 12301.
  - COLOR: BLACK SIGN w/ WHITE LETTERING & BORDER.

### 10 26 13 - WALL AND CORNER GUARDS

- CORNER GUARD: CS MODEL SSM-25 SURFACE MOUNTED CORNER GUARD WITH ACROVYN WALL COVERING INSERT WHERE REQUIRED DUE TO VARYING WALL THICKNESSES AND/OR END WALL APPLICATIONS WITH DOUBLE CORNER GUARDS.
- EXTRUSIONS: HIGH IMPACT VINYL/ACRYLIC WITH A MATTE FINISH PEBBLETTE GRAIN SURFACE IN COLOR. FURNISH END CAPS IN COORDINATING COLOR, DESIGNED FOR DIRECT MECHANICAL ATTACHMENT TO THE RETAINER.
- RETAINERS: ALUMINUM EXTRUSION OF .063" THICKNESS. INCLUDE NON-CORROSIVE ATTACHMENT HARDWARE.
  - CONSTRUCTION SPECIALTIES, INC. MUNCH, PA 17756.

### 10 28 00 - TOILET ACCESSORIES

- GRAB BARS: 18 GAUGE STAINLESS STEEL WITH OUTSIDE DIAMETER OF 1 1/2". CONCEALED MOUNTING. MODEL: BOBRICK B-6806 SERIES.
- FRAMELESS MIRRORS: 1/4" GLASS MIRROR WITH SAFETY BACKING. ASBESTOS-FREE MIRROR MASTIC ADHESIVE COMPOUND SPECIFICALLY PRODUCED FOR SETTING MIRRORS. TOP AND BOTTOM CLEAR ANODIZED ALUMINUM J-CHANNELS. MOUNTING BRACKETS AND SELF-TAPPING SCREWS PER MANUFACTURER INSTALLATION INSTRUCTIONS.
- HAT AND COAT HOOK: TYPE 304 STAINLESS STEEL WITH SATIN FINISH. MODEL: BOBRICK B-6827.
- UTILITY SHELF WITH MOP/BROOM HOLDERS: STAINLESS STEEL UTILITY SHELF WITH MOP/BROOM HOLDERS AND RAG HOOKS. 18 GAUGE SHELF 8" DEEP. UNIT 34" LONG WITH 2 SHELF BRACKETS, 4 HOOKS AND 3 MOP HOLDERS: BOBRICK B-239 x 34.
- OWNER TO PROVIDE SOAP, TOILET PAPER AND PAPER TOWEL DISPENSERS.
  - BOBRICK WASHROOM EQUIPMENT, INC., NORTH HOLLYWOOD, CA 91605

### 10 44 00 - FIRE EXTINGUISHERS

- RECESSED FIRE EXTINGUISHER CABINET: SEMI-RECESSED ROLLED EDGE SATIN STAINLESS STEEL FRAME AND DOOR, WITH 1/4" CLEAR ACRYLIC PLASTIC PANEL DOOR INSERT. COSMOPOLITAN SERIES FULL GLASS F10 DOOR, SERIES 1037.
- SURFACE MOUNTED FIRE EXTINGUISHER CABINET: SURFACE MOUNT SQUARE TRIM STAINLESS STEEL FRAME AND DOOR. COSMOPOLITAN SERIES FULL GLASS F10 DOOR, SERIES 1033.
- FIRE EXTINGUISHER: UL RATED 4A-80BC, 10 LB. CAPACITY FOR CLASS ABC FIRES, WITH STEEL CYLINDER. COSMIC 10E, MULTI-PURPOSE DRY CHEMICAL.
  - J.L. INDUSTRIES, BLOOMINGTON, MN 55435

### 12 24 00 - SOLAR SHADES

- SHADES: CORLESS FLEXSHADE SYSTEM. MANUALLY-OPERATED WINDOW SHADES WITH INDEPENDENT CONTROL. ANSI/MCMA A100.1 COMPLIANT, MANUALLY-OPERATED, VERTICAL ROLL-UP, FABRIC WINDOW SHADE WITH COMPONENTS NECESSARY FOR COMPLETE INSTALLATION. METAL END BRACKETS COMPATIBLE WITH ROLLER SIZE MOUNTED TO JAMB OR WALL. ALUMINUM ROLLER TUBE CONNECTED TO FABRIC WITH LSE DOUBLE-SIDED ADHESIVE. ADJUST ROLLER TENSION FOR SMOOTH OPERATION.
- HEM BAR: CLOSED POCKET ELLIPTICAL SLAT, 1" ALUMINUM INSIDE HEAT SEALED POCKET.
- SOLAR SCREEN FABRICS: PHIFER SHEARWEAVE SW 2510 WOVEN VINYL POLYESTER YARNS, 1% OPENNESS FACTOR.
  - DRAPER, INC. SPICELAND, INDIANA 47385.

### 12 36 61 - SOLID SURFACE FABRICATIONS

- 1/2" THICK LAVATORY TOPS WITH UNDERMOUNT BOWLS, INTEGRAL BACKSPLASH, APRON AND PLUMBING SKIRT.
- CAST, NONPOROUS, FILLED POLYMER WITH THROUGH BODY COLORS MEETING ANSI Z 124.3 OR ANSI Z 124.6
- MANUFACTURER'S STANDARD BOWL CLIP, PANEL INSERTS AND FASTENERS FOR ATTACHMENT OF UNDERMOUNT SINKS.
  - DUPONT INC., BUFFALO, NY 14207

### DIV 22 - PLUMBING

- SEE PLUMBING DRAWINGS

### DIV 23 - MECHANICAL

- SEE MECHANICAL DRAWINGS

### DIV 26 - ELECTRICAL

- SEE ELECTRICAL DRAWINGS

NO	DATE
1	4-23-22
	1-17-23

REVISION	OWNER REVIEW	OWNER REVIEW

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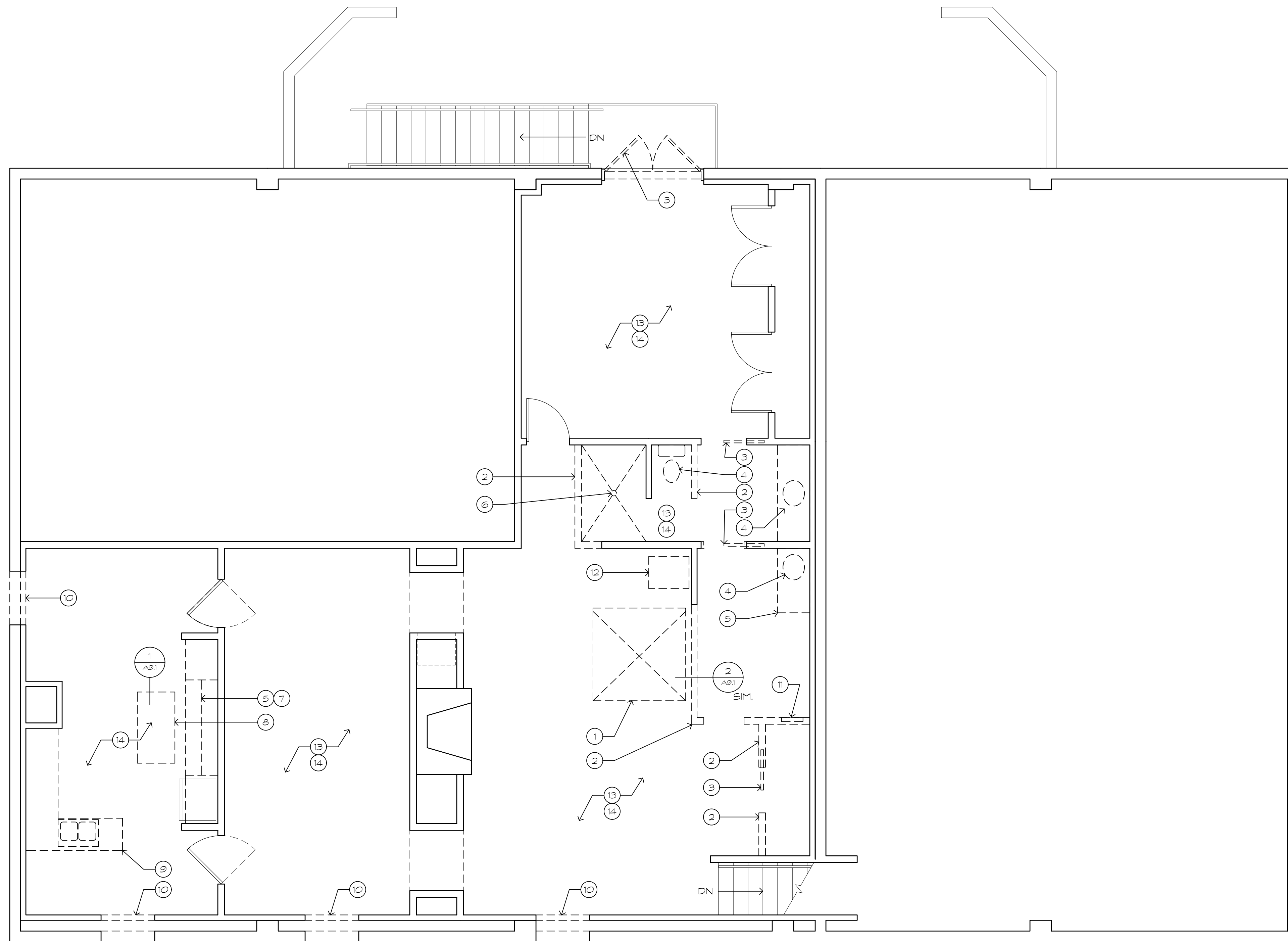
RENOVATION OF:  
**WORCESTER COUNTY**  
**ROADS BUILDING**  
BERLIN, MARYLAND

OUTLINE  
SPECIFICATIONS

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: LKCV
CHECKED BY	: MHH
GMB FILE	: 210241
DATE	: 12-6-21

G.1





LEGEND:

- EXISTING WALL TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED

DEMO KEY NOTES:

- ① REMOVE EXISTING CIRCULAR STAIR IN ITS ENTIRETY AND INFILL FLOOR WITH FRAMING TO MATCH EXISTING OR BETTER. SEE DETAIL 2 ON A9.1
- ② REMOVE EXISTING PARTITION TO THE EXTENTS SHOWN.
- ③ REMOVE EXISTING DOOR, FRAME AND HARDWARE.
- ④ REMOVE EXISTING PLUMBING FIXTURE
- ⑤ REMOVE EXISTING CASEWORK AND COUNTER TOP.
- ⑥ REMOVE EXISTING SHOWER FINISHES & DRAIN, CAP EXISTING PLUMBING. CONTRACTOR TO LEVEL FLOOR WITH EXISTING SECOND FLOOR.
- ⑦ REMOVE EXISTING APPLIANCES.
- ⑧ REMOVE EXISTING SKYLIGHT AND INFILL ROOF.
- ⑨ REMOVE EXISTING CASEWORK, EXISTING COUNTER TOP AND SINK TO BE REMOVED AND STORED FOR REUSE.
- ⑩ CUT OPENINGS IN EXISTING EXTERIOR WALLS FOR NEW WINDOWS.
- ⑪ EXISTING ELECTRIC PANEL TO BE RELOCATED
- ⑫ EXISTING HVAC EQUIPMENT TO BE REMOVED.
- ⑬ REMOVE EXISTING FLOORING.
- ⑭ REMOVE EXISTING LIGHT FIXTURES.

DEMO NOTES:

1. CONTRACTOR TO PROVIDE TEMPORARY LIGHTING DURING CONSTRUCTION.
2. EXISTING HVAC UNIT AND PLENUM TO REMAIN UNTIL SWITCH OUT WITH NEW SYSTEM TO PROVIDE CLIMATE CONTROL DURING CONSTRUCTION.
3. BREAK ROOM FLOOR AND BASE TO REMAIN. CONTRACTOR TO TAKE SPECIAL CARE TO PROTECT THESE DURING DEMOLITION AND CONSTRUCTION WORK.
4. CONTRACTOR TO REUSE EXISTING INTERIOR DOORS THAT MAKE IT THROUGH THE DEMOLITION WITH NO VISIBLE DAMAGE AND PROVIDE CREDIT TO OWNER.
5. ALL FLOOR REGISTERS TO BE REMOVED. PATCH REGISTER IN BREAK ROOM WITH SUITABLE MATERIAL.

NO.	REVISION	DATE
1	OWNER REVIEW	4-22-22
	OWNER REVIEW	1-17-23

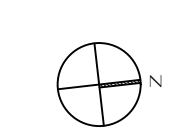
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RENOVATION OF:  
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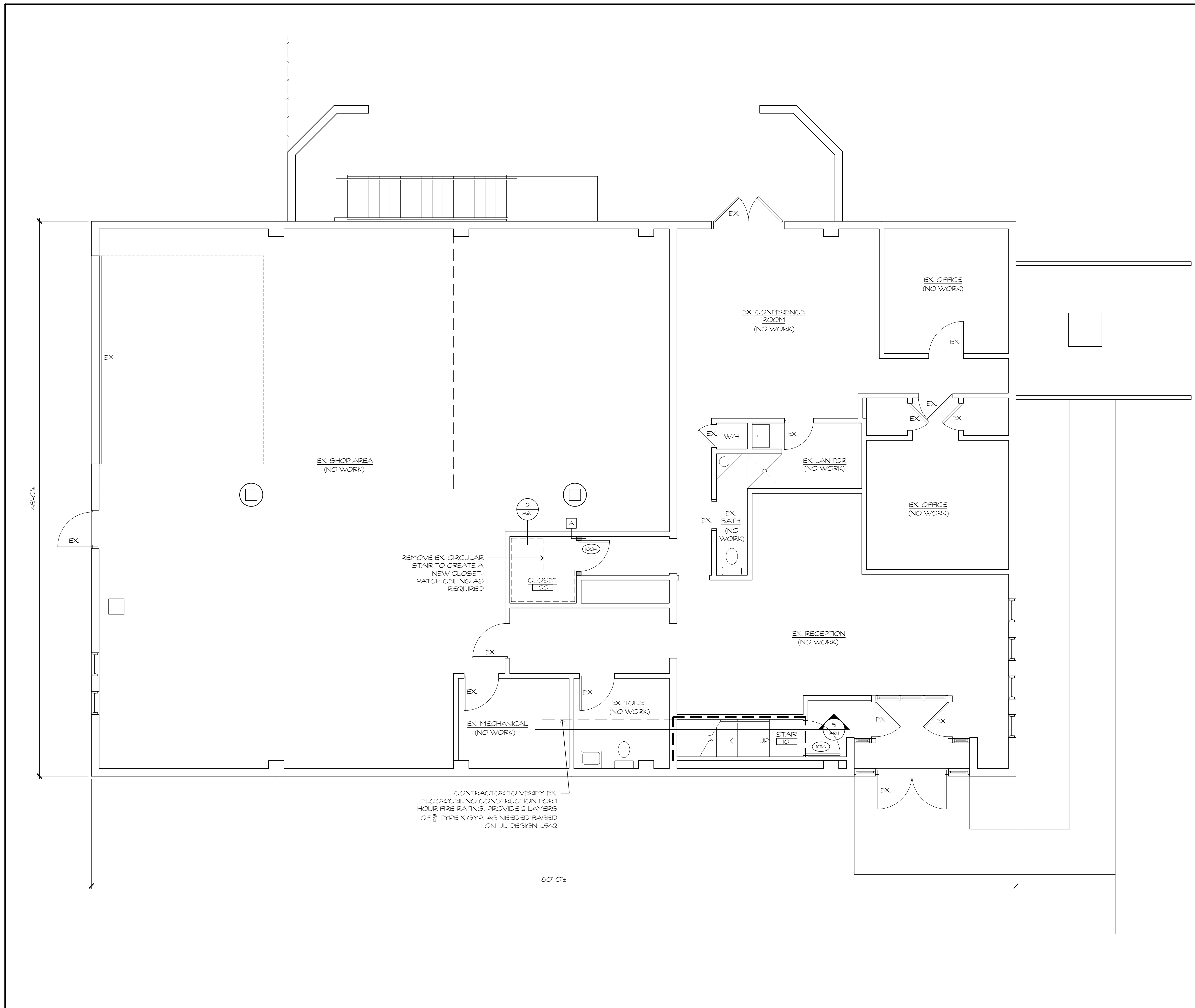
**SECOND FLOOR  
 DEMOLITION PLAN**

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: LKW
CHECKED BY	: MHH
GMB FILE	: 210241
DATE	: 12-6-21

1 SECOND FLOOR - DEMOLITION PLAN  
 1/4" = 1'-0"



A0.1

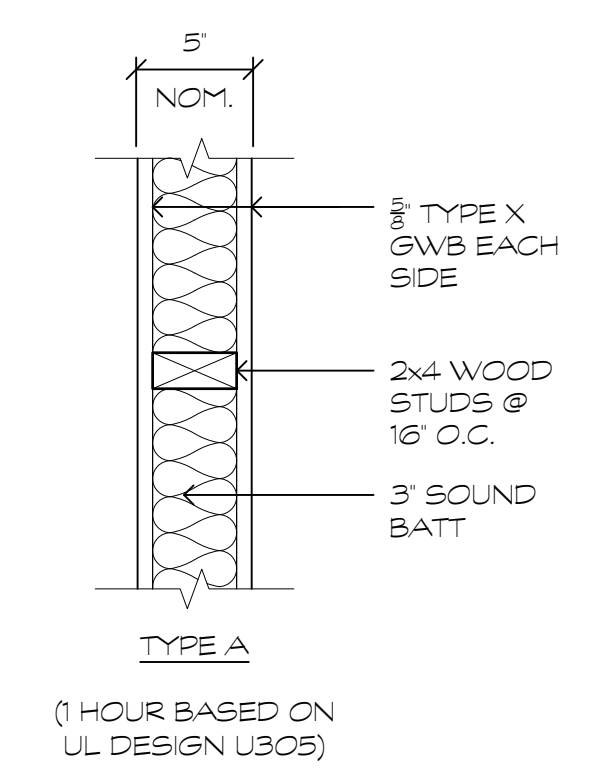


**LEGEND:**

- EXISTING WALL TO REMAIN
- NEW WALLS/INFILL - WALL TYPE A OR MATCH EXISTING
- EXISTING CONSTRUCTION TO BE REMOVED
- 60 MIN. WALL

**WALL TYPES:**

1 1/2" = 1'-0"



**NOTES:**

1. FIRST FLOOR SPACES NOT VERIFIED. ONLY SHOWN FOR ILLUSTRATION ONLY TO SHOW EXTENT OF CIRCULAR STAIR DEMOLITION. VERIFY ALL CONDITIONS IN FIELD PRIOR TO CONSTRUCTION.

NO.	REVISION	DATE
1	OWNER REVIEW	4-22-22
	OWNER REVIEW	1-17-23

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RENOVATION OF:  
**WORCESTER COUNTY  
 ROADS BUILDING**  
 BERLIN, MARYLAND

**FIRST FLOOR  
 PLAN**

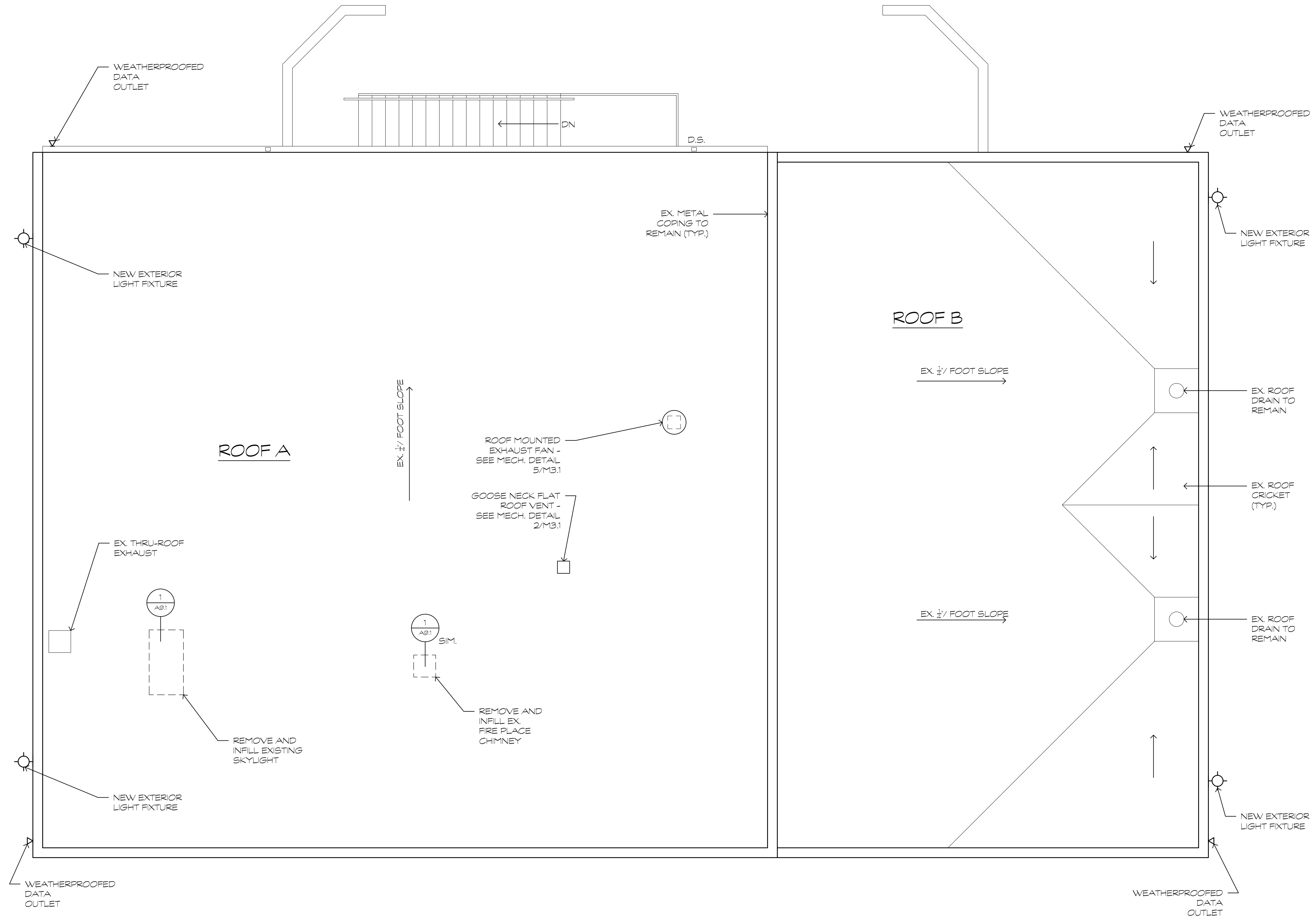
SCALE	: 1/4" = 1'-0"
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DRAWN BY	: LKW
CHECKED BY	: MHH
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DATE	: 12-6-21

**1** FIRST FLOOR  
 1/4" = 1'-0"

**A1.1**







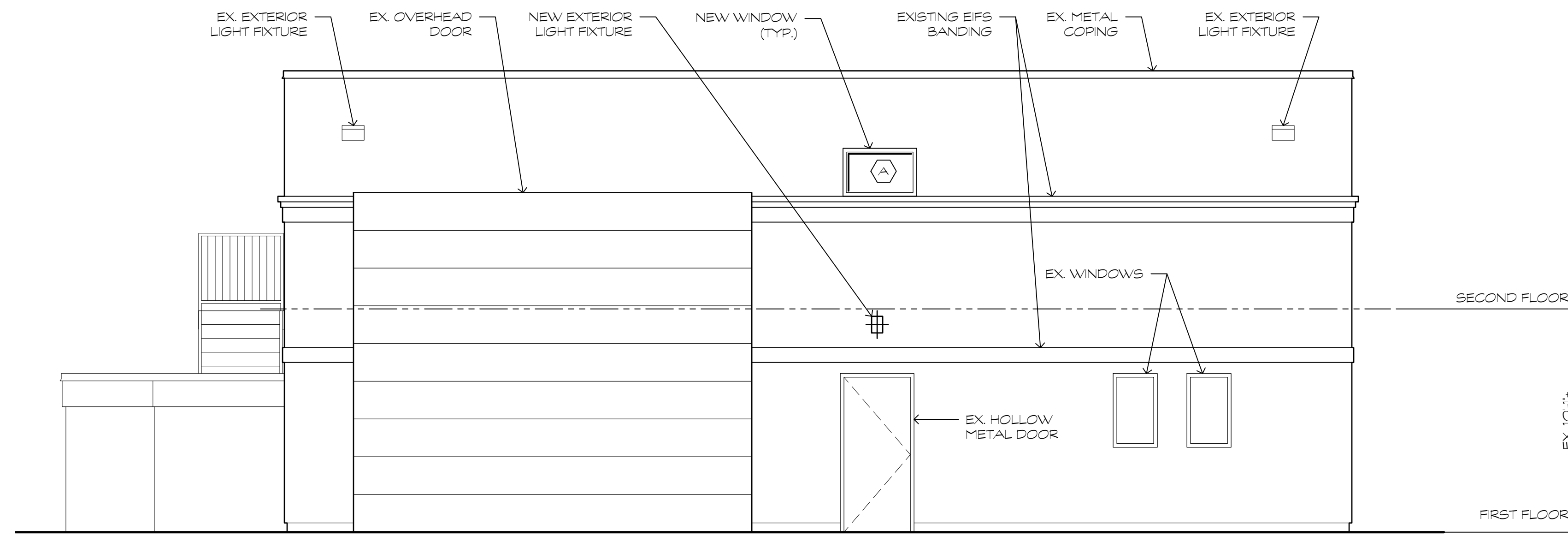
NO.	REVISION	DATE
1	OWNER REVIEW	4-25-22
	OWNER REVIEW	1-17-23

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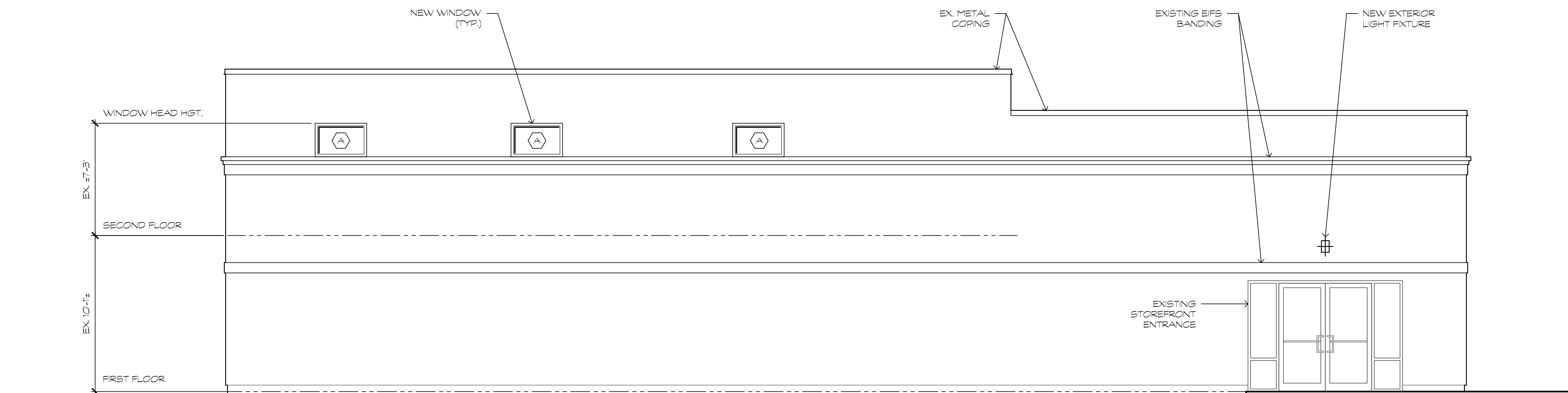
RENOVATION OF:  
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 ROADS BUILDING**  
 BERLIN, MARYLAND

**ROOF PLAN**

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: LKW
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DATE	: 12-6-21



SOUTH ELEVATION



EAST ELEVATION

NO.	REVISION	DATE
1	OWNER REVIEW	4-25-22
	OWNER REVIEW	1-17-23

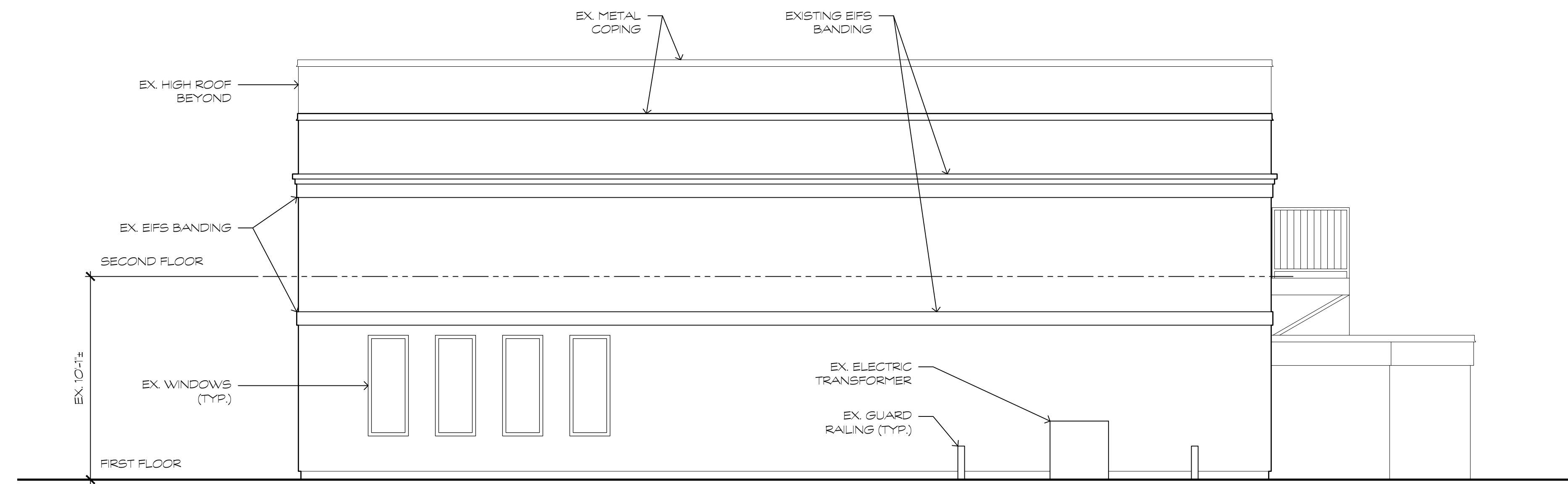
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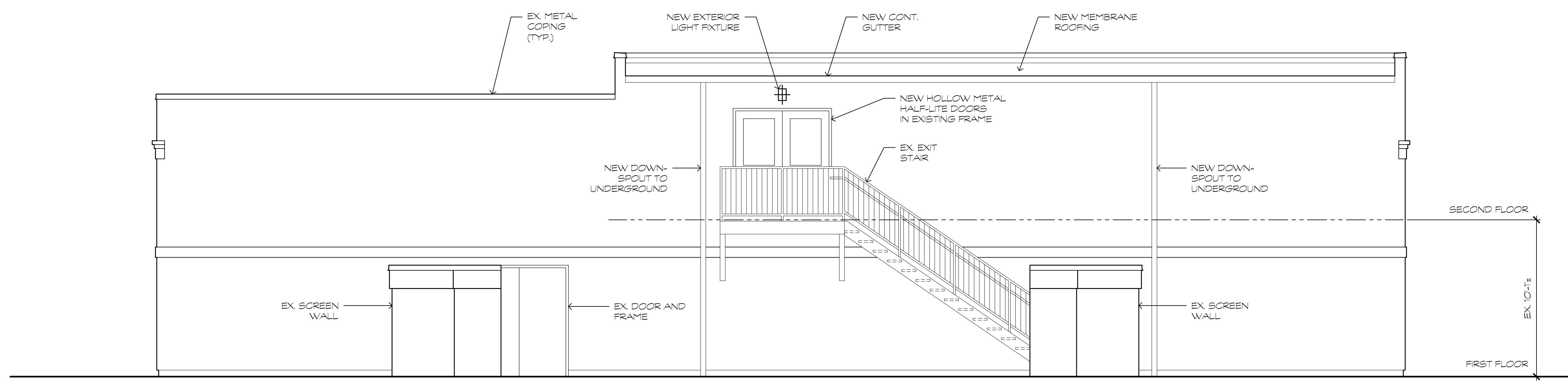
**ELEVATIONS**

SCALE	: 1/4" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: LKW
CHECKED BY	: MHH
GMB FILE	: 210241
DATE	: 12-6-21





NORTH ELEVATION



WEST ELEVATION

NO.	1	REVISION	OWNER REVIEW	DATE	4-25-22
			OWNER REVIEW		1-17-23

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RENOVATION OF:  
**WORCESTER COUNTY  
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 BERLIN, MARYLAND

**ELEVATIONS**

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DOOR SCHEDULE									
DOOR #	ROOM NAME	TYPE	MATL.	SIZE	THICK	RATING	FRAME	HARDWARE	REMARKS
100A	CLOSET	B	WD	2'-8" x 6'-8"	1 3/8"	--	F-1	HW-1	PRE-HUNG UNIT, PASSAGE LOCK
101A	STAIR	A	WD	3'-0" x 6'-8"	1 3/4"	1 HR.	F-1	HW-2	
200A	STAIR	A	WD	3'-0" x 6'-8"	1 3/4"	1 HR.	F-1	HW-2	
203A	BREAK ROOM	C	WD	6'-0" x 6'-8"	1 3/8"	--	F-1	HW-4	PRE-HUNG UNIT
203B	BREAK ROOM	B	WD	3'-0" x 6'-8"	1 3/8"	--	F-1	HW-1	PRE-HUNG UNIT, PASSAGE LOCK
204A	MECHANICAL ROOM	B	WD	3'-0" x 6'-8"	1 3/8"	--	F-1	HW-1	PRE-HUNG UNIT, PASSAGE LOCK
205A	EX. TOILET	B	WD	3'-0" x 6'-8"	1 3/8"	--	F-1	HW-1	SEE MECHANICAL DRAWINGS FOR UNDERCUT DIM. - PRE-HUNG UNIT, PRIVACY LOCK
207A	JANITOR CLOSET	B	WD	3'-0" x 6'-8"	1 3/8"	--	F-1	HW-1	SEE MECHANICAL DRAWINGS FOR UNDERCUT DIM. - PRE-HUNG UNIT, PASSAGE LOCK
208A	SHARED OFFICE	D	HM	PAIR 3'-0" x 6'-8"	1 3/4"	--	F-1	HW-3	INSULATED GALV. DOOR IN EXISTING FRAME

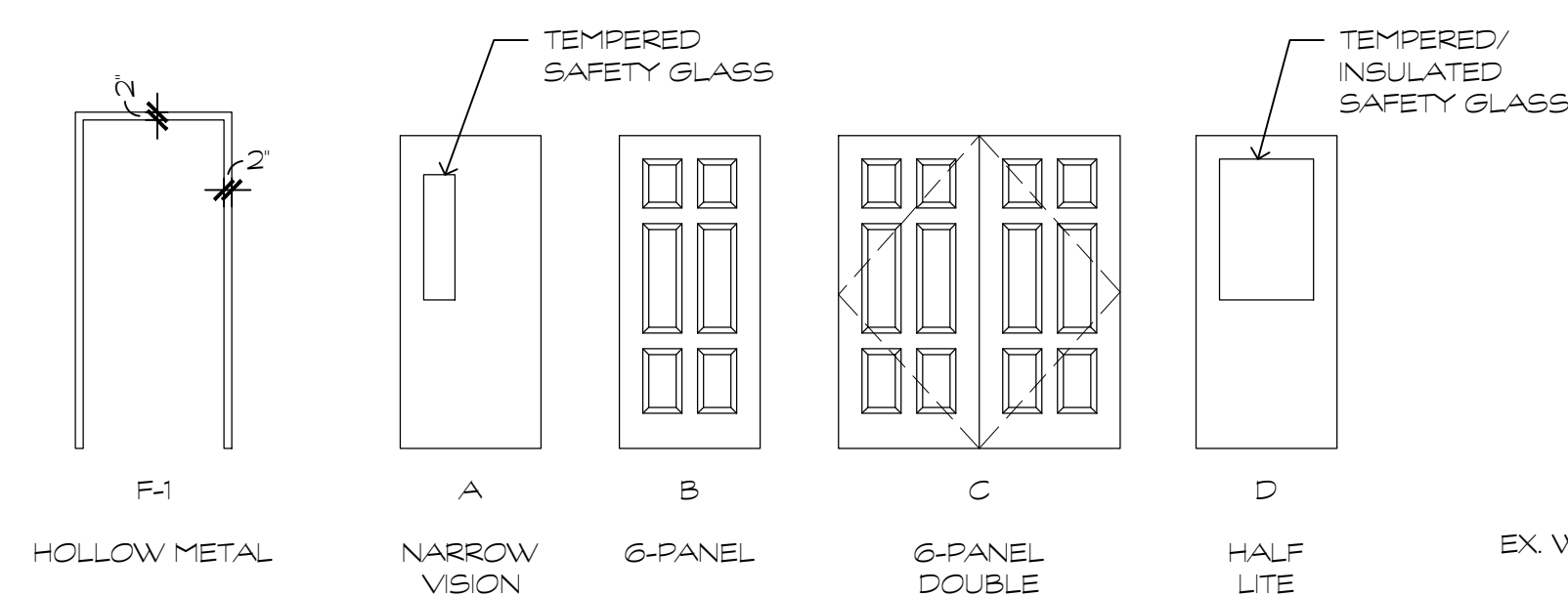
### HARDWARE SETS:

- HW-1  
1 SN RESIDENTIAL LEVER STYLE
- HW-2  
1 3/4" PR HINGES (BB)  
1 PASSAGE LOCKSET (LEVER TYPE)  
1 WALL BUMPER  
2 KICKPLATES  
1 CLOSER
- HW-3  
3 PR HINGES (BB)  
1 ENTRY LOCKSET (LEVER TYPE)  
1 T&B FLUSHBOLTS (INACTIVE LEAF)  
1 CLOSER (ACTIVE LEAF)  
1 WEATHERSTRIP  
1 THRESHOLD  
2 KICKPLATES (INTERIOR SIDE ONLY)
- HW-4  
2 SN RESIDENTIAL LEVER STYLE PULLS  
2 TOP OF DOOR BALL CATCH LATCH

FINISH SCHEDULE											
ROOM #	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CLG. HT.	SIGNAGE	NOTES
				N	E	S	W				
100	CLOSET	VINYL	WD	PAINT	PAINT	PAINT	PAINT	PAINT	9'-0"		
101	STAIR	VINYL	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.		
200	STAIR	VINYL	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.		
201	OPEN AREA	CARPET	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.		
202	OPEN CUBICLE	CARPET	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.	●	
203	BREAK ROOM	EX.	EX.	PAINT	PAINT	PAINT	PAINT	PAINT	EX.	●	
204	MECHANICAL ROOM	VINYL	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.		
205	EXISTING TOILET	VINYL	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.	●	
206	CORRIDOR	CARPET	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.		
207	JANITOR CLOSET	VINYL	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.	●	
208	CONFERENCE ROOM	CARPET	WD	PAINT	PAINT	PAINT	PAINT	PAINT	EX.	●	

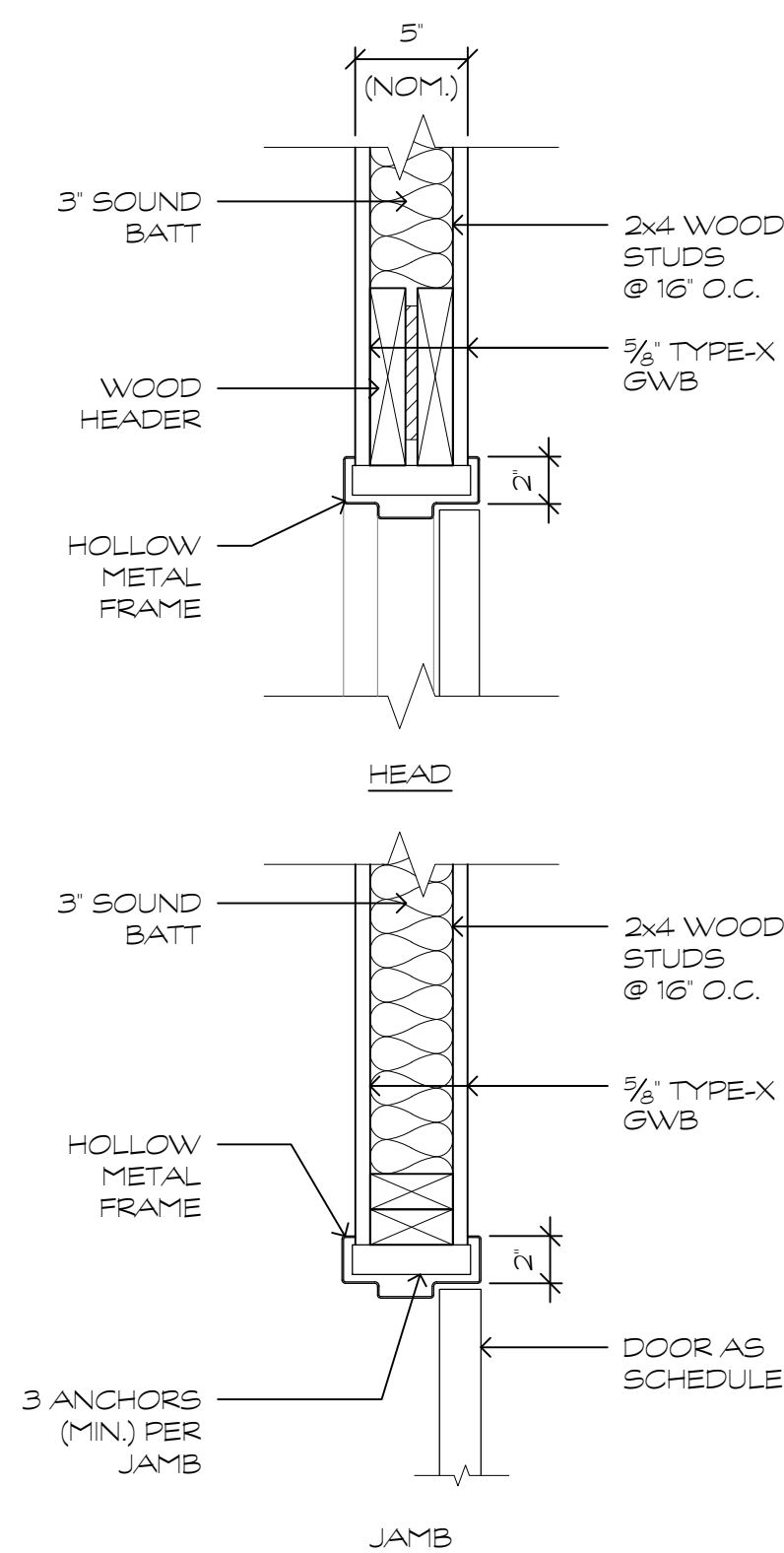
### FINISH NOTES:

- LABELING OF INTERIOR SIGNAGE TO BE COORDINATED WITH OWNER.
- WOOD CASING AND BASE MOLDING TO MATCH.



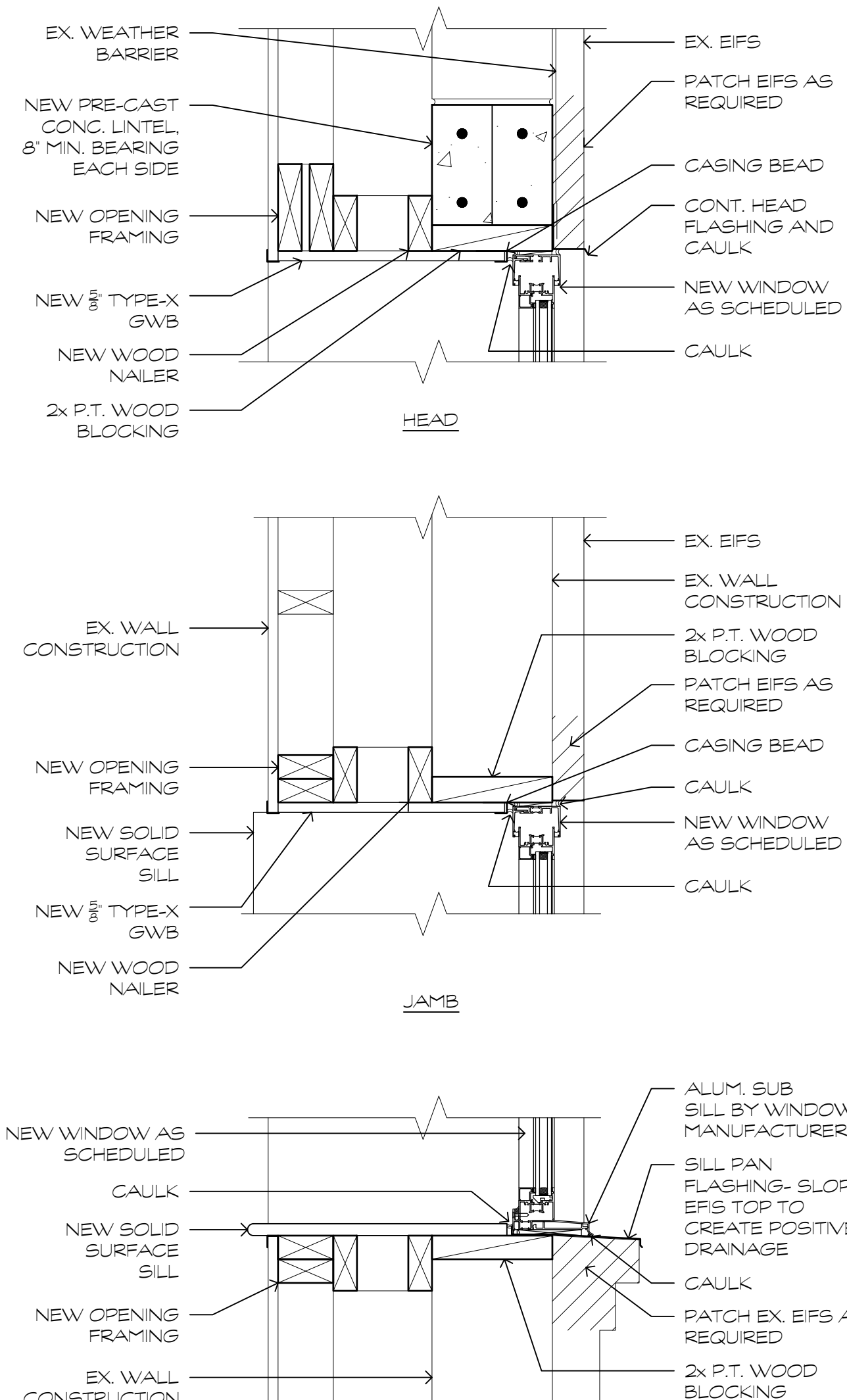
### DOOR AND FRAME TYPES

1/4" = 1'-0"



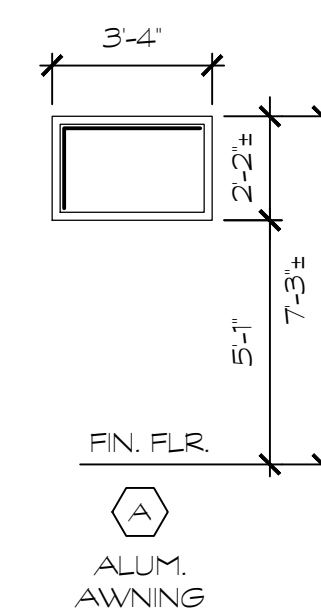
### DOOR DETAILS

1 1/2" = 1'-0"



### WINDOW DETAILS

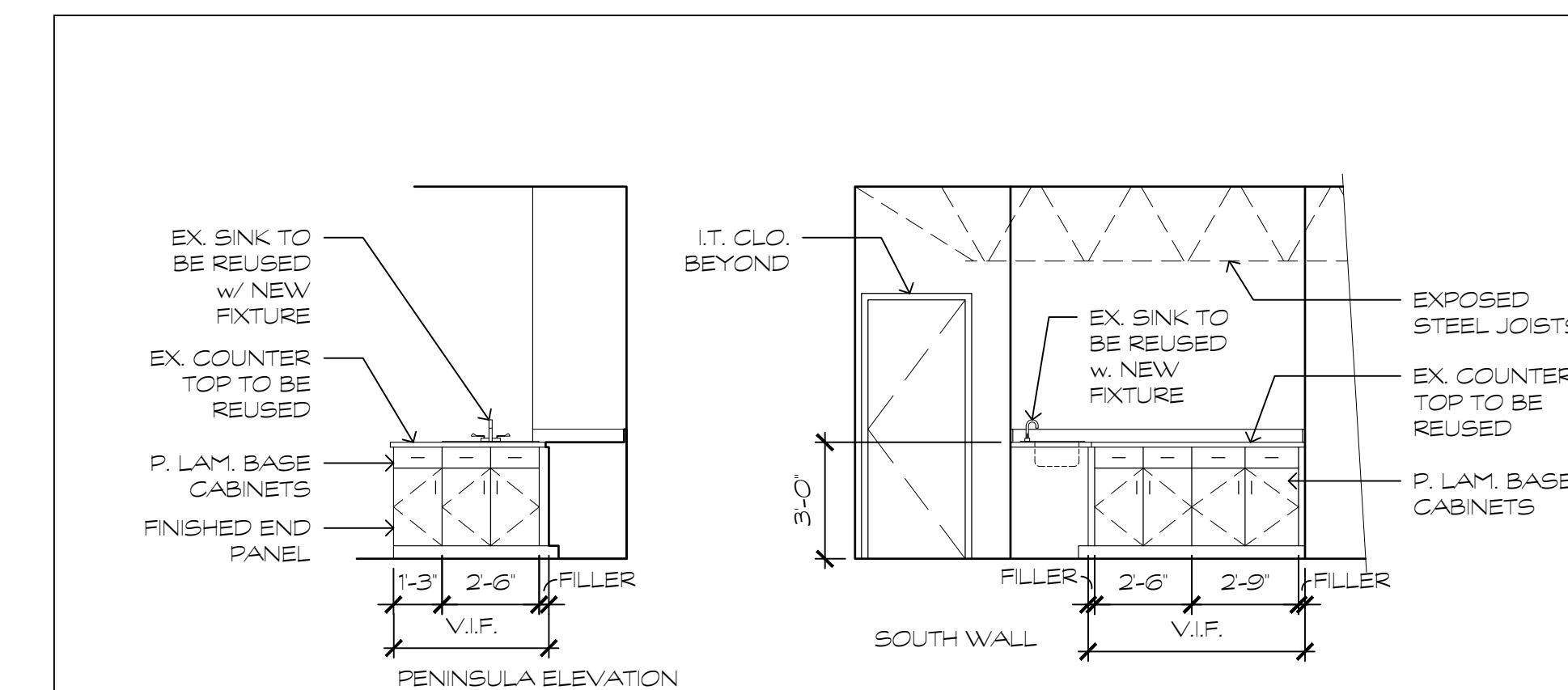
1 1/2" = 1'-0"



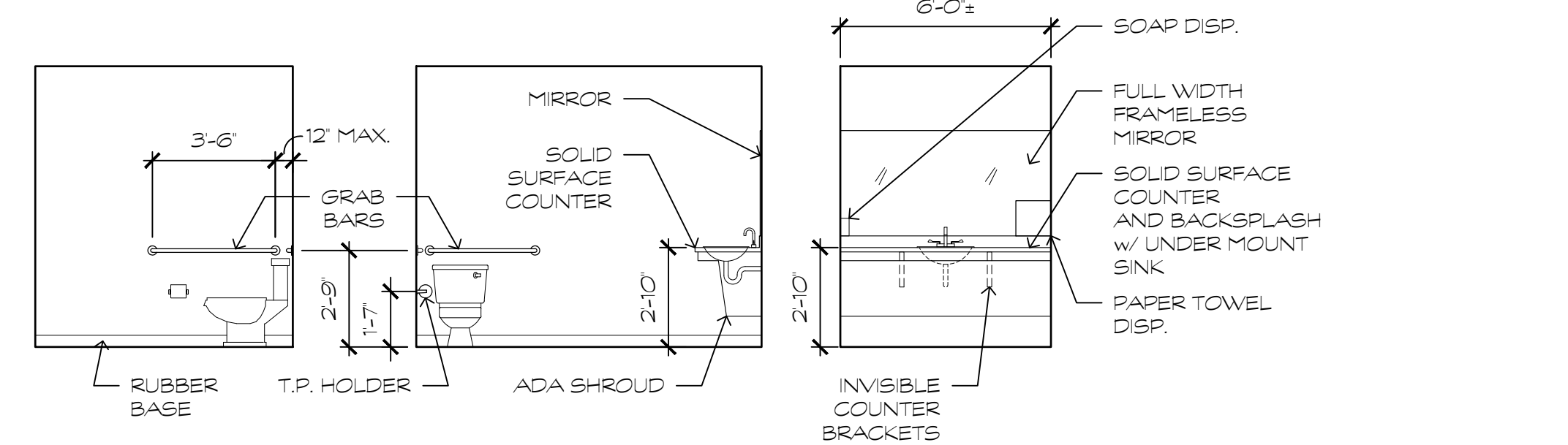
NOTE: WINDOW DIMENSION TO BE DETERMINED BY EXISTING MASONRY OPENINGS. CONTRACTOR TO VERIFY IN FIELD.

### WINDOW SCHEDULE

1/4" = 1'-0"



### BREAK ROOM



### EX. TOILET

### NOTES:

- FIELD VERIFY EXISTING CONDITIONS BEFORE FABRICATION.
- TOILET ACCESSORIES WILL BE PROVIDED AND INSTALLED BY OWNER.

1

### INTERIOR ELEVATIONS

1/4" = 1'-0"

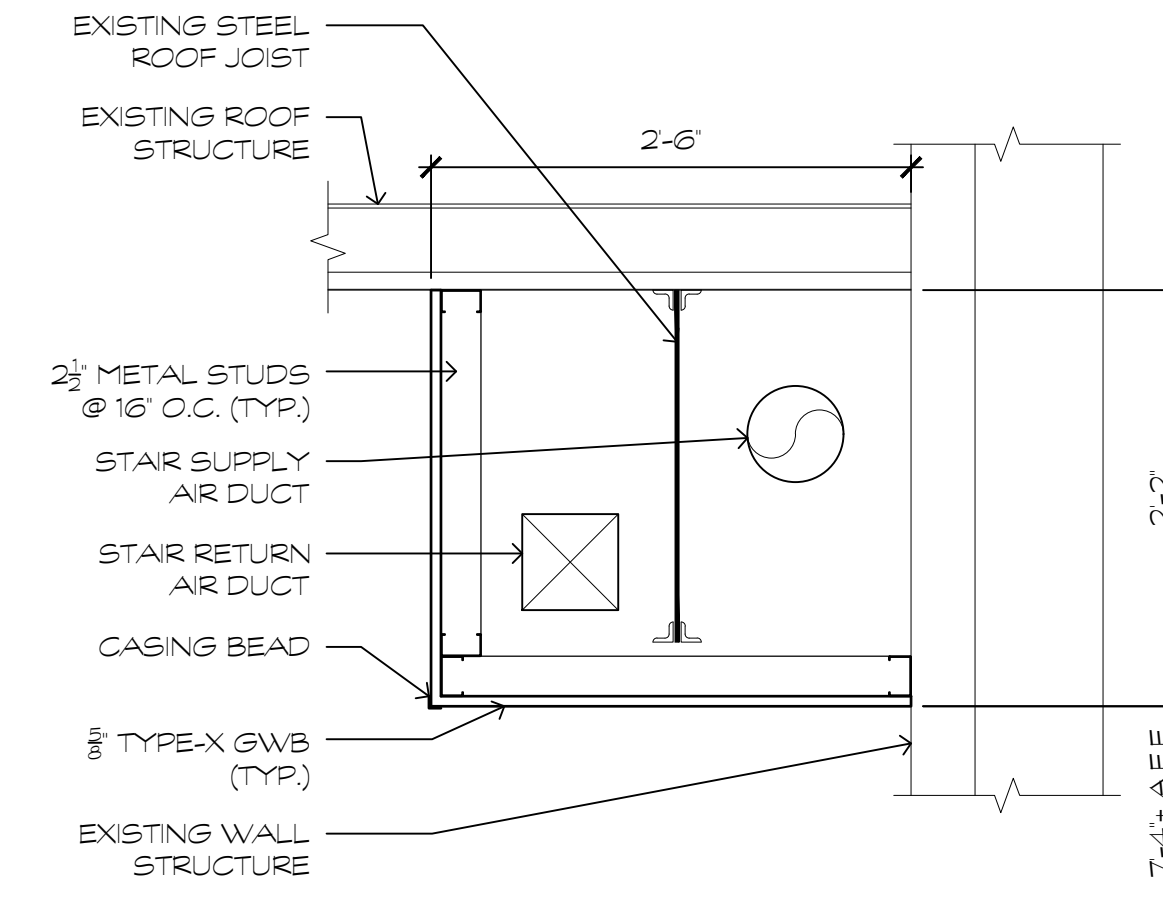


RENOVATION OF:  
**WORCESTER COUNTY  
ROADS BUILDING**  
BERLIN, MARYLAND

SCHEDULES

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: LKW
CHECKED BY	: MHH
GMB FILE	: 210241
DATE	: 12-6-21

A5.1



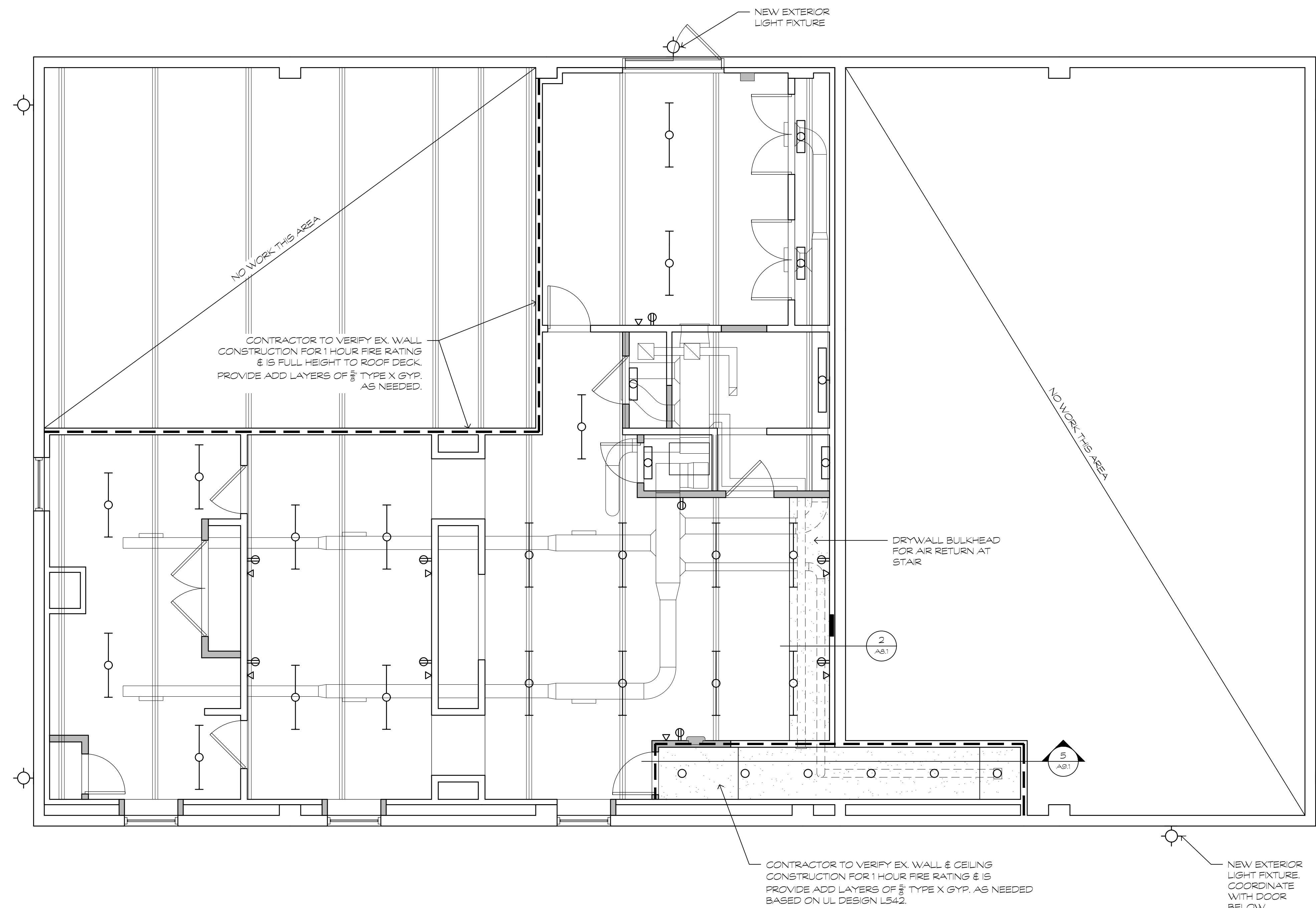
**2 BULKHEAD DETAIL**  
1" = 1'-0"

**LEGEND:**

- 30 MIN. WALL
- ⊕ ADDITIONAL ELECTRIC OUTLET
- △ DATA OUTLET
- ⊙ EXTERIOR SURFACE MOUNTED FIXTURE
- ⊖ SURFACE MOUNTED LED
- RECESSED LED
- ⊖ WALL MOUNTED LED
- ⊖ WALL MOUNTED LED
- ▭ GWB CEILING - 1 HOUR RATING IN STAIR ENCLOSURE

**NOTES:**

1. SEE ELECTRICAL DRAWINGS FOR LIFE SAFETY & NEW LIGHTING INFO & LAYOUT



**1 SECOND FLOOR REFLECTED CEILING PLAN**  
1/4" = 1'-0"

**GMB**  
GEORGE, MILES & BUHR, LLC  
ARCHITECTS & ENGINEERS  
SALISBURY, BALTIMORE, SEAFORD  
www.gmbnet.com

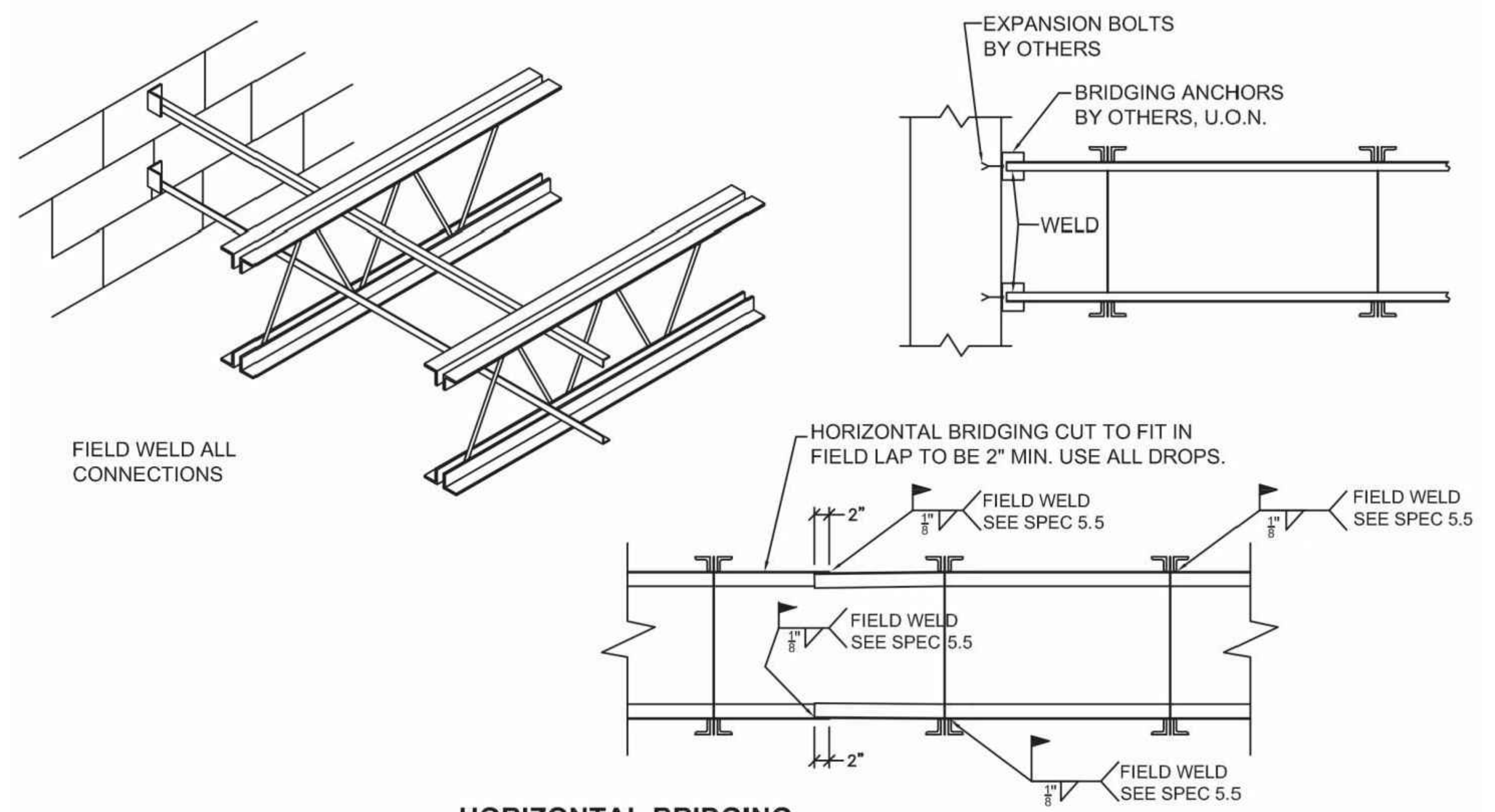
RENOVATION OF:  
**WORCESTER COUNTY  
ROADS BUILDING**  
BERLIN, MARYLAND

**REFLECTED  
CEILING PLAN**

SCALE : 1/4" = 1'-0"  
DESIGN BY : MHH  
DRAWN BY : LKW  
CHECKED BY : MHH  
GMB FILE : 210241  
DATE : 12-6-21

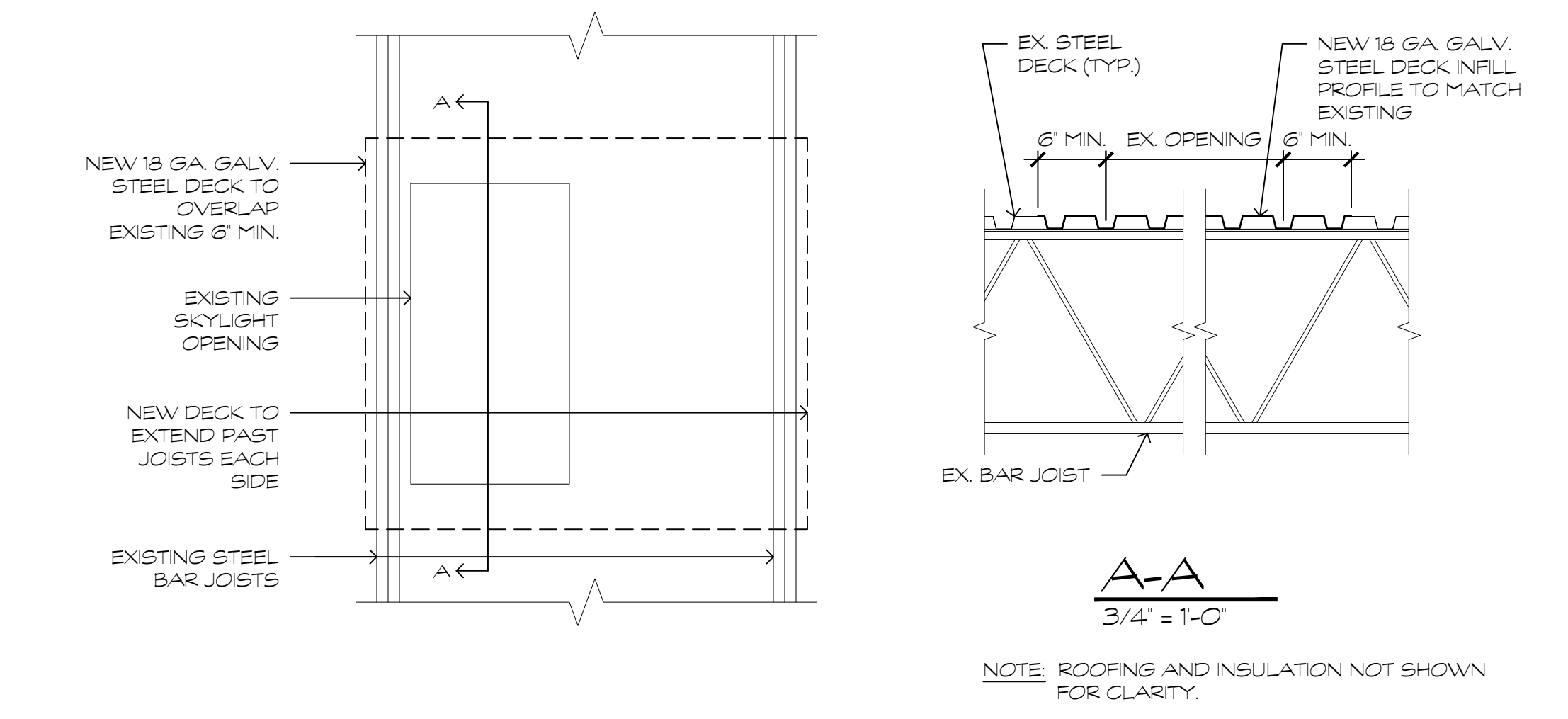
**A8.1**

NO.	REVISION	DATE
1	OWNER REVIEW	4-25-22
	OWNER REVIEW	1-17-23

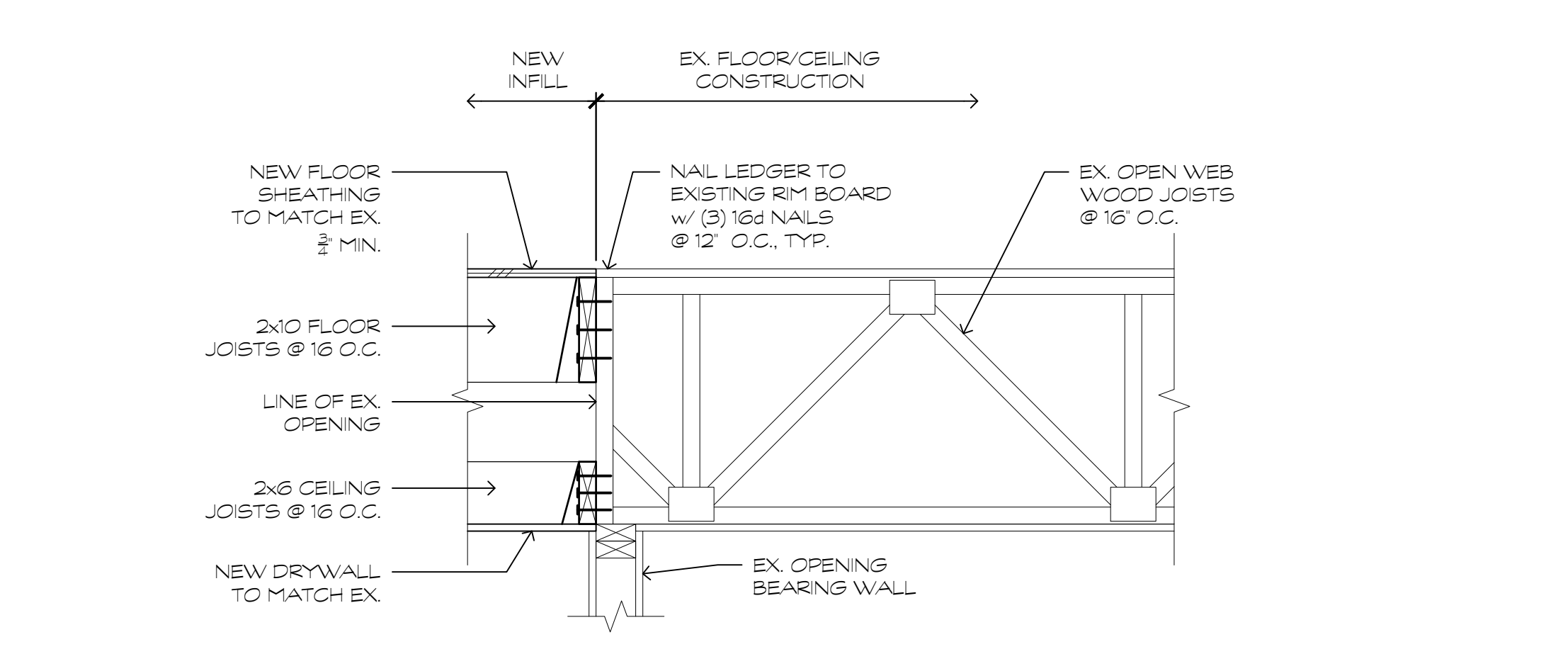


**HORIZONTAL BRIDGING  
SEE SJI SPECIFICATIONS**

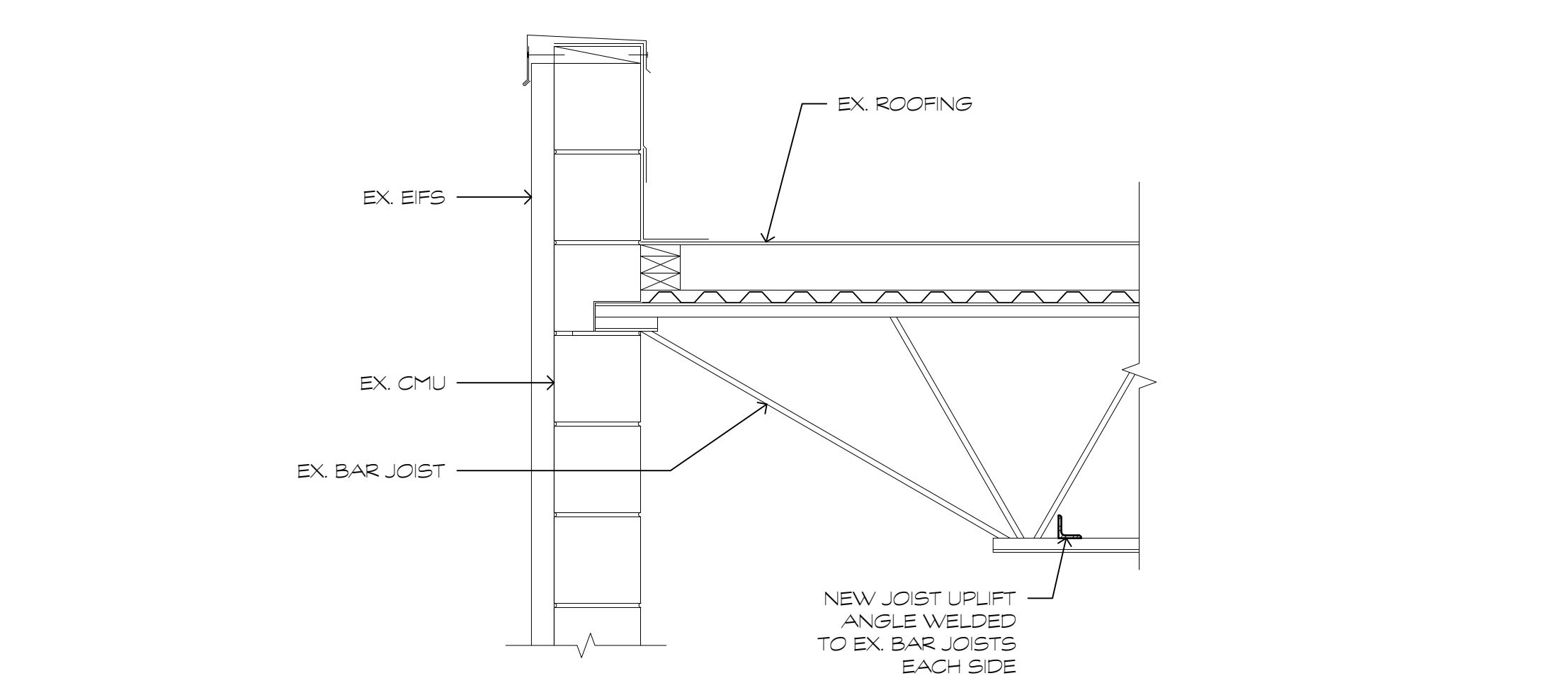
**NOTE: DO NOT WELD BRIDGING TO JOIST WEB MEMBERS. DO NOT HANG ANY MECHANICAL, ELECTRICAL, ETC. FROM BRIDGING.**



**1 TYP. ROOF INFILL DETAIL**  
1/2" = 1'-0" (CHIMNEY INFILL SIMILAR)

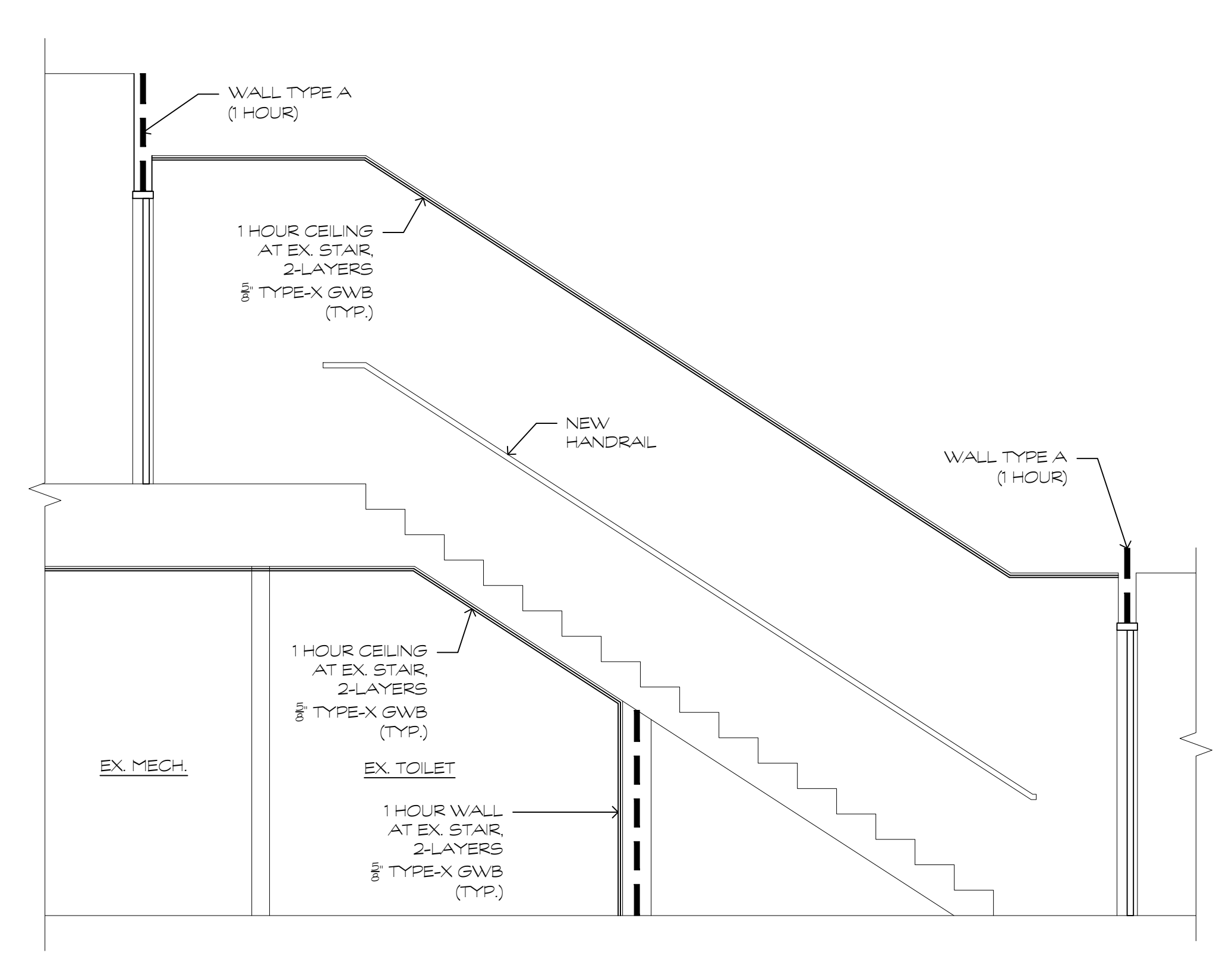


**2 TYP. FLOOR/CEILING INFILL DETAIL**  
1" = 1'-0"

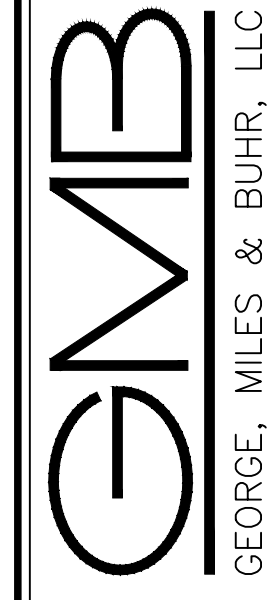


**3 TYP. UPLIFT ANGLE DETAIL**  
1" = 1'-0"

**4 TYP. UPLIFT BRIDGING ATTACHMENT DETAIL**  
N.T.S.



**5 STAIR SECTION RATING DETAIL**  
3/8" = 1'-0"

DATE	4-2-22
REVISION	OWNER REVIEW 1-17-23
NO.	1
 <b>GEORGE, MILES &amp; BUHR, LLC</b> ARCHITECTS & ENGINEERS SALESBURY, BALTIMORE, SEAFORD www.gmbnet.com	
RENOVATION OF: <b>WORCESTER COUNTY</b> <b>ROADS BUILDING</b> BERLIN, MARYLAND	
DETAILS	
SCALE	1/2" = 1'-0"
DESIGN BY	MHH
DRAWN BY	LKGV
CHECKED BY	MHH
GMB FILE	210241
DATE	12-6-21
<b>A9.1</b>	

**GENERAL MECHANICAL NOTES (ALL DRAWINGS):**

- MECHANICAL CONTRACTOR SHALL PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND REQUIRED BY CODE.
- THE CONTRACT DOCUMENT DRAWINGS ARE DIAGRAMMATIC ONLY, AND ARE INTENDED TO CONVEY THE SCOPE AND GENERAL ARRANGEMENT OF WORK.
- ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR BY FIELD INSPECTION PRIOR TO BIDDING. ANY INTERFERENCES TO INSTALLATION SHALL BE NOTED AND THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE THE COST TO AVOID OR RELOCATE ALL ITEMS, INCLUDING ITEMS OF OTHER TRADES, THAT INTERFERE. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. ALL OFFSETS, RISES, TRANSITIONS AND DROPS IN DUCTS AND PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS OR PIPE ADAPTERS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.
- PROVIDE ACCESS IN WALLS & CEILINGS TO ACCESS ALL EQUIPMENT, VALVES, CONTROL DEVICES, VOLUME DAMPERS, AND FIRE/SMOKE DAMPERS.
- FOLLOW MANUFACTURE'S RECOMMENDATIONS FOR INSTALLATION OF EQUIPMENT. ALSO REFER TO TYPICAL DETAILS FOR INSTALLATION OF EQUIPMENT.
- ALL MATERIALS FURNISHED, AND ALL WORK PERFORMED BY THE MECHANICAL CONTRACTOR SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE LATEST APPLICABLE EDITIONS OF NFPA, IECE, OSHA, SMACNA, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL BUILDING CODE, AND ANY STATE, COUNTY, AND LOCAL CODES.
- ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED SUFFICIENTLY AND ANY ADDITIONAL SUPPORT SHALL BE PROVIDED AS REQUIRED TO PROVIDE VIBRATION FREE AND SAFE INSTALLATION. ALL MISCELLANEOUS STEEL REQUIRED AND/OR AS SHOWN IN DETAILS FOR DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. SUPPORT ALL DUCTWORK, PIPING AND EQUIPMENT MOUNTED ABOVE THE CEILING DIRECTLY FROM THE STRUCTURE. ALL ATTACHMENTS TO BEAMS, TRUSSES, OR JOIST SHALL BE MADE AT PANEL POINTS WITH BEAM CLAMPS MEETING MSS STANDARDS.
- ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH NEC AND ELECTRICAL SPECIFICATIONS FOR THIS PROJECT.

**DUCTWORK GENERAL NOTES (ALL DRAWINGS):**

- ALL DUCTWORK INDICATED IS SCHEMATIC AND SHOW ONLY RELATIVE POSITIONS. PROVIDE OFFSETS, RISES, TRANSITIONS AND ELBOWS AS NEEDED TO INSTALL PROPERLY.
- PROVIDE ACCESS DOORS IN DUCTWORK FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL HVAC DEVICES, FANS, DAMPERS, (FIRE, SMOKE, BALANCING) COILS, AND TERMINAL EQUIPMENT.
- LOCATIONS OF TERMINAL DEVICES, AIR OUTLETS AND INLETS ARE APPROXIMATE. LOCATE PER THE ARCHITECTURAL DRAWINGS AND TO AVOID OTHER TRADES WORK. COORDINATE LOCATIONS WITH OTHER TRADES. CONSULT ARCHITECT/ENGINEER FOR CLARIFICATION IF CONFLICTS OCCUR.
- DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE FACE-TO-FACE DIMENSIONS AND DO NOT INCLUDE DUCT LINER WHERE SPECIFIED. INCREASE DIMENSIONS OF LINED DUCTWORK TO PROVIDE FREE INSIDE AREA EQUAL DIMENSIONS SHOWN. REFER TO THE SPECIFICATIONS FOR LOCATION OF LINED DUCTWORK.
- FINAL CONNECTIONS FROM HIGH VELOCITY MAIN DUCTS TO AIR TERMINAL UNITS SHALL BE MADE WITH FLEXIBLE DUCTWORK NOT EXCEEDING 3 FEET IN LENGTH. CONNECTIONS BETWEEN LOW VELOCITY DUCTWORK AND/OR TERMINAL UNITS TO AIR INLETS AND OUTLETS SHALL BE MADE WITH FLEXIBLE DUCTWORK NOT EXCEEDING 6 FEET IN LENGTH. LONGER DUCT RUN OUTS SHALL BE CONSTRUCTED OF HARD DUCT OF THE SAME MATERIAL SPECIFIED FOR THE SYSTEM SERVED AND INSULATED AS SPECIFIED FOR THAT SYSTEM. FLEXIBLE DUCTWORK SHALL BE OF THE PRESSURE CLASS AND FACTORY INSULATED AS SPECIFIED FOR THE SYSTEM WHERE INSTALLED.
- FLEXIBLE DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WITHOUT ANY SAGS, SHARP TURNS OR KINKS. AT THE MINIMUM, THE FLEXIBLE DUCTWORK SHALL BE FASTENED TO THE HARD DUCT BY A NYLON STRAP SECURED BY SHEETMETAL SCREWS TO PREVENT SLIPPING OFF FROM COLLAR.
- PROVIDE VOLUME DAMPERS AT EACH AIR OUTLET, AIR INLET AND TERMINAL DEVICE AND AT EACH BRANCH TAKE-OFF CONNECTION FROM THE MAIN.

MECHANICAL DUCTWORK & GENERAL SYMBOLS LEGEND		
SYMBOL	ABRV.	DESCRIPTION
	XTR	EXISTING EQUIPMENT OR DUCTWORK TO REMAIN
	RX	EXISTING EQUIPMENT OR DUCTWORK TO BE REMOVED
		NEW EQUIPMENT OR DUCTWORK
		LINED DUCTWORK
		SUPPLY DUCT UP
		SUPPLY DUCT DOWN
		RETURN / EXHAUST DUCT UP
		RETURN / EXHAUST DUCT DOWN
		ROUND DUCT ELBOW UP
		ROUND DUCT ELBOW DOWN
		ELBOW WITH TURNING VANES
		DUCT OFFSET UP
		DUCT OFFSET DOWN
		SQUARE / RECTANGULAR DUCT TRANSITION
		SQUARE/RECTANGULAR TO ROUND DUCT TRANSITION
	CD	CEILING DIFFUSER - ROUND NECK - # THROW DIRECTIONS
	SD	SUPPLY DIFFUSER - RECTANGULAR - MULTI-DIRECT.
	SG/EG	SIDEWALL SUPPLY or RETURN GRILLE - (R = REGISTER)
	LD	LINEAR DIFFUSER. SEE SCHEDULE FOR INFORMATION.
	RG/EG	RETURN or EXHAUST GRILLE - (R = REGISTER)
		FLEXIBLE DUCT
	FLEX	FLEXIBLE DUCT CONNECTION (TO EQUIPMENT)
		SPIN TAP WITH VOLUME CONTROL DAMPER
	AD	DUCT ACCESS DOOR
	VD	VOLUME CONTROL DAMPER
	BDD	BACKDRAFT DAMPER
	MD	MOTORIZED DAMPER
	FD	VERTICAL FIRE DAMPER (WALL)
	HFD	HORIZONTAL FIRE DAMPER (FLOOR)
	SD	VERTICAL SMOKE DAMPER (WALL)
	HSD	HORIZONTAL SMOKE DAMPER (FLOOR)
	FD/SD	COMBINATION VERTICAL FIRE & SMOKE DAMPER
	HFD/SD	COMBINATION HORIZONTAL FIRE & SMOKE DAMPER
	RD	CEILING RADIATION FIRE DAMPER
	DD	DUCT SMOKE DETECTOR
	T	THERMOSTAT
	H	HUMIDISTAT
	SP	STATIC PRESSURE SENSOR
	CO2	CARBON DIOXIDE SENSOR
	CO	CARBON MONOXIDE SENSOR
	TAG #	EQUIPMENT UNIT DESIGNATION
	TAG CFM	DIFFUSER, REGISTER & GRILLE UNIT DESIGNATION W/ CFM
		UNDER CUT DOOR
		LOUVERED DOOR
		CONNECTION POINT, NEW TO EXISTING
		DISCONNECTION POINT
	1	DRAWING KEYNOTE
	1	DEMOLITION DRAWING KEYNOTE
		REVISION NUMBER
	RA or EA	RETURN OR EXHAUST AIR
	SA or OA	SUPPLY OR OUTSIDE AIR

MECHANICAL PIPING SYMBOLS LEGEND		
SYMBOL	ABRV.	DESCRIPTION
	HWS	HEATING WATER SUPPLY PIPING
	HWR	HEATING WATER RETURN PIPING
	CWS	CONDENSER WATER SUPPLY PIPING
	CWR	CONDENSER WATER RETURN PIPING
	CHWS	CHILLED WATER SUPPLY PIPING
	CHWR	CHILLED WATER RETURN PIPING
	G	NATURAL GAS PIPING
	D	CONDENSATE DRAIN PIPING
	R	REFRIGERANT PIPING
	LPS	LOW PRESSURE STEAM SUPPLY PIPING (0-15 PSIG)
	MPS	MEDIUM PRESSURE STEAM SUPPLY PIPING (16-60 PSIG)
	HPS	HIGH PRESSURE STEAM SUPPLY PIPING (61 TO 200 PSIG)
	LPR	LOW PRESSURE STEAM CONDENSATE RETURN
	MPR	MEDIUM PRESSURE STEAM CONDENSATE RETURN
	HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
	PC	PUMPED STEAM CONDENSATE
	V	VENT PIPING
	CW	CITY (DOMESTIC) WATER
	FOS	FUEL OIL SUPPLY PIPING
	FOR	FUEL OIL RETURN PIPING
		ELBOW TURNED UP
		ELBOW TURNED DOWN
		BOTTOM PIPE CONNECTION
		TOP PIPE CONNECTION
		PIPING CAP
		UNION
		FLANGED CONNECTION
		CONCENTRIC PIPE REDUCER
		ECCENTRIC PIPE REDUCER
		FLOW ARROW
	BV	BALL VALVE
	BFV	BUTTERFLY VALVE
	PV	PLUG VALVE
	GV	GATE VALVE
	GBV	GLOBE VALVE
	CV	CHECK VALVE
		2-WAY CONTROL VALVE
		3-WAY CONTROL VALVE
		CIRCUIT SETTER (BALANCING VALVE)
		STRAINER (W/ BALL VALVE AND CAP)
		BACKFLOW PREVENTER
		PRESSURE REGULATING VALVE
		PRESSURE RELIEF VALVE
		TRIPLE DUTY VALVE WITH MEASURING CONNECTIONS
		PRESSURE GAGE W/ SHUT-OFF
		FLEXIBLE CONNECTOR
		AUTOMATIC AIR VENT
		HOSE BIB
		PIPE ANCHOR
		PIPE GUIDE
		STEAM TRAP

MECHANICAL ABBREVIATIONS	
ABRV.	DESCRIPTION
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
MBH	1000 - BRITISH THERMAL UNITS
KW	1000-WATT (1 KW = 3,412 BTUH)
SENS.	SENSIBLE
LAT.	LATENT
E.A.T.	ENTERING AIR TEMPERATURE
L.A.T.	LEAVING AIR TEMPERATURE
E.W.T.	ENTERING WATER TEMPERATURE
L.W.T.	LEAVING WATER TEMPERATURE
DBWB	DRY BULB / WET BULB
IN. W.G.	INCHES WATER GAUGE (AIR)
FT. W.G.	FEET WATER GAUGE (HYDRONIC)
E.S.P.	EXTERNAL STATIC PRESSURE
T.S.P.	TOTAL STATIC PRESSURE
TG	TRANSFER GRILLE
TR	TOP REGISTER
(E)	EXISTING
R / R	REMOVE EXISTING ITEM & RELOCATE TO NEW LOCATION
UNO	UNLESS NOTED OTHERWISE
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
Ø OR PH	PHASE
Ø	DIAMETER
AFB	ABOVE FINISHED FLOOR
ELEV.	ELEVATION FROM DATUM

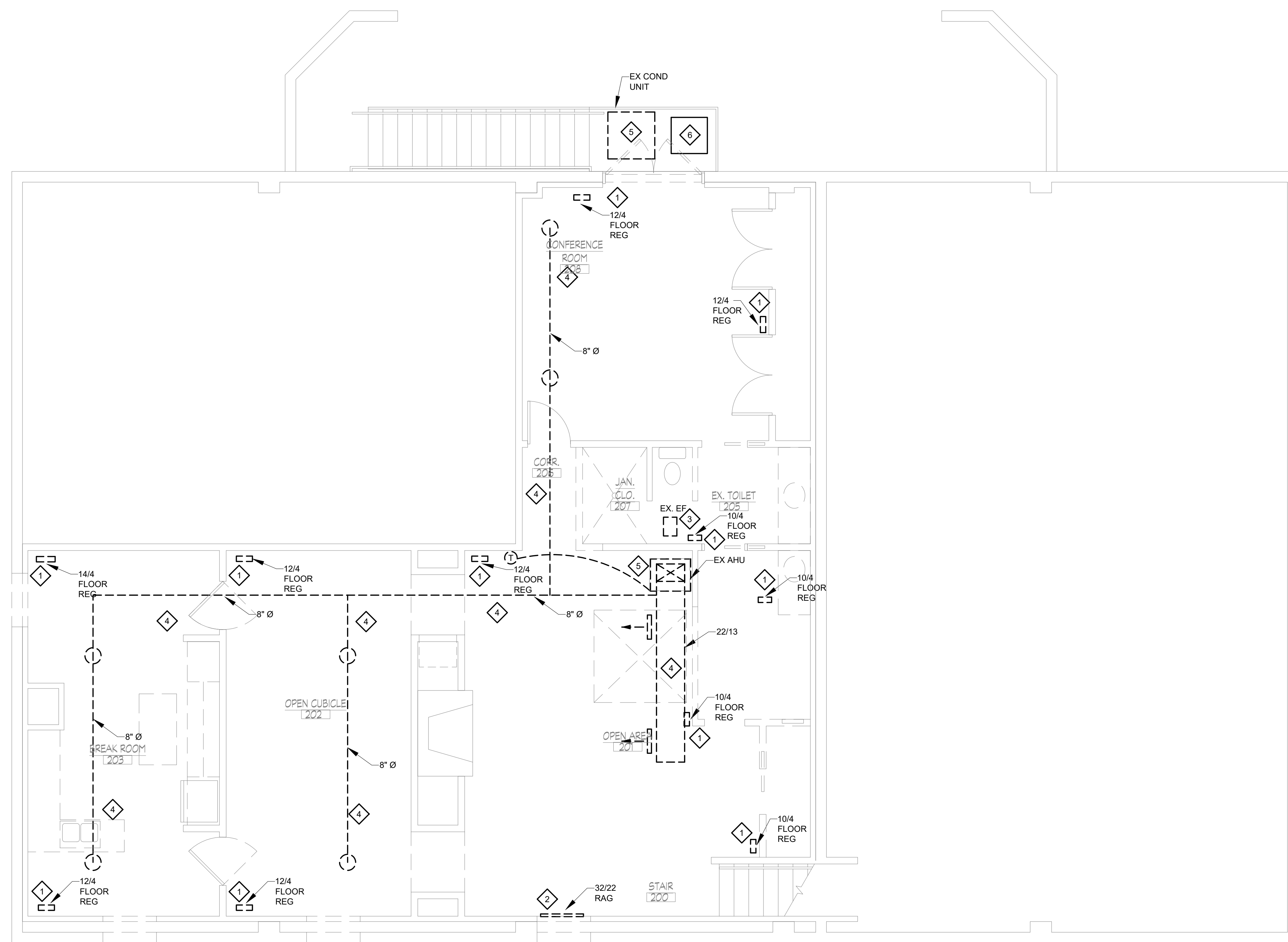
**NOTES:**

- NOT ALL SYMBOLS AND ABBREVIATIONS ARE IN USE FOR THIS PROJECT.

NO.	1	REVISION	OWNER REVIEW	DATE	4-12-22
<b>RENOVATION OF: WORCESTER COUNTY ROADS BUILDING BERLIN, MARYLAND</b>					
<b>MECHANICAL DATA SHEET</b>					
<b>Allen + Shariff</b> MEP Engineering Project Management 205 East Market Street Salisbury, Maryland 21801 443.545.1300					
SCALE : NTS					
DESIGN BY : JHG					
DRAWN BY : AM					
CHECKED BY : JHG					
GMB FILE : 210241					
DATE : 12-06-22					
MO.1					







**MECHANICAL GENERAL NOTES:**

- EXISTING CONDITIONS SHOWN ON THIS DRAWING HAVE BEEN OBTAINED FROM FIELD OBSERVATIONS AND PHOTOS, AND MAY NOT INDICATE ALL ACTUAL EXISTING CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
- EXISTING EQUIPMENT AND DUCTWORK OUTSIDE OF SCOPE OF WORK AREA IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
- PATCH ALL WALL, FLOOR, AND CEILING SURFACES SCHEDULED TO REMAIN, WHERE MEP ELEMENTS ARE BEING REMOVED, TO MATCH EXISTING CONDITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL REMOVED EQUIPMENT.
- RECLAIM REFRIGERANT ON DEMOLISHED UNITS.
- CONDENSING UNITS ARE INSTALLED UNDER THE STAIRWELL.

**MECHANICAL KEY NOTES:**

- REMOVE ALL FLOOR REGISTERS. PATCH FLOOR TO MATCH EXISTING.
- REMOVE RETURN AIR GRILLE. PATCH WALL TO MATCH EXISTING.
- REMOVE EXISTING EXHAUST FAN, DUCTS, WIRING, CONTROLS, ETC. AND DISCARD. PATCH PENETRATION TO MATCH EXISTING.
- REMOVE EXISTING DUCTS, SUPPORTS, AND AIR DEVICES AND DISCARD.
- REMOVE EXISTING UNITS, REFRIGERANT PIPING, CONDENSATE PUMP, CONDENSATE PIPING, CONTROLS, POWER WIRING. TURN OVER UNIT TO OWNER.
- EXISTING CONDENSING UNIT TO REMAIN.

**1** MECHANICAL SECOND FLOOR DEMO PLAN  
M1.1 1/4" = 1'-0"



NO.	1	DATE	4-12-22
REVISION	OWNER REVIEW		

**GMB**  
GEORGE, MILES & BUHR, LLC  
ARCHITECTS & ENGINEERS  
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RENOVATION OF:  
**WORCESTER COUNTY  
ROADS BUILDING**  
BERLIN, MARYLAND

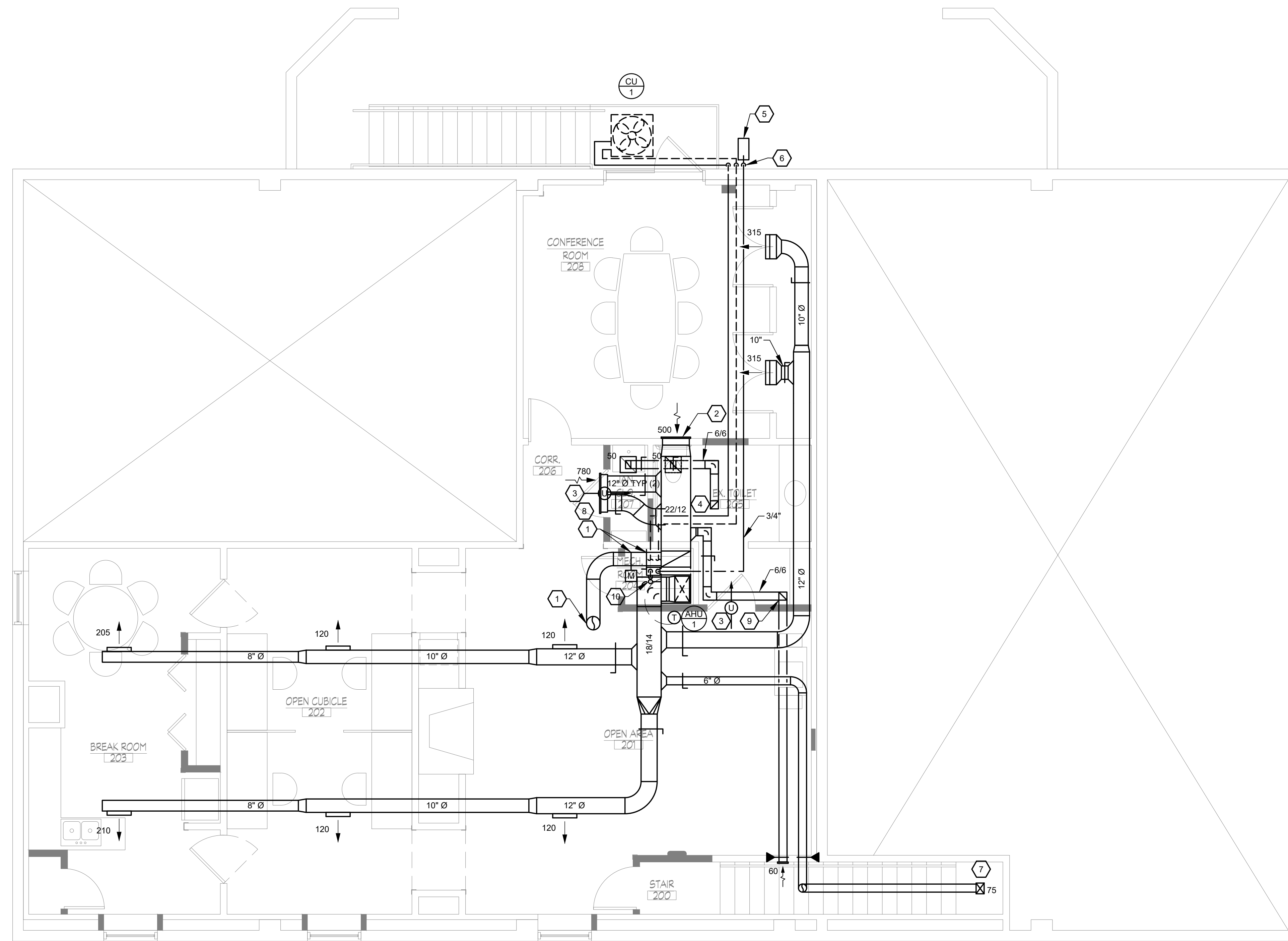
MECHANICAL  
SECOND FLOOR  
DEMO PLAN

**Allen + Shariff**  
MEP Engineering  
Project Management  
205 East Market Street  
Salisbury, Maryland 21801  
443.545.1300

SCALE : 1/4" = 1'-0"  
DESIGN BY : JHG  
DRAWN BY : AM  
CHECKED BY : JHG  
GMB FILE : 210241  
DATE : 12-06-22

M1.1

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ALLEN + SHARIFF JOB# : 2231078



1 MECHANICAL SECOND FLOOR PLAN  
M2.1 1/4" = 1'-0"

**MECHANICAL GENERAL NOTES:**

- EXISTING CONDITIONS SHOWN ON THIS DRAWING HAVE BEEN OBTAINED FROM FIELD OBSERVATIONS AND PHOTOS, AND MAY NOT INDICATE ALL ACTUAL EXISTING CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
- EXISTING EQUIPMENT AND DUCTWORK OUTSIDE OF SCOPE OF WORK AREA IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
- PATCH ALL WALL, FLOOR, AND CEILING SURFACES SCHEDULED TO REMAIN, WHERE MEP ELEMENTS ARE BEING REMOVED, TO MATCH EXISTING CONDITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- OWNER HAS FIRST RIGHT OF REFUSAL FOR ALL REMOVED EQUIPMENT.
- RECLAIM REFRIGERANT ON DEMOLISHED UNITS.
- PATCH/FIRE STOP ALL WALL AND CEILING PENETRATIONS WHERE ALL MEP ITEMS ARE INSTALLED. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- MOUNT ALL THERMOSTATS 48" AFF. EQUAL TO HONEYWELL CG511A1000/C. PROGRAM THERMOSTATS TO OPERATE DURING OWNERS SCHEDULED HOURS OF OPERATION.
- COORDINATE THE INSTALLATION OF ALL MECHANICAL EQUIPMENT, DUCTS, ETC. WITH LIGHTING AND LIGHTING CONTROLS.
- ALL REFRIGERANT PIPING SHALL BE KEPT TIGHT TO BEAMS AND WALLS.
- SUPPORT ALL DUCTS, PIPING, EQUIPMENT, ETC. FROM STRUCTURE ABOVE. PROVIDE ALL STEEL SUPPORTS TO ADEQUATELY SUPPORT THESE ITEMS.
- ALL SUPPLY AIR AND RETURN AIR DUCT SHALL BE INSTALLED WITHIN BAR JOIST SPACE UNLESS OTHERWISE NOTED.
- PROVIDE SOUND LINED DUCT FROM UNIT TO CONFERENCE ROOM, AND RETURN TO HALL WAY. RA DUCT TO STAIRS SHALL NOT BE SOUNDLINED.
- PROVIDE ADEQUATE SPACE IN MECHANICAL CLOSET FOR FUTURE DEHUMIDIFICATION EQUIPMENT. CONSULT WITH OWNER FOR FUTURE REQUIREMENTS.

**MECHANICAL KEY NOTES:** #

- 12" Ø FRESH AIR DUCT UP THROUGH ROOF. TERMINATE VIA GOOSENECK. INSTALL MANUAL VOLUME DAMPER IN DUCT FOR BALANCING (280 CFM). INTERLOCK MOD WITH THE OPERATION OF THE UNIT. MOD SHALL OPERATE DURING OCCUPIED HOURS OF OPERATION ONLY.
- 16/20 RETURN AIR DEVICE INSTALLED HIGH ON WALL.
- COORDINATE WITH ARCHITECT TO PROVIDE UNDERCUT OF 1".
- INSTALL AND CONNECT TO ROOF-TOP EXHAUST FAN AS PER SCHEDULES & DETAILS.
- CONDENSATE TO SPILL ON SPLASH BLOCK SET ON GRADE.
- INSTALL EXTERIOR REFRIGERANT AND CONDENSATE PIPING IN HIDE A LINE SET COVER KIT OR APPROVED EQUAL. PAINT TO MATCH EXTERIOR COLOR SCHEME.
- INSTALL SUPPLY AIR DEVICE AT LOWER LANDING.
- 16/28 RETURN AIR DEVICE INSTALLED ABOVE DOOR.
- PROVIDE RA OFFSET DOWN TO BULKHEAD. SEE ARCHITECTURAL DRAWINGS FOR BULKHEAD LOCATIONS.
- ROUTE 3/4" CONDENSATE FROM AHU INTO CONDENSATE PUMP. ROUTE PUMPED CONDENSATE UP IN CEILING THROUGH CONFERENCE ROOM TO EXTERIOR OF BUILDING.



NO.	1	REVISION	OWNER REVIEW	DATE	4-12-22
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RENOVATION OF:  
**WORCESTER COUNTY  
ROADS BUILDING**  
BERLIN, MARYLAND

MECHANICAL  
SECOND FLOOR  
PLAN

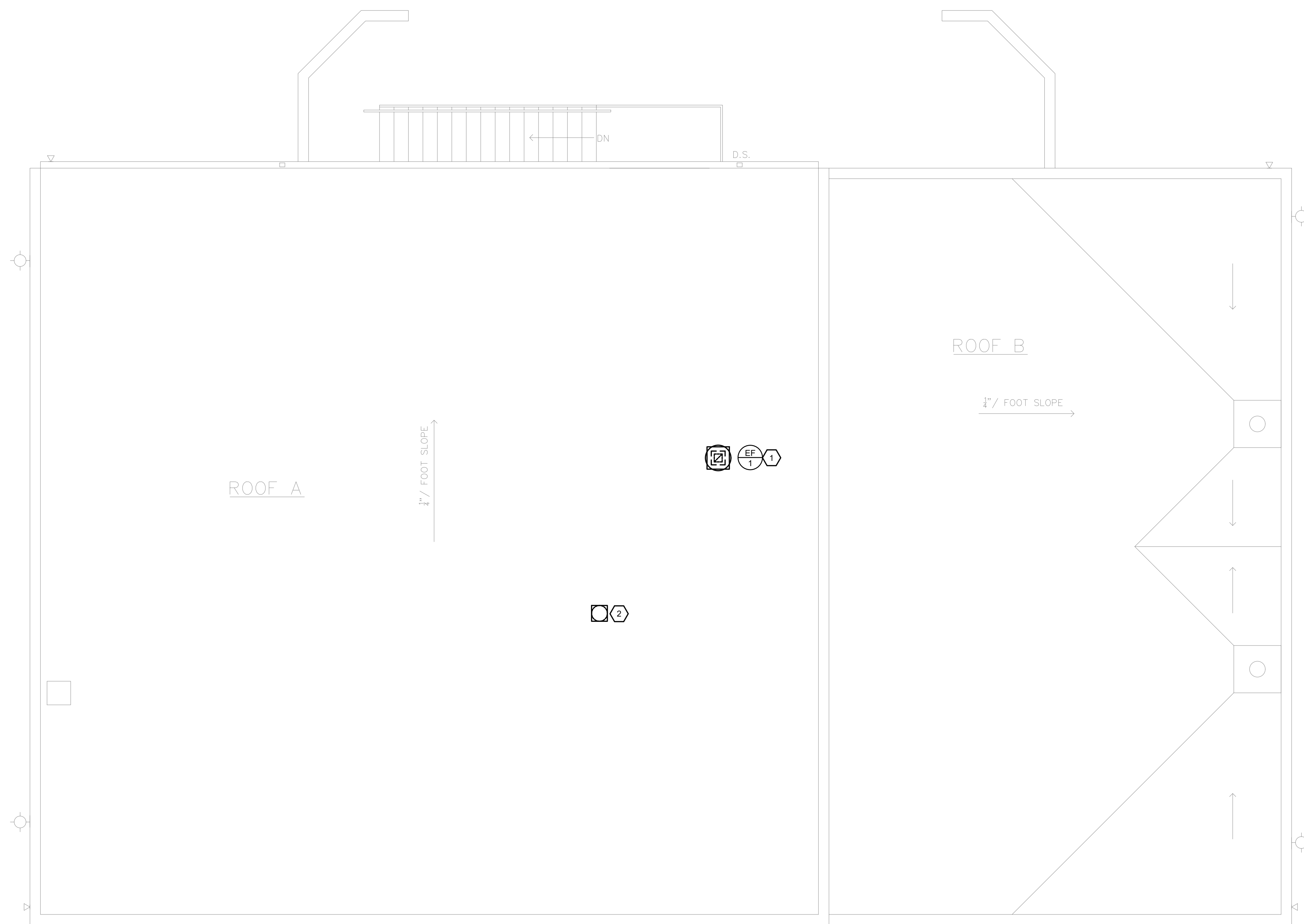
**Allen + Shariff**  
MEP Engineering  
Project Management  
205 East Market Street  
Salisbury, Maryland 21801  
443.545.1300

SCALE	: 1/4" = 1'-0"
DESIGN BY	: JHG
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M2.1

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**MECHANICAL GENERAL NOTES:**

1. EXISTING CONDITIONS SHOWN ON THIS DRAWING HAVE BEEN OBTAINED FROM FIELD OBSERVATIONS AND PHOTOS, AND MAY NOT INDICATE ALL ACTUAL EXISTING CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
2. EXISTING EQUIPMENT AND DUCTWORK OUTSIDE OF SCOPE OF WORK AREA IS EXISTING TO REMAIN UNLESS OTHERWISE NOTED

**MECHANICAL KEY NOTES:** (#)

1. FASTEN CURB TO ROOF AND FAN TO CURB. COORDINATE ROOF CUTTING AND PATCHING WITH ROOFING CONTRACTOR.
2. 12/12 FRESH AIR INTAKE GOOSE NECK FITTING. SEE DETAIL 2/M301.

ROOF PLAN

1 MECHANICAL ROOFPLAN  
M2.1 1/4" = 1'-0"



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MECHANICAL  
SECOND FLOOR  
PLAN

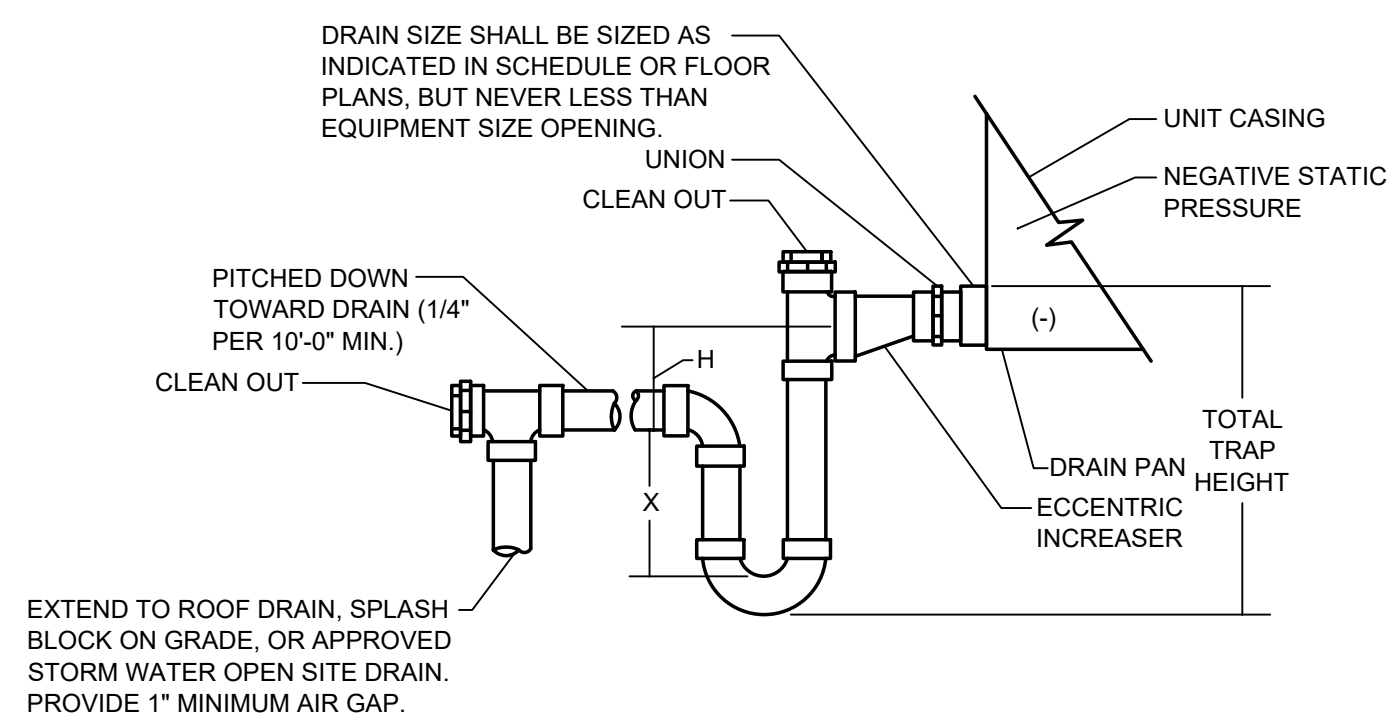
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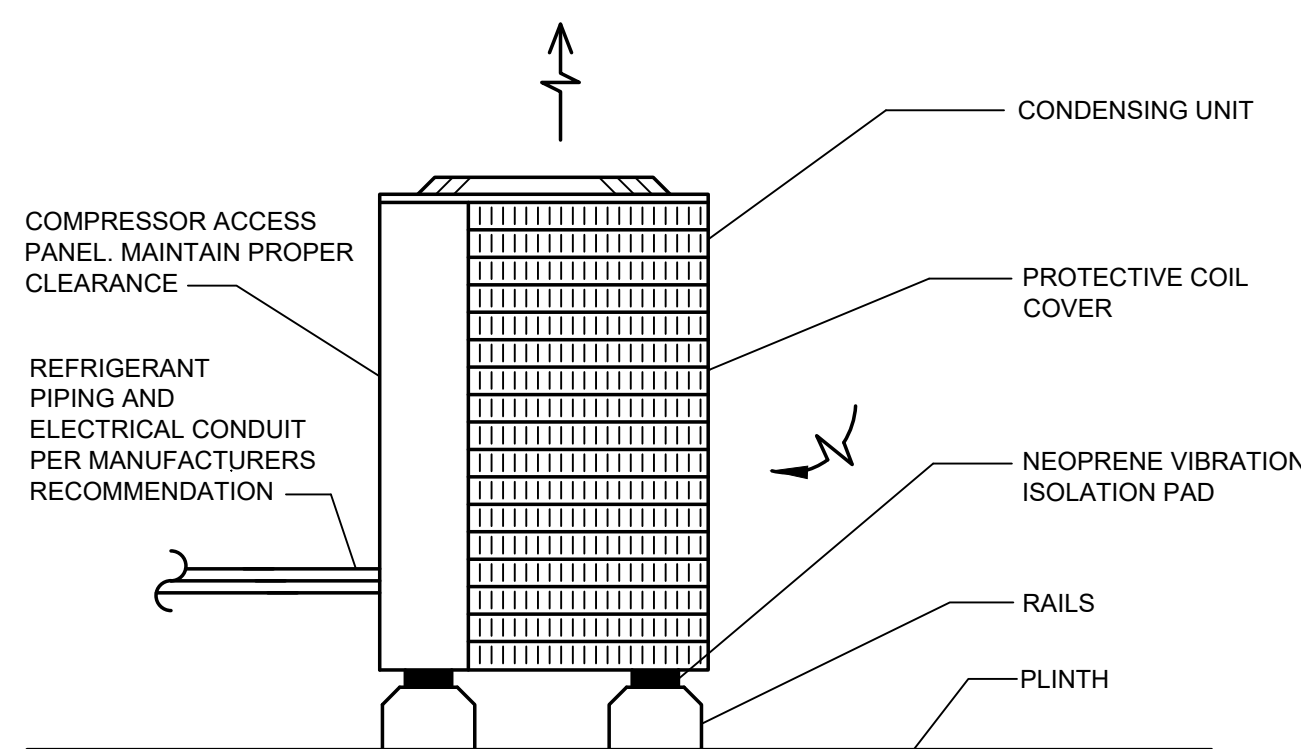
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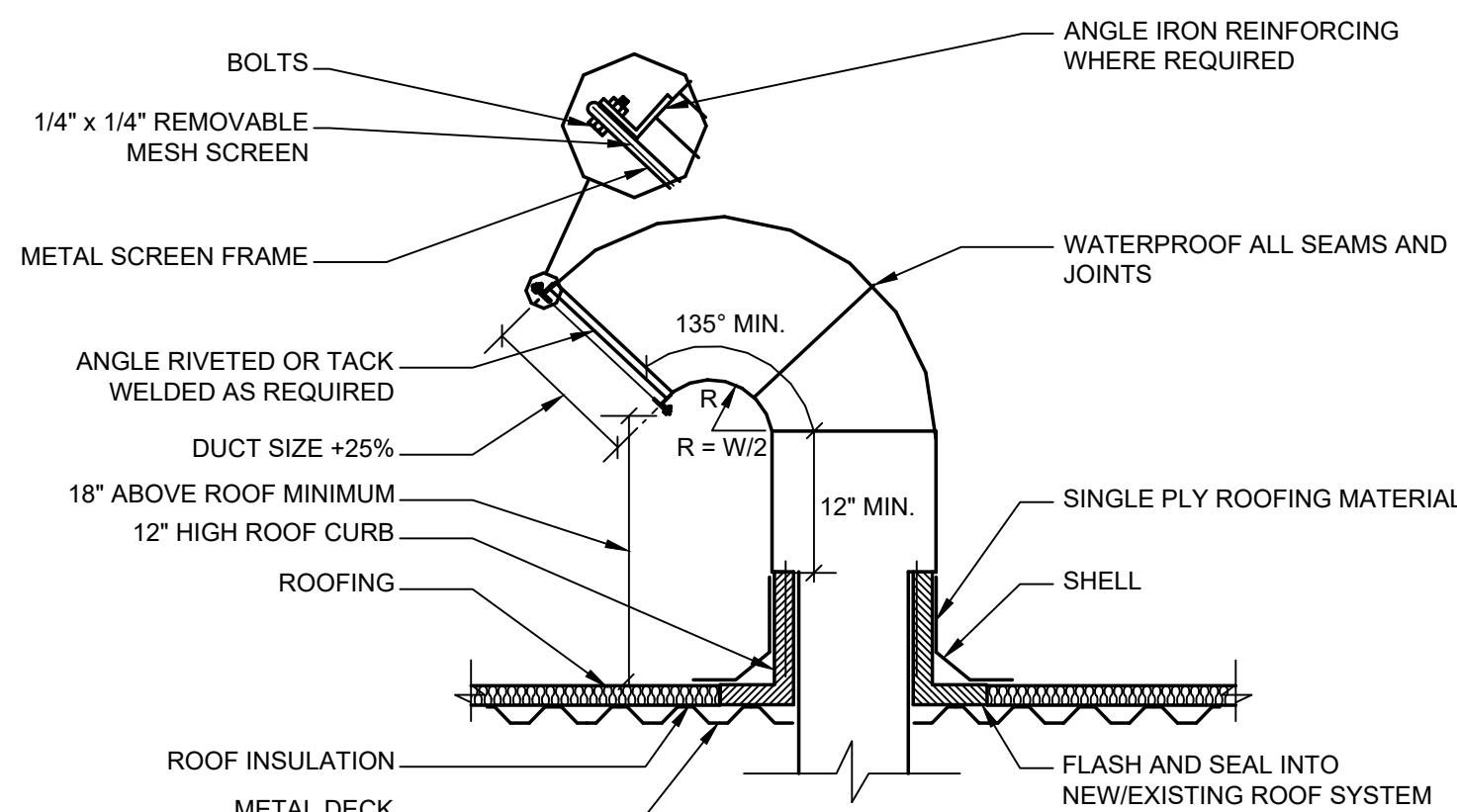
TRAP SIZING	
"H" MUST EQUAL 1 INCH PLUS CASING STATIC PRESSURE	
"X" = 1/2 "H"	
TOTAL TRAP HEIGHT = "X" + "H" + (1.5 X PIPE DIAMETER) + INSULATION THICKNESS	



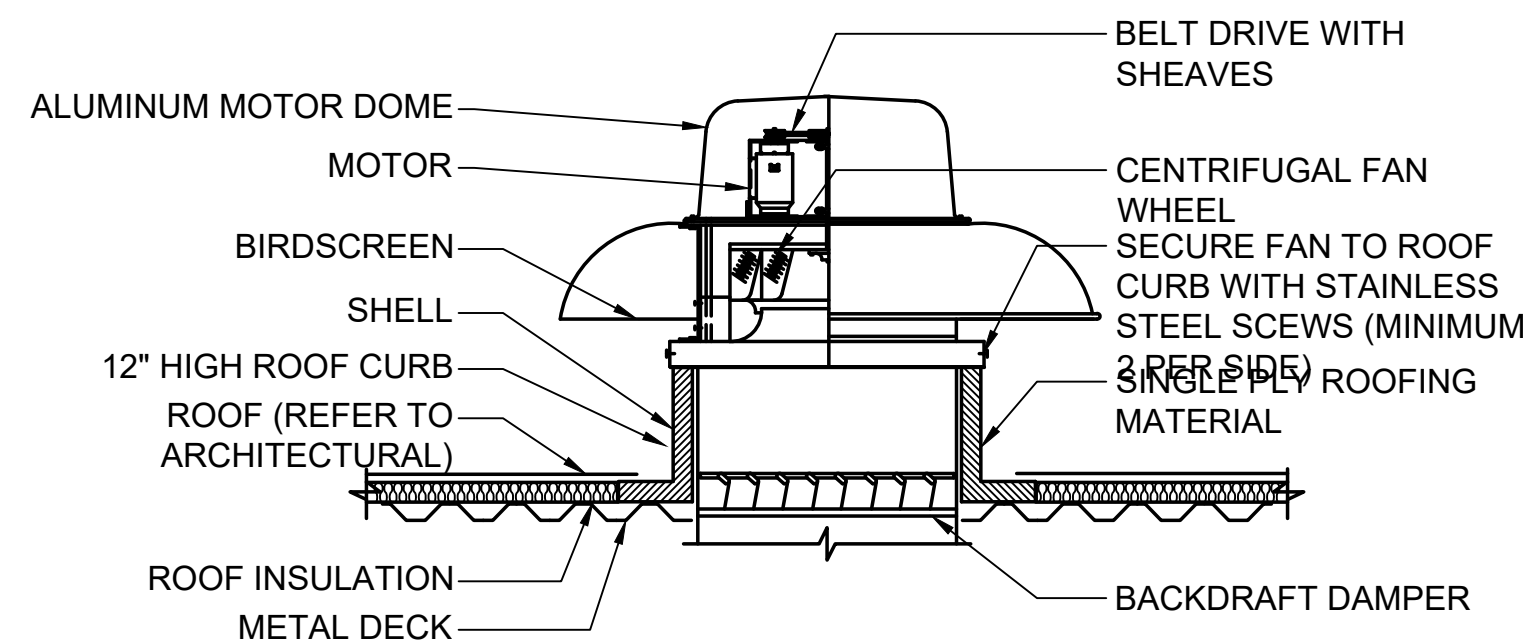
**1 A/C CONDENSATE DRAIN TRAP ASSEMBLY DETAIL -**  
**M301 TYPICAL DRAW-THROUGH OR NEGATIVE PRESSURE**  
 NOT TO SCALE



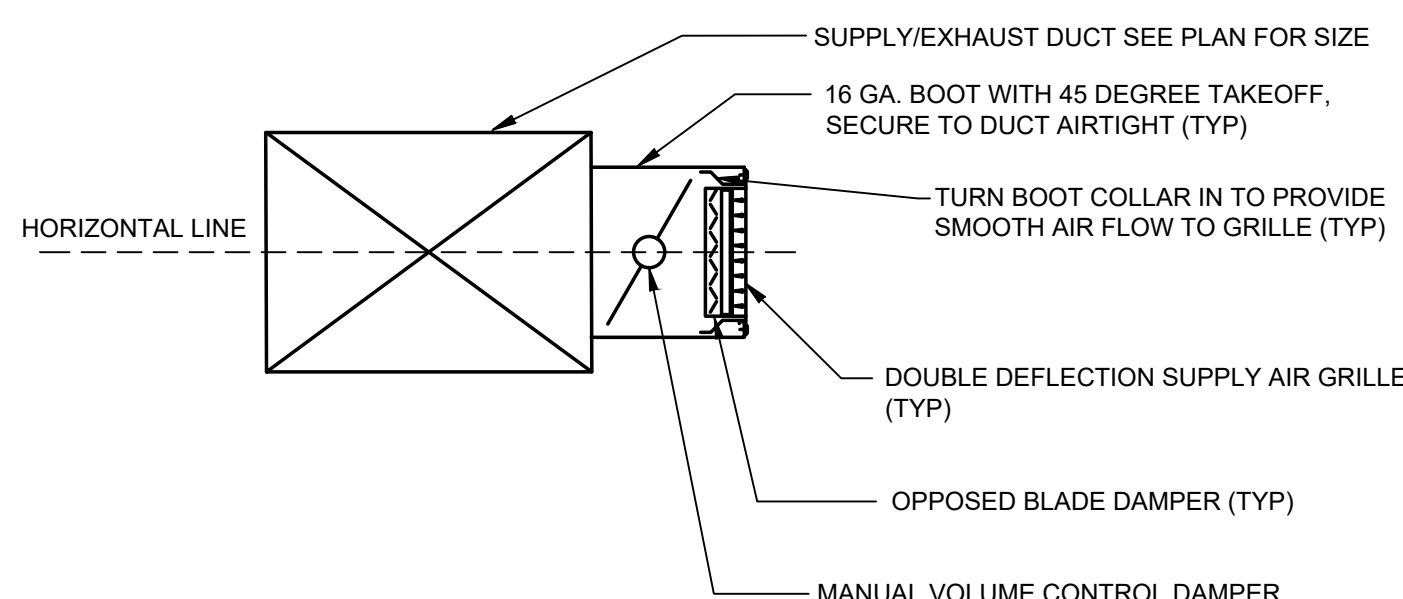
**4 FLOOR MOUNTED CONDENSING UNIT DETAIL**  
**M301 NOT TO SCALE**  
 NOTES:  
 1. ROOF RAILS SHALL BE A MINIMUM OF 18" ABOVE ROOF.



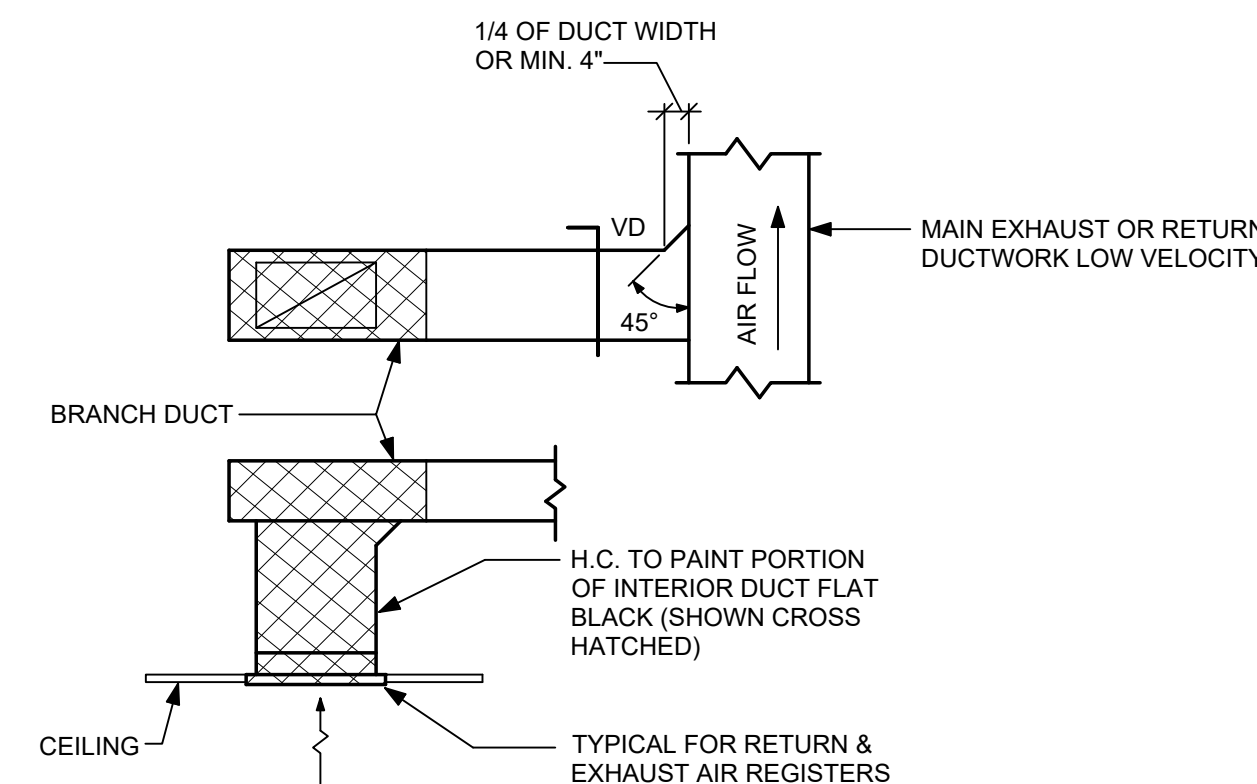
**2 GOOSENECK THRU FLAT ROOF DETAIL**  
**M301 NOT TO SCALE**



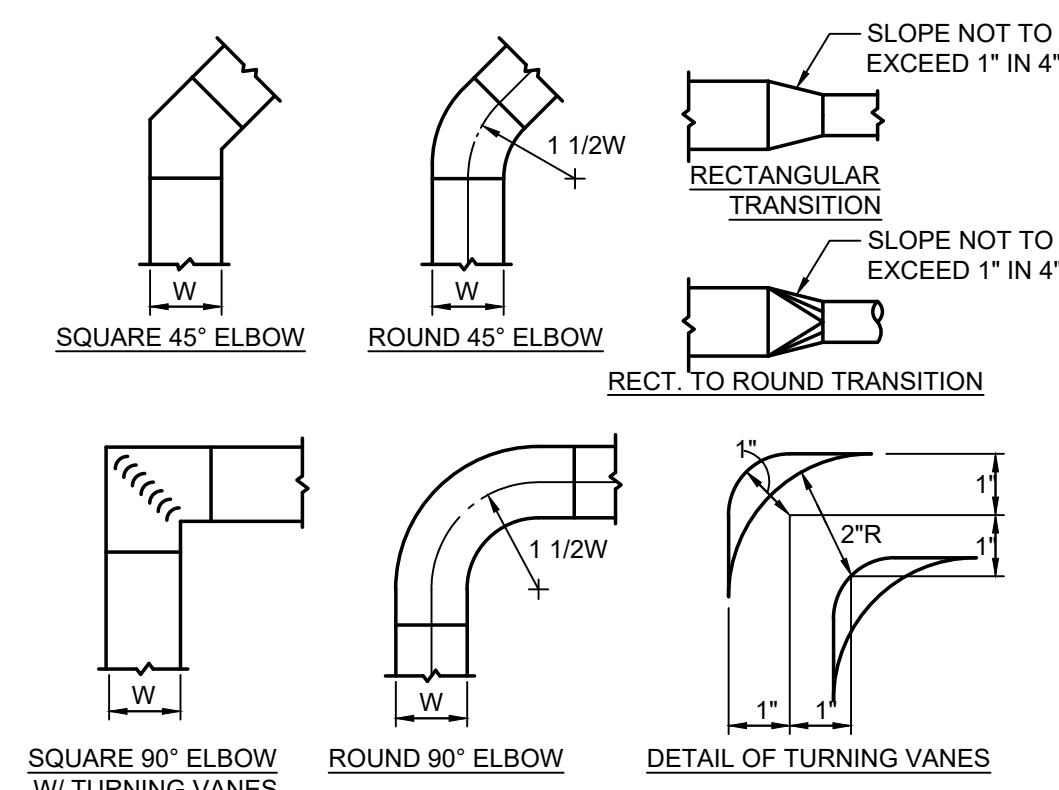
**5 ROOF MOUNTED EXHAUST FAN DIAGRAM**  
**M301 NOT TO SCALE**



**7 DUCT MOUNTED SUPPLY AIR GRILLE**  
**M301 NOT TO SCALE**



**3 LOW VELOCITY BRANCH DUCT CONNECTION DETAIL**  
**M301 NOT TO SCALE**



**6 LOW VELOCITY DUCTWORK DIAGRAMS**  
**M301 NO SCALE**  
 NOTE:  
 PROVIDE RADIUS ELBOWS, 18" AND LARGER WITH TURNING BLADES AT 1/3 AND 1/2 THE WIDTH OF THE DUCT FROM THE INSIDE RADIUS. TURNING BLADES SHALL BE PROVIDED WITH HEIMMED ENDS. (SEE SECTION 16840 OF MECHANICAL SPECIFICATIONS FOR ADDITIONAL DUCT CONSTRUCTION INFORMATION AND RESTRICTIONS.)

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1	OWNER REVIEW	4-12-22

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RENOVATION OF:  
**WORCESTER COUNTY**  
**ROADS BUILDING**  
 BERLIN, MARYLAND

MECHANICAL  
 DETAILS

**Allen + Shariff**  
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SPLIT SYSTEM SCHEDULE - HEAT PUMP																		
UNIT DES.	SERVICE	SENS. CAP MBH	TOTAL CAP MBH	E.A.T. DB / WB	REVERSE CYCLE HEAT CAP. MBH @ 17° O.A.T.	INDOOR UNIT						ELEC. VOLTS / PHASE	OUTDOOR UNIT				ELEC. VOLTS / PHASE	
						CFM	O.A. CFM	E.S.P. IN. W.G.	HP	HEATER KW@208V	BASIS OF DESIGN CARRIER MODEL		UNIT. DES.	NOM. TONS	SEER	HSPF		BASIS OF DESIGN CARRIER MODEL
AHU-1	BLDG 1	32.3	48.3	80/67	28.2	1600	290	0.3	3/4	10	FB4CNF048010	208/230/1φ	CU-1	4	15	8.2 BTUH	25HCE54830	208/230/1φ

- PIPE 3/4" INSULATED CONDENSATE DRAIN PIPING TO SPILL ON SPLASH BLOCK LOCATED ON GRADE OUTSIDE. SEAL EXTERIOR WALL PENETRATION.
- PROVIDE ELECTRIC HEAT WITH 24° HEAT RISE, 208230V/1φ, SINGLE POINT WIRING KIT, CIRCUIT BREAKER, AND DISCONNECT SWITCH FOR AHU.
- SIZE AND INSTALL INSULATED R-410A REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE STANDARD 1" RETURN AIR FILTER IN AHU.
- PROVIDE 7-DAY, REMOTE, PROGRAMMABLE, WALL MOUNTED THERMOSTAT WITH AUTOMATIC CHANGEOVER. MOUNT 48" AFF. W/ OPAQUE ENCLOSURE. INTERLOCK AHU WITH ASSOCIATED HP.
- PROVIDE CONDENSATE OVERFLOW SENSOR IN PRIMARY CONNECTION OF THE COOLING COIL TO SHUT SOWN THE UNIT UPON SENSING CONDENSATE.
- PROVIDE FLEXIBLE CONNECTION AT INLET AND DISCHARGE OF AHU TO ISOLATE FAN. USE HEAT RESISTANT MATERIAL.
- PROVIDE TXV, VARIABLE SPEED ECM MOTOR, TIME DELAY RELAY AND LOW AMBIENT COOLING TO 14°F.
- PROVIDE VIBRATION ISOLATION FOR AHU AND CU. SECURE CU TO PAD USING VANDAL RESISTANT ANCHORS AND SCREWS.
- PROVIDE NIGHT SET BACK CONTROL, MORNING WARM UP CONTROL, COMPRESSOR SUMP HEATER, AND DEFROST CONTROL. PROGRAM TO OWNERS SCHEDULE.
- PROGRAM THERMOSTATS TO OPERATE AT 75°/70° CLG/HTG.
- PROVIDE CONDENSATE PUMP IN UNIT.

EXHAUST FAN SCHEDULE										
TAG	SERVES	TYPE	CFM	SP IN W.C.	FAN RPM	WT. LB.S	MOTOR		BASIS OF DESIGN	
							HP	VOLTS/ PH	MFG.	MODEL
EF-1	RESTROOM /JANITOR	ROOF MOUNTED	100	0.18	1050	22	1/100	115V/1φ	GREENHECK	G-070-E

- REMARKS:
- PROVIDE DISCONNECT SWITCH.
  - PROVIDE SOLID STATE SPEED CONTROLLER, MOUNTED IN THE MOTOR COMPARTMENT, FOR BALANCING.
  - PROVIDE W/ROOF CURB (NON-INSULATED, 14" TALL)
  - PROVIDE TIME CLOCK AND COORDINATE WITH OWNER FOR OPERATION HOURS.

VENTILATION SCHEDULE																				
ROOM #	ROOM	DESCRIPTION	AREA FT2 AZ	AREA OA RATE	AREA OA RaAz	OCCUPANT DENSITY PEOPLE/1000 FT2	OCCUPANCY PZ	OCCUPANT OA RATE RP	OCCUPANT OA RATE RpPz	BREATHING ZONE OA VBZ	ZA DIST EFFECTIV NESS Ez	ZONE OA Voz	SA DESIGN Vpz	OA FRACTION Zp	VENT PROVIDED CFM	TOTAL ACPH	OA ACPH	OA NEEDED CFM	TOTAL NEEDED CFM	
201	OPEN AREA	OFFICE	433	0.06	26.0	5	2	5	10	36.0	0.8	45.0	240	0.19	46.00	NA	NA	45.0	232.0	
202	OPEN CUBICLE	OFFICE	274	0.06	16.4	5	4	5	20	36.4	0.8	45.6	240	0.22	46.00	NA	NA	45.6	211.0	
203	BREAK ROOM	BREAK	271	0.12	32.5	50	6	5	30	62.5	0.8	78.2	415	0.40	79.00	NA	NA	78.2	193.0	
208	CONFERENCE ROOM	CONFERENCE	281	0.06	16.9	50	8	5	40	56.9	0.8	71.1	630	0.11	120.00	NA	NA	71.1	626.0	

DIVISION OF MECHANICAL/ ELECTRICAL WORK		
ITEM	MECH/ DIV 22 AND 23	ELEC/ DIV 26
AUTOMATIC TEMPERATURE CONTROLS	FURNISH, INSTALL & WIRE	POWER WIRE
CONTROL PANELS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
LOW VOLTAGE CONTROL WIRING FOR MECH EQUIP.	FURNISH & INSTALL	
LINE VOLTAGE CONTROL WIRING FOR MECH. EQUIP.	FURNISH, INSTALL & WIRE	
MECHANICAL FLOW SWITCHES	FURNISH, INSTALL & WIRE	
THERMOSTATS/ SENSORS	FURNISH, INSTALL & WIRE	
P/E & E/P SWITCHES	FURNISH, INSTALL & WIRE	
DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MECHANICAL EQUIPMENT MONITORS	FURNISH & INSTALL	POWER WIRE
MANUAL STARTERS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MAGNETIC STARTERS FOR MECHANICAL EQUIPMENT	FURNISH	INSTALL & POWER WIRE
MOTOR CONTROL CENTERS	CONTROL WIRING	FURNISH, INSTALL, & POWER WIRE
VARIABLE SPEED CONTROLLERS	FURNISH & INSTALL	POWER WIRE
MOTORIZED DAMPERS & VALVES	FURNISH, INSTALL & WIRE	
DUCT SMOKE DETECTORS	INSTALL	FURNISH & WIRE
HEAT TRACE CABLE FOR PIPING	FURNISH & INSTALL	POWER WIRE
OIL/ GAS EMERGENCY SHUT-OFF SWITCHES		FURNISH, INSTALL, & POWER WIRE
SPRINKLER FLOW & TAMPER SWITCHES	BY SPRINKLER CONTRACTOR	WIRE

EXHAUST REGISTER SCHEDULE	
CFM RANGE	DUCT / NECK SIZE
0 - 75	6 X 6
76 - 150	8 X 8
151 - 225	10 X 10
226 - 350	12 X 12
351 - 450	14 X 14
451 - 650	16 X 20
651 - 850	16 X 28
851 - 1025	22 X 22
1026-1850	24 X 24

NOTE: INSTALL AT SIZES ABOVE UNLESS NOTED OTHERWISE ON FLOOR PLANS.

SUPPLY REGISTER SCHEDULE	
CFM RANGE	DIMENSIONS
0 - 150	8" x 6"
151 - 240	12" x 6"
241 - 330	12" x 8"
331 - 500	18" x 8"

REMARKS:  
INSTALL AT SIZES ABOVE UNLESS NOTED OTHERWISE ON FLOOR PLAN.

NO.	REVISION	DATE
1	OWNER REVIEW	4-12-22



RENOVATION OF:  
**WORCESTER COUNTY  
ROADS BUILDING**  
BERLIN, MARYLAND

MECHANICAL  
SCHEDULES



SCALE : NTS  
DESIGN BY : JHG  
DRAWN BY : AM  
CHECKED BY : JHG  
GMB FILE : 210241  
DATE : 12-06-22

M4.0

PIPE HANGER SPACING <sup>C,D</sup>		
PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)
CAST-IRON PIPE	5 <sup>A</sup>	10
CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE AND TUBING, 1 INCH AND SMALLER	3	10 <sup>B</sup>
CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE AND TUBING, 1-1/4 INCH AND LARGER	4	10 <sup>B</sup>
COPPER OR COPPER-ALLOY TUBING, 1-1/4 INCH AND SMALLER	6	10
COPPER OR COPPER-ALLOY TUBING, 1-1/2 INCH AND LARGER	10	10
CROSS-LINKED POLYETHYLENE (PEX) PIPE 1 INCH AND SMALLER	2.67 (32 INCHES)	10 <sup>B</sup>
CROSS-LINKED POLYETHYLENE (PEX) PIPE 1-1/4 INCH AND LARGER	4	10 <sup>B</sup>
CROSS-LINKED POLYETHYLENE/ALUMINUM/CROSS-LINKED POLYETHYLENE (PEX-AL-PEX) PIPE	2.67 (32 INCHES)	4
POLYVINYL CHLORIDE (PVC) PIPE	4	10 <sup>B</sup>

**REMARKS:**

- A. THE MAXIMUM HORIZONTAL SPACING OF CAST-IRON PIPE HANGERS SHALL BE INCREASED TO 10 FEET WHERE 10-FOOT LENGTHS OF PIPE ARE INSTALLED.
- B. FOR SIZES 2 INCHES AND SMALLER, A GUIDE SHALL BE INSTALLED MIDWAY BETWEEN REQUIRED VERTICAL SUPPORTS. SUCH GUIDES SHALL PREVENT PIPE MOVEMENT IN A DIRECTION PERPENDICULAR TO THE AXIS OF THE PIPE.
- C. THIS SCHEDULE IS BASED UPON 2018 INTERNATIONAL PLUMBING CODE TABLE 308.5. NOT ALL PIPE TYPES LISTED ARE USED IN PROJECT. PIPE MANUFACTURER'S SPACING RECOMMENDATIONS SHALL BE TAKEN INTO ACCOUNT WHEN INSTALLING HANGERS AND WHERE CONFLICTS BETWEEN THE CODE AND MANUFACTURER'S RECOMMENDATIONS OCCUR THE MOST STRINGENT SHALL BE APPLIED.
- D. HANGERS/SUPPORTS SHALL BE PROVIDED IN ADDITIONAL AREAS NOT NOTED ABOVE. AREAS INCLUDE BUT NOT LIMITED TO THE FOLLOWING: EACH SIDE OF WALL/FLOOR PENETRATION, EACH SIDE OF JOINT, AT A CHANGE IN DIRECTION, AND EACH SIDE OF A VALVE.

DIVISION OF MECHANICAL/ ELECTRICAL WORK		
ITEM	MECH/ DIV 22 AND 23	ELEC/ DIV 26
AUTOMATIC TEMPERATURE CONTROLS	FURNISH, INSTALL & WIRE	POWER WIRE
CONTROL PANELS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
LOW VOLTAGE CONTROL WIRING FOR MECH EQUIP.	FURNISH & INSTALL	
LINE VOLTAGE CONTROL WIRING FOR MECH. EQUIP.	FURNISH, INSTALL & WIRE	
MECHANICAL FLOW SWITCHES	FURNISH, INSTALL & WIRE	
THERMOSTATS/ SENSORS	FURNISH, INSTALL & WIRE	
P/E & E/P SWITCHES	FURNISH, INSTALL & WIRE	
DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MECHANICAL EQUIPMENT MONITORS	FURNISH & INSTALL	POWER WIRE
MANUAL STARTERS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MAGNETIC STARTERS FOR MECHANICAL EQUIPMENT	FURNISH	INSTALL & POWER WIRE
MOTOR CONTROL CENTERS	CONTROL WIRING	FURNISH, INSTALL & POWER WIRE
VARIABLE SPEED CONTROLLERS	FURNISH & INSTALL	POWER WIRE
MOTORIZED DAMPERS & VALVES	FURNISH, INSTALL & WIRE	
DUCT SMOKE DETECTORS	INSTALL	FURNISH & WIRE
HEAT TRACE CABLE FOR PIPING	FURNISH & INSTALL	POWER WIRE
OIL/ GAS EMERGENCY SHUT-OFF SWITCHES	FURNISH, INSTALL & POWER WIRE	
SPRINKLER FLOW & TAMPER SWITCHES	BY SPRINKLER CONTRACTOR	WIRE

**PLUMBING GENERAL NOTES:**

**A. GENERAL**

- CONFORM TO GENERAL AND SPECIAL CONDITIONS OF CONTRACT.
- SPECIFICATIONS ARE APPLICABLE TO CONTRACTORS AND/OR SUBCONTRACTORS.
- THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND EQUIPMENT DRAWINGS AND SPECIFICATIONS ARE INCORPORATED INTO, AND BECOME A PART OF THIS DIVISION. THIS CONTRACTOR SHALL EXAMINE SUCH DRAWINGS AND SPECIFICATIONS AND BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS CONTAINED THEREIN. THE SUBMISSION OF THE BID SHALL INDICATE SUCH KNOWLEDGE.
- VISIT SITE, CHECK FACILITIES AND CONDITIONS.
- SYSTEMS SHALL BE COMPLETE AND PLACED IN OPERATION.
- EACH CONTRACTOR SHALL PROVIDE FOR HIS OWN CLEAN-UP, REMOVAL AND LEGAL DISPOSAL OF RUBBISH DAILY. CONTRACTOR SHALL PROTECT THEIR WORK AND EXISTING OR ADJACENT PROPERTY AGAINST WEATHER, TO MAINTAIN THEIR WORK, MATERIALS, APPARATUS AND FIXTURES FREE FROM INJURY OR DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED, SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTOR'S EXPENSE.
- CONTRACTORS SHALL CONFIRM AND COMPLY WITH UTILITY COMPANY REQUIREMENTS, COORDINATE CONNECTION POINTS IN FIELD.
- ARRANGE FOR AND OBTAIN OWNER'S AND INSURANCE REPRESENTATIVE'S PERMISSION FOR ANY SERVICE SHUTDOWNS.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES OF CONSTRUCTION AND THE SAFETY OF WORKMEN.
- PIPING, CONTROLS, ETC., SHALL NOT BE INSTALLED, OR ROUTED ABOVE, ELECTRICAL PANELS AND EQUIPMENT OR THROUGH ELEVATOR MACHINE ROOMS.
- THE CONTRACTOR SHALL COORDINATE AND PROVIDE A WRITTEN LISTING OF ELECTRICAL CHARACTERISTICS OF PLUMBING EQUIPMENT TO ELECTRICAL CONTRACTOR PRIOR TO ORDERING OF EQUIPMENT. ADDITIONAL COMPENSATION WILL NOT BE MADE FOR LACK OF CONTRACTOR COORDINATION OF EQUIPMENT'S ELECTRICAL CHARACTERISTICS.
- DURING THE BUILDING CONSTRUCTION SOME EXISTING INSTALLATION MAY BE EXPOSED THAT WILL HAVE TO BE CHANGED, ALTERED, REROUTED AND/OR ABANDONED. ANY SUCH WORK WHICH COMES UNDER THE JURISDICTION OF THIS CONTRACTOR SHALL BE DONE BY THIS CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.
- WORK RELATED TO THE EXISTING BUILDING SHALL BE COORDINATED TO MINIMIZE INTERFERENCE OR INTERRUPTION OF NORMAL BUILDING USE BY OWNER. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR PHASING REQUIREMENTS.
- THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING CONDITIONS THAT MAY AFFECT THE BID. ADDITIONAL COMPENSATION WILL NOT BE PROVIDED FOR FAILURE TO REVIEW EXISTING CONDITIONS PRIOR TO BIDDING.

**B. CODES, PERMITS, STANDARDS AND REGULATIONS**

- CONFORM TO APPLICABLE CODES (LOCAL, STATE, NATIONAL CODES, NFPA, OSHA, ETC.), GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND APPLICABLE STANDARDS.
- OBTAIN PERMITS AND PAY FEES. ARRANGE FOR REQUIRED TESTS, INSPECTIONS AND APPROVALS. PROVIDE COPIES OF INSPECTIONS, AND APPROVALS TO THE ARCHITECT-ENGINEER.

**C. RELATED WORK SPECIFIED ELSEWHERE**

- OPENINGS AND CHASES, WHEN SHOWN ON ARCHITECTURAL DRAWINGS.
- TEMPORARY WATER SERVICE, SANITARY FACILITIES, FIRE PROTECTION AND HEATING DURING CONSTRUCTION.
- POURED-IN-PLACE CONCRETE.
- FINISH PAINTING.
- ELECTRIC POWER WIRING.

**D. DRAWINGS**

- THE SYSTEMS SHOWN ON DRAWINGS ARE DIAGRAMMATIC. CONFIRM DIMENSIONS BY FIELD MEASUREMENT.
- THE EXACT LOCATIONS FOR APPARATUS, FIXTURES, EQUIPMENT AND PIPING WHICH IS NOT COVERED BY DRAWINGS, SHALL BE OBTAINED FROM THE ARCHITECT OR HIS REPRESENTATIVE IN THE FIELD, AND THE WORK SHALL BE LAID OUT ACCORDINGLY.
- DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT ONE ANOTHER. ANY MATERIALS OR LABOR CALLED FOR IN ONE BUT NOT THE OTHER SHALL BE PROVIDED.

**E. DEMOLITION AND REMOVAL**

- DISCONNECT, DISASSEMBLE, CAP, PLUG AND REMOVE PIPING, DUCTS AND EQUIPMENT INDICATED ON THE DRAWINGS, AND AS REQUIRED FOR THE PROJECT.
- ANY EQUIPMENT DESIGNATED BY OWNER TO BE SALVAGED SHALL BE PROTECTED AND DELIVERED TO THE OWNER'S ON SITE.
- DEMOLITION SHALL BE DONE IN A MANNER NOT TO DAMAGE ADJACENT WORK AND NOT AFFECT THE OPERATION OF SYSTEMS TO REMAIN IN USE. ANY ITEM TO REMAIN THAT IS DAMAGED BY THE CONTRACTOR OR THAT REQUIRES DAMAGE DUE TO THE ABSOLUTE NECESSITY FOR DEMOLITION REQUIREMENTS SHALL BE REPLACED AND/OR REPAIRED AT HIS EXPENSE.
- OPENINGS ON PIPING AND DUCTS THAT REMAIN SHALL BE CAPPED AND PROPERLY SECURED.
- ASBESTOS REMOVAL WILL BE HANDLED BY THE OWNER AND IS NOT A PART OF THIS WORK.
- EXAMINE AREAS AND CONDITIONS UNDER WHICH DEMOLITION WORK SHALL BE PERFORMED. CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES PERFORMING DEMOLITION WORK.
- REMOVE SUPPORTS, HANGERS, AND ACCESSORIES FROM EQUIPMENT AND MATERIAL INDICATED TO BE REMOVED.

PLUMBING LEGEND		
SYMBOL	ABRV.	DESCRIPTION
	SAN., W.	SANITARY PIPING
	V	VENT PIPING
	CW	COLD WATER PIPING
	HW	HOT WATER PIPING
		EXISTING EQUIPMENT OR PIPING TO BE REMOVED (LINE TYPE INDICATES PIPE TYPE UNO.)
		PIPE UP
		PIPE DOWN
		PIPE TEE DOWN
		PIPE UNION
		BALL VALVE OR SHUTOFF VALVE
		BALL VALVE OR SHUTOFF VALVE IN RISE
	MV	MIXING VALVE
	#	DRAWING NOTE
	XX	REVISION NUMBER
	X	RISER DESIGNATION
	#	PART PLAN NUMBER
	X###	SHEET NUMBER WHERE PART PLAN IS FOUND
	DN.	DOWN
	VTR	VENT THROUGH ROOF TERMINATION

PLUMBING FIXTURE SCHEDULE (BASIS OF DESIGN)												
DESIGNATION	FIXTURE TYPE	C.W.	H.W.	WASTE	MANUFACTURER	MODEL NO.	TRIM	DRAIN	TRAP	SUPPLY	ACCESSORIES	REMARKS
P-1	LAVATORY - COUNTERTOP; ADA	1/2"	1/2"	1-1/4"	SEE ARCHITECTURAL DRAWINGS		SLOAN / OPTIMA SENSOR FAUCET ETF-600-PLG	GRID DRAIN W/ OVERFLOW	CHROME PLATE W/ CLEAN OUT PLUG	BRASSCRAFT B-11"A SUPPLIES W/ WHEEL HANDLE STOPS	TMV-1	1, 2, 3, 4
P-2	WATER CLOSET - TANK TYPE; ADA	1/2"	-	3"	AMERICAN STANDARD	AMERICAN STANDARD / CADET ELONGATED PRESSURE ASSISTED MN: 2467.016	-	-	INTEGRAL	BRASSCRAFT B-3"DL SUPPLY W/ WHEEL HANDLE STOP	BEMIS / 1955SSTRF SEAT	1, 2, 4, 5, 6
P-3	MOP SINK	1/2"	1/2"	3"	FIAT	MSB2424	830AA / 832AA	GRID DRAIN	SAME SIZE AS OUTLET	CONCEALED	889CC / MSG2424	1, 4
P-4	BREAK ROOM SINK	1/2"	1/2"	1-1/4"	EXISTING TO REMAIN		AMERICAN STANDARD CORALAIS K-15171	-	CHROME PLATE W/ CLEAN OUT PLUG	BRASSCRAFT B-11"A SUPPLIES W/ WHEEL HANDLE STOPS	-	1

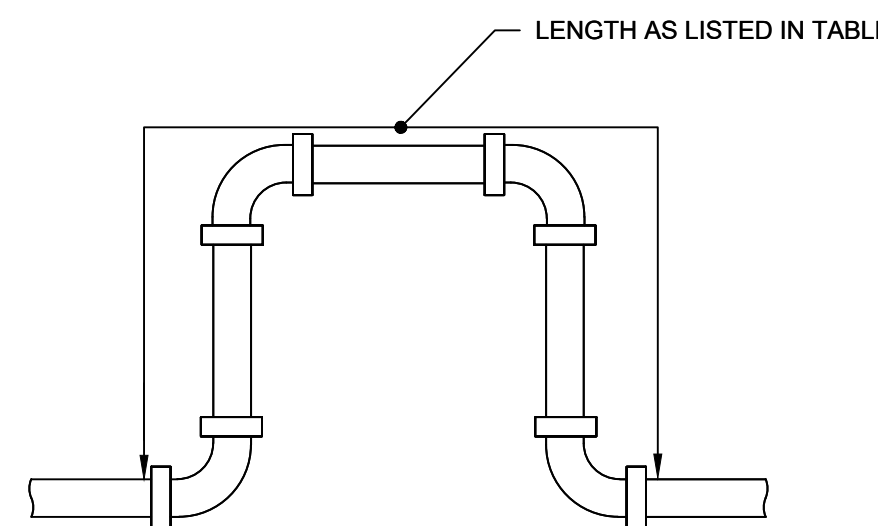
**REMARKS**

- PROVIDE ALL REQUIRED COMPONENTS FOR COMPLETE FIXTURE ROUGH-IN, I.E., SUPPLIES, STOPS, TRAPS, CARRIERS, GRID DRAINS, TAILPIECES, ETC. NOT ALL REQUIRED COMPONENTS ARE SPECIFIED ABOVE. CARRIERS FOR LAVATORIES AND WATER CLOSETS SHALL COMPLY WITH ANSI STANDARD A112.6.1M AND PLUMBING DRAIN INSTITUTE (PDI) ARTICLE "MINIMUM SPACE REQUIREMENTS FOR ENCLOSED PLUMBING FIXTURE SUPPORTS."
- FIXTURES SHALL BE ADA COMPLIANT. PROVIDED WITH ADA COMPLIANT ACCESSORIES. MOUNT ADA COMPLIANT. SEE ARCHITECTURAL PLANS FOR ELEVATIONS.
- PROVIDE SKAL-GUARD INSULATING DEVICES ON EXPOSED UNDER-COUNTER PLUMBING.
- REFER TO RISER DIAGRAM FOR VENT PIPE SIZES AND CONNECTIONS.
- COORDINATE ADA GRAB BAR INSTALLATION WITH WATER CLOSET. GRAB BARS SHALL NOT INTERFERE WITH USE AND MAINTENANCE OF TANK. PROVIDE EXTENSIONS AS REQUIRED.
- COORDINATE SCHEDULED WATER CLOSET MODEL NUMBERS WITH INSTALLED ORIENTATION OF FIXTURE. FIXTURE FLUSH LEVER SHALL BE ACCESSIBLE FROM THE OPEN / APPROACH SIDE OF FIXTURE.

DOMESTIC AND STORM PIPING INSULATION SCHEDULE						
SYSTEM OR SERVICE	FLUID TEMPERATURE RANGE (DEG F)	INSULATION TYPE	INSULATION THICKNESS (INCHES)			
			PIPE SIZE (INCHES)			
			1/2" TO <1-1/2"	1-1/2" TO <4"	4" TO <8"	≥8"
DOMESTIC HOT WATER AND HOT WATER CIRCULATION	105 TO 140	MINERAL FIBER	1"	1-1/2"	1-1/2"	1-1/2"
DOMESTIC COLD WATER	40 TO 60	MINERAL FIBER	1/2"	1/2"	1"	1"
ROOF DRAIN BODIES & HORIZONTAL STORM DRAIN PIPING	-	MINERAL FIBER	1"	1"	1"	1"

**NOTES:**

- NOT ALL PIPE SIZES LISTED ARE USED ON PROJECT.
- SIZES LISTED ARE BASED UPON 2021 IECC TABLE C403.12.3.
- ALL PIPING INSULATION SHALL HAVE A MAXIMUM THERMAL CONDUCTIVITY FACTOR (K) OF 0.27 BTU"IN/HR"FT<sup>2</sup>F.
- OTHER INSULATION MATERIAL THAT MEETS OR EXCEEDS THE PERFORMANCE CHARACTERISTICS OF THE LISTED MATERIAL MAY BE USED. CONTRACTOR SHALL PROVIDE INSULATION PERFORMANCE CUT SHEET PRIOR TO INSTALLATION.



NOMINAL PIPE DIA.	LENGTH PIPING IN FEET		
	STEEL PIPE	COPPER PIPE	SCH. 40 CPVC
1/2"	4.7'	5.3'	1.7'
3/4"	5.2'	6.2'	1.9'
1"	5.9'	7.1'	2.1'
1-1/4"	6.6'	7.8'	2.3'
1-1/2"	7.0'	8.5'	2.5'
2"	7.9'	9.7'	2.8'
2-1/2"	8.7'	10.8'	3.1'
3"	9.6'	11.8'	3.4'
4"	10.8'	13.5'	3.8'

**NOTES:**

- EXPANSION LOOPS SHALL BE IN STALLED AT INTERVALS AS RECOMMENDED BY PIPE MANUFACTURER.
- PRE-MANUFACTURED EXPANSION JOINTS MAY BE USED IN-LIEU OF EXPANSION LOOPS.
- NOT ALL SIZES AND MATERIALS ARE USED ON PROJECT.

DATE: 4-12-22  
 REVISION: OWNER REVIEW  
 NO. 1

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PLUMBING DATA  
 SHEET

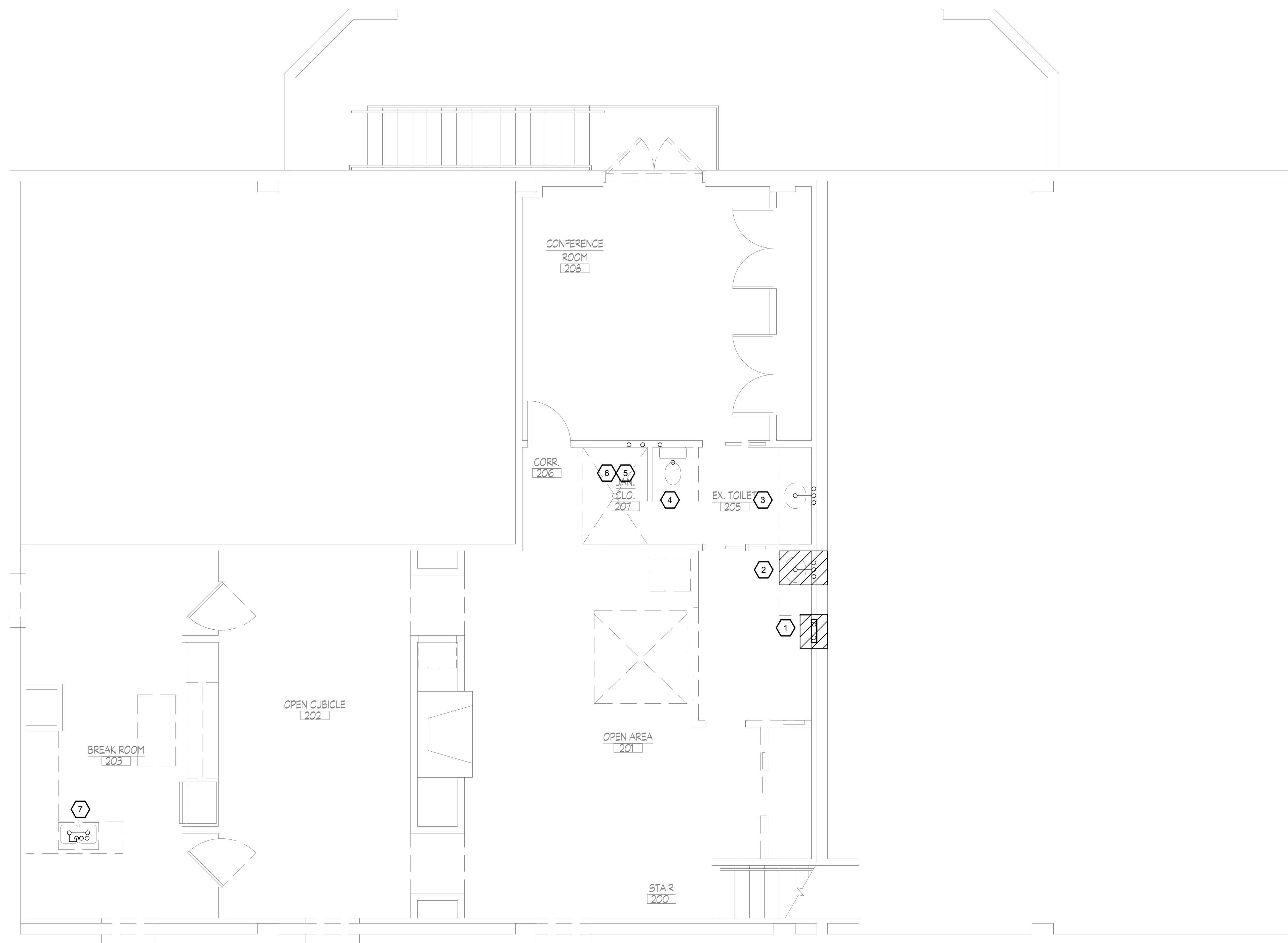
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P0.1







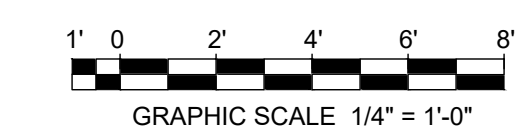
**PLUMBING DEMOLITION GENERAL NOTES:**

- EXISTING CONDITIONS SHOWN ON THIS DRAWING HAVE BEEN OBTAINED FROM EXISTING DRAWINGS, FIELD OBSERVATIONS AND PHOTOS, AND MAY NOT INDICATE ALL ACTUAL EXISTING CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
- PATCH ALL WALL, FLOOR, AND CEILING SURFACES SCHEDULED TO REMAIN, WHERE MEP ELEMENTS ARE BEING REMOVED, TO MATCH EXISTING CONDITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

**PLUMBING DEMOLITION KEY NOTES:** (#)

- EXISTING WASHING MACHINE BOX CONNECTIONS LOCATED IN WALL TO BE DEMOLISHED BACK TO POINT IN WALL AND CAPPED.
- EXISTING SINK TO BE REMOVED, EXISTING SANITARY AND VENT TO BE DEMOLISHED BACK TO POINT IN WALL AND CAPPED. EXISTING HW/CW TO BE DEMOLISHED BACK TO POINT IN WALL AND CAPPED.
- EXISTING SINK TO BE REPLACED, EXISTING HW/CW/SAN, SERVING FIXTURE TO REMAIN FOR REPLACEMENT SINK.
- EXISTING WATER CLOSET TO BE REPLACED, EXISTING CW/SAN, SERVING FIXTURE TO REMAIN FOR REPLACEMENT WATER CLOSET.
- EXISTING SHOWER TO BE REMOVED, EXISTING HW/CW SERVING FIXTURE TO REMAIN FOR CONNECTION OF NEW MOP SINK.
- EXISTING SAN, SERVING EXISTING SHOWER TO BE DEMOLISHED BACK TO POINT BELOW FLOOR AND CAPPED.
- EXISTING SINK TO BE REMOVED AND REUSED, EXISTING HW/CW/SAN, CONNECTIONS TO REMAIN.

1 PLUMBING SECOND FLOOR DEMO PLAN  
P1.2 1/4" = 1'-0"



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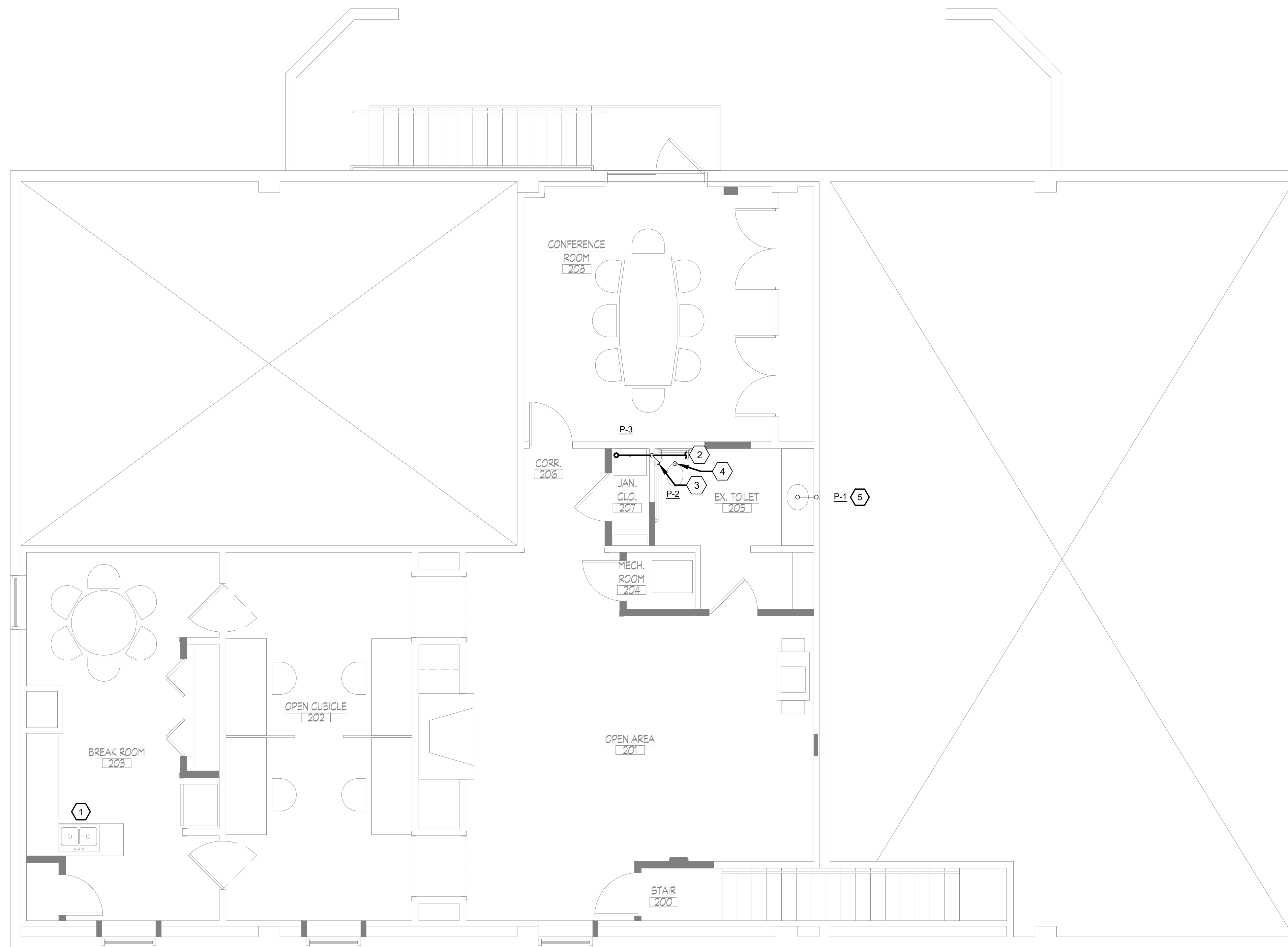
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PLUMBING SECOND  
 FLOOR DEMO

**Allen + Shariff**  
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 Salisbury, Maryland 21801  
 443.545.1300

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- PATCH ALL WALL, FLOOR, AND CEILING SURFACES SCHEDULED TO REMAIN, WHERE MEP ELEMENTS ARE BEING REMOVED, TO MATCH EXISTING CONDITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

**PLUMBING KEY NOTES:**

- REINSTALL EXISTING SINK REMOVED DURING DEMOLITION. CONNECT TO EXISTING PLUMBING SERVICES.
- EXTEND NEW 3" SAN. TO CONNECT TO EXISTING SANITARY SYSTEM. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF EXISTING SANITARY SYSTEM.
- EXTEND NEW 2" V. TO CONNECT TO EXISTING VENT SYSTEM. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF EXISTING VENT SYSTEM.
- CONNECT NEW WATER CLOSET TO EXISTING SANITARY CONNECTION.
- CONNECT NEW LAVATORY TO EXISTING SANITARY/VENT CONNECTION.

**1 DRAINAGE SECOND FLOOR PLAN - NEW WORK**  
 P2.2 1/4" = 1'-0"



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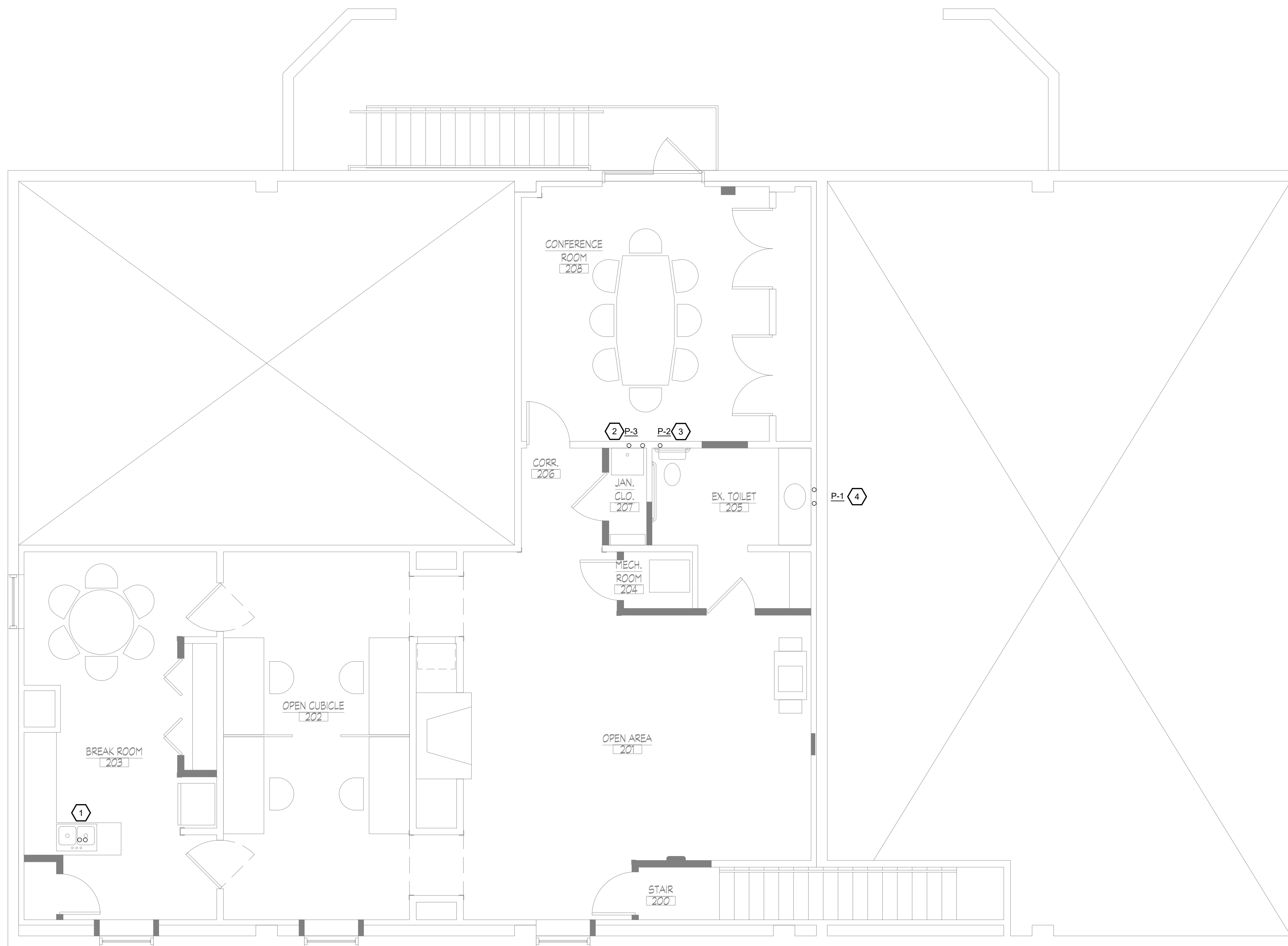
DRAINAGE SECOND  
 FLOOR PLAN -  
 NEW WORK

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**PLUMBING GENERAL NOTES:**

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- PATCH ALL WALL, FLOOR, AND CEILING SURFACES SCHEDULED TO REMAIN, WHERE MEP ELEMENTS ARE BEING REMOVED, TO MATCH EXISTING CONDITIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

**PLUMBING KEY NOTES:**

- REINSTALL EXISTING SINK REMOVED DURING DEMOLITION. CONNECT TO EXISTING PLUMBING SERVICES. RECONFIGURE PIPING AS REQUIRED TO ACCOMMODATE NEW FIXTURE.
- RELOCATE AND CONNECT NEW P-3 TO EXISTING HW/CW FROM REMOVED SHOWER.
- CONNECT NEW P-2 TO EXISTING CW.
- CONNECT NEW P-1 TO EXISTING HW/CW.

**1** SUPPLY SECOND FLOOR PLAN - NEW WORK  
 P3.2 1/4" = 1'-0"



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SUPPLY SECOND  
 FLOOR PLAN -  
 NEW WORK

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ELECTRICAL ABBREVIATIONS	
A	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CURRENT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO/VISUAL
BFG	BELOW FINISHED GRADE
C	CONDUIT
CATV	CABLE ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CFL	COMPACT FLUORESCENT
CKT	CIRCUIT
EBC	EMERGENCY BATTERY UNIT
EC	EMPTY CONDUIT
EC	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
ERU	ENERGY RECOVERY UNIT
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
FLA	FULL LOAD AMPS
FPC	FIRE PROTECTION CONTRACTOR
FPVAV	FAN POWERED VARIABLE AIR VOLUME
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HP	HORSE POWER/HEAT PUMP
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILO-VOLT AMPERE
KW	KILO-WATT
LC	LIGHTING CONTACTOR
LTG	LIGHTING
MAU	MAKE UP AIR UNIT
MCA	MINIMUM CIRCUIT AMPS
MC	MECHANICAL CONTRACTOR
MC	METAL CLAD
MCB	MAIN CIRCUIT BREAKER
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
P	POLE
PC	PLUMBING CONTRACTOR
PCP	PUMP CONTROL PANEL
PF	POWER FACTOR
PL	PROPERTY LINE
PNL	PANEL
PNLBD	PANELBOARD
Ø	PHASE
PRI	PRIMARY
RECP	RECEPTACLE
RTU	ROOF TOP UNIT
SE	SERVICE ENTRANCE
SEC	SECONDARY
TBB	TELEPHONE BACKBOARD
TR	TAMPER RESISTANT
TRT	TRIPLE TUBE FLUORESCENT LAMP

POWER	
	SINGLE RECEPTACLE, 20A, 120V, 18" AFF, UON.
	DUPLEX RECEPTACLE, 20A, 120V, 18" AFF, UON.
	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTING TYPE, 20A, 120V, 18" AFF, UON.
	DUPLEX RECEPTACLE WITH ADDITIONAL ISOLATED GROUND WIRE, 20A, 120V, 18" AFF, UON.
	DUPLEX RECEPTACLE, 20A, 120V, 40" AFF OR 4" ABOVE COUNTER TOP OR IN CASEWORK (AS APPLICABLE), OR IN CASEWORK, AS APPLICABLE, UON.
	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTING TYPE, 20A, 120V, 40" AFF TO 4" ABOVE COUNTER TOP OR IN CASEWORK (AS APPLICABLE), OR IN CASEWORK, AS APPLICABLE, UON.
	QUADRUPLEX RECEPTACLES IN COMMON BOX, 20A, 120V, 18" AFF, UON.
	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTING TYPE, 20A, 120V, WITH COOPER MODEL WIU-1D (OR EQUAL) "WHILE-IN-USE" WEATHERPROOF COVER, 18" AFF UON.
	ELECTRIC WATER COOLER CONNECTION, PROVIDE 20A, 120V GROUND FAULT INTERRUPTING TYPE DUPLEX RECEPTACLE, COORDINATE WITH EWC MANUFACTURER'S REQUIREMENTS. RECEPTACLE SHALL BE ACCESSIBLE THROUGH REMOVAL OF EWC COVER.
	DUPLEX RECEPTACLE, 20A, 120V, 18" AFF, UON. TOP RECEPTACLE SHALL BE CONNECTED TO LOCAL SWITCH.
	FLOORBOX WITH DUPLEX RECEPTACLE. COORDINATE EXACT LOCATION IN FIELD WITH IN-FLOOR DISTRIBUTION SYSTEM.
	FLOORBOX WITH DUPLEX RECEPTACLE AND TELE/DATA. COORDINATE EXACT LOCATION IN FIELD WITH IN-FLOOR DISTRIBUTION SYSTEM.
	CABLE TELEVISION OUTLET WITH DUPLEX RECEPTACLE, EQUAL TO ARLINGTON TVB5505 BOX. PROVIDE DUPLEX RECEPTACLE AND 3/4" C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH BUSHING.
	FLOOR BOX. REFER TO FLOOR BOX SCHEDULE SHEET EX X FOR DETAILS.
	SURFACE METAL RACEWAY WITH 20A, 120V SINGLE RECEPTACLES MOUNTED AT 12" ON CENTER. MOUNT 1" ABOVE COUNTER TOP BACKSPLASH.
	SPECIAL RECEPTACLE. NEMA CONFIGURATION AS NOTED. MOUNT 18" AFF UON.
	JUNCTION BOX - ABOVE CEILINGS OR FLUSH IN WALLS.
	MAIN GROUND BAR
	GROUND BAR
	DISCONNECT SWITCH - SIZE AS INDICATED ON PLANS 30/2/20/3R — NEMA RATING (IF OTHER THAN 1) — FUSE SIZE (AMPS), N.F. INDICATES NON-FUSED No. OF POLES — SIZE (AMPS)
	HORSEPOWER RATED MOTOR SWITCH
	MOTOR CONNECTION.
	POWER POLE
	DROP CORD/REEL, 20A, 120V, MOUNTED TO CEILING WITH (3) SINGLE RECEPTACLES AT CORD END.
	EMON DMON METER. REFER TO POWER PLAN FOR ADDITIONAL INFORMATION.
	VARIABLE FREQUENCY DRIVE (FURNISHED WITH ASSOCIATED MECHANICAL EQUIPMENT, INSTALLED BY EC), WITH INTEGRAL DISCONNECT SWITCH.
	SURGE PROTECTIVE DEVICE
	FAN COIL UNIT.
	ELECTRICAL METER. MOUNT 54" AFF (MINIMUM).
	ELECTRICAL PANELBOARD
	ELECTRICAL CIRCUIT RUN IN CONDUIT AND CIRCUIT HOMERUN TO PANELBOARD (PANEL AND CIRCUIT DESIGNATION AS INDICATED), AS A MINIMUM CONDITION, EACH SINGLE PHASE CIRCUIT SHALL HAVE 1 #12 PHASE CONDUCTOR, 1 #12 NEUTRAL CONDUCTOR, AND 1 #12 GROUNDING CONDUCTOR IN 3/4" CONDUIT. PROVIDE ADDITIONAL PHASE CONDUCTORS AS REQUIRED FOR "MULTIPLE PHASED" ELECTRICAL LOADS. PROVIDE ADDITIONAL "SWITCH LEG" CONDUCTORS TO PROVIDE THE LIGHT FIXTURE CONTROL INDICATED. MULTIPLE SINGLE PHASE CONDUCTORS SHALL BE GROUPED TOGETHER IN A COMMON CONDUIT IN ACCORDANCE WITH THE NEC AND AT THE CONTRACTOR'S DISCRETION. NEUTRAL AND GROUNDING CONDUCTORS SHALL BE SHARED AS ALLOWED BY THE NEC. CONDUIT LARGER THAN 3/4" AND CONDUCTORS LARGER THAN #12 SHALL BE AS INDICATED.

ELECTRICAL ABBREVIATIONS	
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VAV	VARIABLE AIR VOLUME
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS/WIRE
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

LIGHTING	
	LIGHTING FIXTURE.
	LIGHTING FIXTURE ON EMERGENCY CIRCUIT. SUBSCRIPT "NL" WHERE USED, INDICATES NIGHT LIGHT CONNECTED AHEAD OF LIGHTING CONTROLS. TYPICAL ALL FIXTURE TYPES.
	DOWNLIGHT FIXTURE.
	PENDANT LIGHTING FIXTURE.
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT. SUBSCRIPT "NL" WHERE USED, INDICATES NIGHT LIGHT CONNECTED AHEAD OF LIGHTING CONTROLS.
	WALL MOUNTED LIGHTING FIXTURE.
	WALL MOUNTED LIGHTING FIXTURE ON EMERGENCY CIRCUIT. SUBSCRIPT "NL" WHERE USED, INDICATES NIGHT LIGHT CONNECTED AHEAD OF LIGHTING CONTROLS.
	TRACK LIGHTING FIXTURE. INDICATES AN INDIVIDUAL FIXTURE ON THE TRACK.
	EMERGENCY LIGHTING REMOTE UNIT.
	EMERGENCY BATTERY LIGHTING UNIT, CONNECT AHEAD OF LOCAL SWITCH.
	EXIT LIGHTING FIXTURE WITH DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. CONNECT TO DEDICATED EMERGENCY BRANCH CIRCUIT. SHADED AREA DENOTES LIGHTED FACE.
	DUAL SWITCH (SINGLE POLE OR AS INDICATED BY SUBSCRIPT). 20A, 120/277V, 44" AFF. UON. CONNECT EACH TO SEPARATELY CONTROL INBOARD AND OUTBOARD LAMPS OF EACH FIXTURE INDICATED. CONTROL INBOARD AND OUTBOARD LAMPS CONSISTENTLY. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
	SINGLE POLE SWITCH, 20A, 120/277V, 44" AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
	FOUR-WAY SWITCH, 20A, 120/277V, 44" AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
	THREE-WAY SWITCH, 20A, 120/277V, 44" AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
	DIMMER SWITCH, 44" AFF UON. SUBSCRIPT "a", WHERE USED, INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
	WALL SWITCH OCCUPANCY SENSOR, 44" AFF UON.
	WALL SWITCH VACANCY SENSOR, 44" AFF UON.
	OCCUPANCY SENSOR. "F" DENOTES OCCUPANCY SENSOR TYPE. SUBSCRIPT "a", WHERE USED, INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
	VACANCY SENSOR. "F" DENOTES VACANCY SENSOR TYPE. SUBSCRIPT "a", WHERE USED, INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
	PHOTOCELL FOR EXTERIOR LIGHTING CONTROL. MOUNT ON ROOF OF BUILDING AND AIM NORTH.

LIGHTING FIXTURE KEY	
	1. LETTER "A" DENOTES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE.
	2. SUBSCRIPT "LP-B" INDICATES NAME OF PANELBOARD FROM WHICH FIXTURE IS FED. ASSOCIATED NUMBER "3" INDICATES CIRCUIT NUMBER IN PANELBOARD FROM WHICH FIXTURE IS FED. ASSOCIATED LETTER "a", WHERE USED, INDICATES LIGHTING FIXTURE CONTROL DEVICE DESIGNATION.

LINEWEIGHTS	
	NEW
	EXISTING
	REMOVE EXISTING

GENERAL	
	KEYNOTE.
	LIMIT OF DEMOLITION WORK.
	POINT OF CONNECTION, NEW TO EXISTING.
DETAIL OR SECTION NOTATION: ENUMERATION: A = DETAIL, 1 = SECTION	
	ENUMERATION NUMBER OR LETTER
	SHEET WHERE DETAIL OR SECTION IS SHOWN

DIVISION OF MECHANICAL/ ELECTRICAL WORK		
ITEM	MECH/ DIV 22 AND 23	ELEC/ DIV 26
AUTOMATIC TEMPERATURE CONTROLS	FURNISH, INSTALL & WIRE	POWER WIRE
CONTROL PANELS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
LOW VOLTAGE CONTROL WIRING FOR MECH EQUIP.	FURNISH & INSTALL	
LINE VOLTAGE CONTROL WIRING FOR MECH. EQUIP.	FURNISH, INSTALL & WIRE	
MECHANICAL FLOW SWITCHES	FURNISH, INSTALL & WIRE	
THERMOSTATS/ SENSORS	FURNISH, INSTALL & WIRE	
PIE & E/P SWITCHES	FURNISH, INSTALL & WIRE	
DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MECHANICAL EQUIPMENT MONITORS	FURNISH & INSTALL	POWER WIRE
MANUAL STARTERS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MAGNETIC STARTERS FOR MECHANICAL EQUIPMENT	FURNISH	INSTALL & POWER WIRE
MOTOR CONTROL CENTERS	CONTROL WIRING	FURNISH, INSTALL, & POWER WIRE
VARIABLE SPEED CONTROLLERS	FURNISH & INSTALL	POWER WIRE
MOTORIZED DAMPERS & VALVES	FURNISH, INSTALL & WIRE	
DUCT SMOKE DETECTORS	INSTALL	FURNISH & WIRE
HEAT TRACE CABLE FOR PIPING	FURNISH & INSTALL	POWER WIRE
OIL/ GAS EMERGENCY SHUT-OFF SWITCHES		FURNISH, INSTALL, & POWER WIRE
SPRINKLER FLOW & TAMPER SWITCHES	BY SPRINKLER CONTRACTOR	WIRE

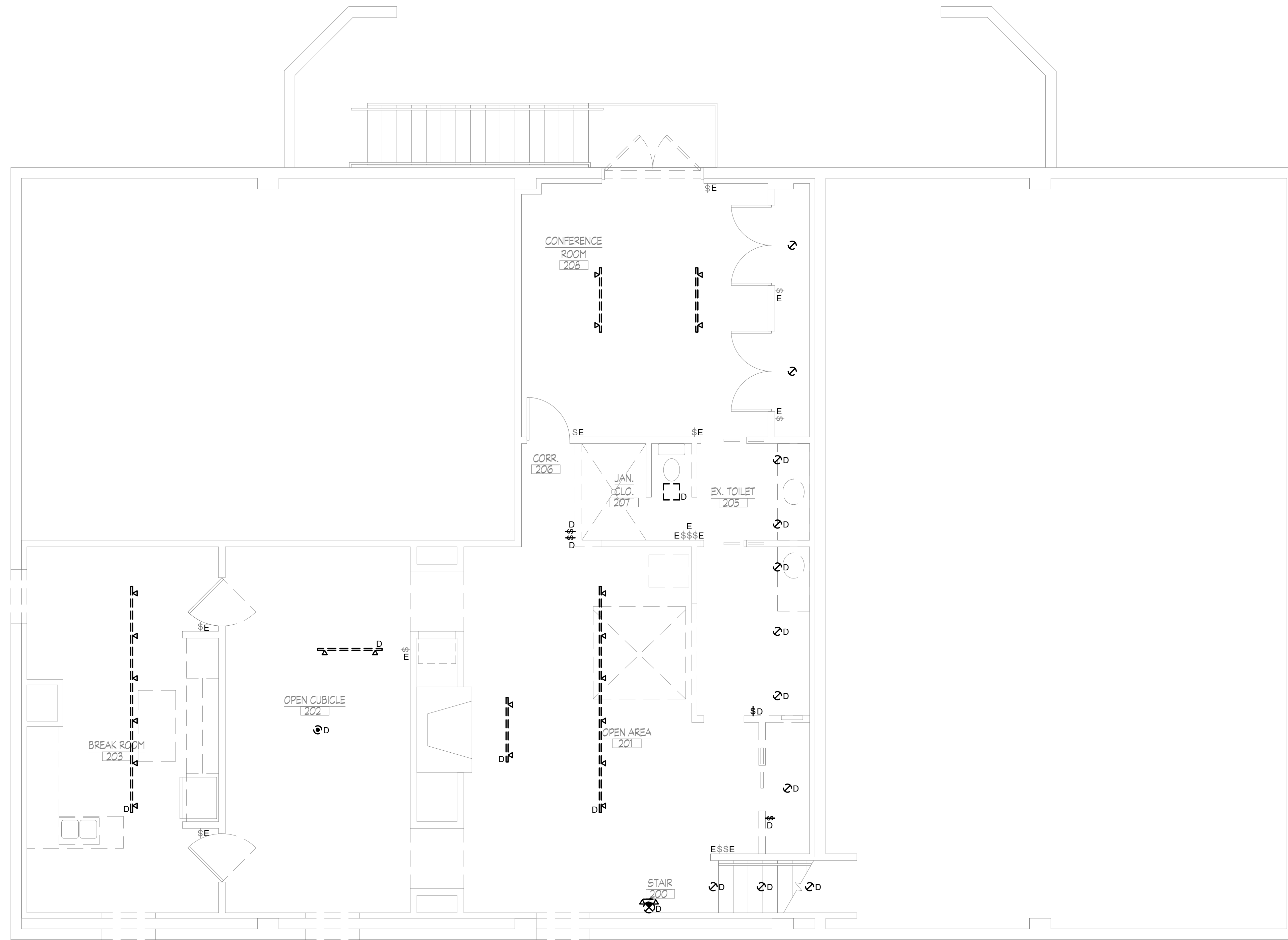
FIRE ALARM	
	FIRE ALARM CONTROL PANEL, SURFACE MOUNTED, TOP 5'-9" AFF.
	FIRE ALARM ANNUNCIATOR PANEL, RECESSED, TOP 5'-0" AFF.
	FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL, SURFACE MOUNTED, TOP, 5'-9" AFF.
	FIRE ALARM TRANSPONDER PANEL, SURFACE MOUNTED, TOP 5'-9" AFF.
	FIRE ALARM MANUAL PULL STATION, 44" AFF TO ACTUATING ARM, UON.
	ADDRESSABLE FIRE ALARM SYSTEM PHOTO-ELECTRIC SMOKE DETECTOR, CEILING MOUNTED.
	DUCT MOUNTED ADDRESSABLE FIRE ALARM SYSTEM PHOTO-ELECTRIC SMOKE DETECTOR.
	ADDRESSABLE FIRE ALARM SYSTEM HEAT DETECTOR, FIXED TEMPERATURE/RATE OF RISE TYPE. CEILING MOUNTED.
	FIRE ALARM VISUAL (STROBE) APPLIANCE, MOUNT 80" AFF, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING, WHERE GREATER THAN 15.
	FIRE ALARM SYSTEM VISUAL (STROBE) APPLIANCE, WALL MOUNTED AT 80" AFF TO BOTTOM OF LENS, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING.
	FIRE ALARM AUDIO/VISUAL (HORN/STROBE) APPLIANCE, 80" AFF, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING, WHERE GREATER THAN 15.
	FIRE ALARM SYSTEM HORN/STROBE, WALL MOUNTED AT 80" AFF TO BOTTOM OF LENS, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING. SUBSCRIPT "WP" INDICATES WEATHERPROOF DEVICE.
	SPRINKLER SYSTEM SUPERVISORY VALVE TAMPER SWITCH CONNECTION.
	SPRINKLER SYSTEM SUPERVISORY FLOW SWITCH CONNECTION.
	SPRINKLER SYSTEM PRESSURE SWITCH CONNECTION.
	FIRE ALARM MAGNETIC DOOR HOLDER CONNECTION POWERED THROUGH FIRE ALARM SYSTEM. COORDINATE MOUNTING HEIGHT WITH ASSOCIATED DOOR MOUNTED DEVICE.
	SPRINKLER SYSTEM BELL ALARM APPLIANCE, WEATHERPROOF. MOUNT 80" AFF.
	POST INDICATOR VALVE CONNECTION, COORDINATE EXACT LOCATION WITH SITE DRAWINGS.
	SMOKE DAMPER CONNECTION, 120V.
	FIREMAN TELEPHONE OUTLET, 46" AFF, UON.

COMMUNICATIONS	
	TELE/DATA BOX, 4"x4"x2 1/4" D BOX WITH SINGLE GANG PLASTER RING 18" AFF, UON, WITH 3/4" C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH PLASTIC BUSHING.
	TELE/DATA BOX, 4"x4"x2 1/4" D BOX WITH SINGLE GANG PLASTER RING 40" AFF OR 4" ABOVE COUNTER TOP OR BACKSPLASH (WHICHEVER IS HIGHER) OR IN CASEWORK AS APPLICABLE, UON, WITH 3/4" C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH PLASTIC BUSHING.
	TELEPHONE PLYWOOD BACKBOARD 3/4"x8"x4", FIRE RETARDANT. BOTTOM AT 0'-4" AFF.
	CABLE TELEVISION OUTLET WITH DUPLEX RECEPTACLE, PROVIDE DUPLEX RECEPTACLE AND ADDITIONAL 4"x4"x2 1/4" D BOX WITH SINGLE GANG PLASTER RING, WITH 3/4" C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH BUSHING. MOUNT 18" AFF UON.

DATE	4-12-22
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RENOVATION OF: <b>WORCESTER COUNTY</b> <b>ROADS BUILDING</b> BERLIN, MARYLAND	
ELECTRICAL DATA SHEET	
 <b>Allen + Shariff</b> MEP Engineering Project Management 205 East Market Street Salisbury, Maryland 21801 443.545.1300	
SCALE	: XXX
DESIGN BY	: XXX
DRAWN BY	: PRD
CHECKED BY	: XXX
GMB FILE	: 210241
DATE	: 12-06-22
E0.1	







**GENERAL LIGHTING DEMOLITION NOTES:**

- EXISTING CONDITIONS CAPTURED THROUGH SITE WALK AND OWNER PROVIDED AS-BUILT NOTES, AND MAY NOT BE AN ACCURATE DEPICTION OF ALL EXISTING CONDITIONS. DETERMINE EXISTING CONDITIONS PRIOR TO DEMOLITION WORK, AND INCLUDE ALL SCOPE WHETHER SHOWN OR NOT. DEVICES LOCATED OUTSIDE OF THE SOW TENANT SPACE ARE NOT SHOWN.
- FIXTURES AND DEVICES INDICATED BY 'D' ARE SCHEDULED FOR DEMOLITION. GIVE OWNER FIRST RIGHT OF REFUSAL OF DEMOLISHED FIXTURES AND DEVICES. ALSO COORDINATE WITH ARCHITECTURAL PLANS FOR EXISTING FIXTURES AND DEVICES SCHEDULED FOR DEMOLITION. UTILIZE EXISTING DEVICE WHERE NEW DEVICES ARE SHOWN AT DEMOLISHED LOCATION, UNLESS MAINTAIN LIGHTING BRANCH CIRCUIT FOR NEW LIGHT FIXTURES, UNLESS ALL ITEMS SHOWN WITH AN 'R' SHALL BE RELOCATED. REFER TO NEW WORK PLAN FOR NEW LOCATION, EXTEND CIRCUITS AS REQUIRED.
- FIXTURES AND DEVICES INDICATED BY 'E' ARE EXISTING TO REMAIN. ALSO COORDINATE WITH ARCHITECTURAL PLANS FOR EXISTING FIXTURES AND DEVICES TO REMAIN.
- FIXTURES AND DEVICES INDICATED BY 'R' ARE EXISTING TO BE RELOCATED. CONTRACTOR SHALL DISCONNECT, REMOVE, CLEAN, STORE, AND RELAMP EXISTING FIXTURES. REFER TO NEW WORK DRAWINGS FOR NEW LOCATIONS OF FIXTURES WITH LABEL 'NR'. ALSO COORDINATE WITH ARCHITECTURAL PLANS FOR EXISTING FIXTURES AND DEVICES TO BE RELOCATED.
- HATCHED AREAS ARE NOT IN SCOPE OF WORK. REFER TO ARCHITECTURAL DRAWINGS FOR AREAS INCLUDED IN THE SCOPE OF WORK.
- CIRCUITING TO REMAIN: WHERE AFFECTED BY NEW WORK, EXISTING CIRCUITING TO REMAIN SHALL BE REROUTED OR RECONNECTED AS REQUIRED, IN ORDER TO MAINTAIN CONTINUITY OF CIRCUIT.
- REUSE OF EXISTING CIRCUITRY: EXISTING CIRCUITS SHALL BE REUSED WHERE CONVENIENT TO SERVE THE NEW LAYOUT. PROVIDE CIRCUIT MODIFICATIONS INDICATED OR REQUIRED TO MAINTAIN CONTINUITY OF EXISTING CIRCUITS THAT REMAIN.

1 LIGHTING SECOND FLOOR PLAN DEMO  
E101 1/4" = 1'-0"



NO.	REVISION	DATE
1	OWNER REVIEW	4-12-22

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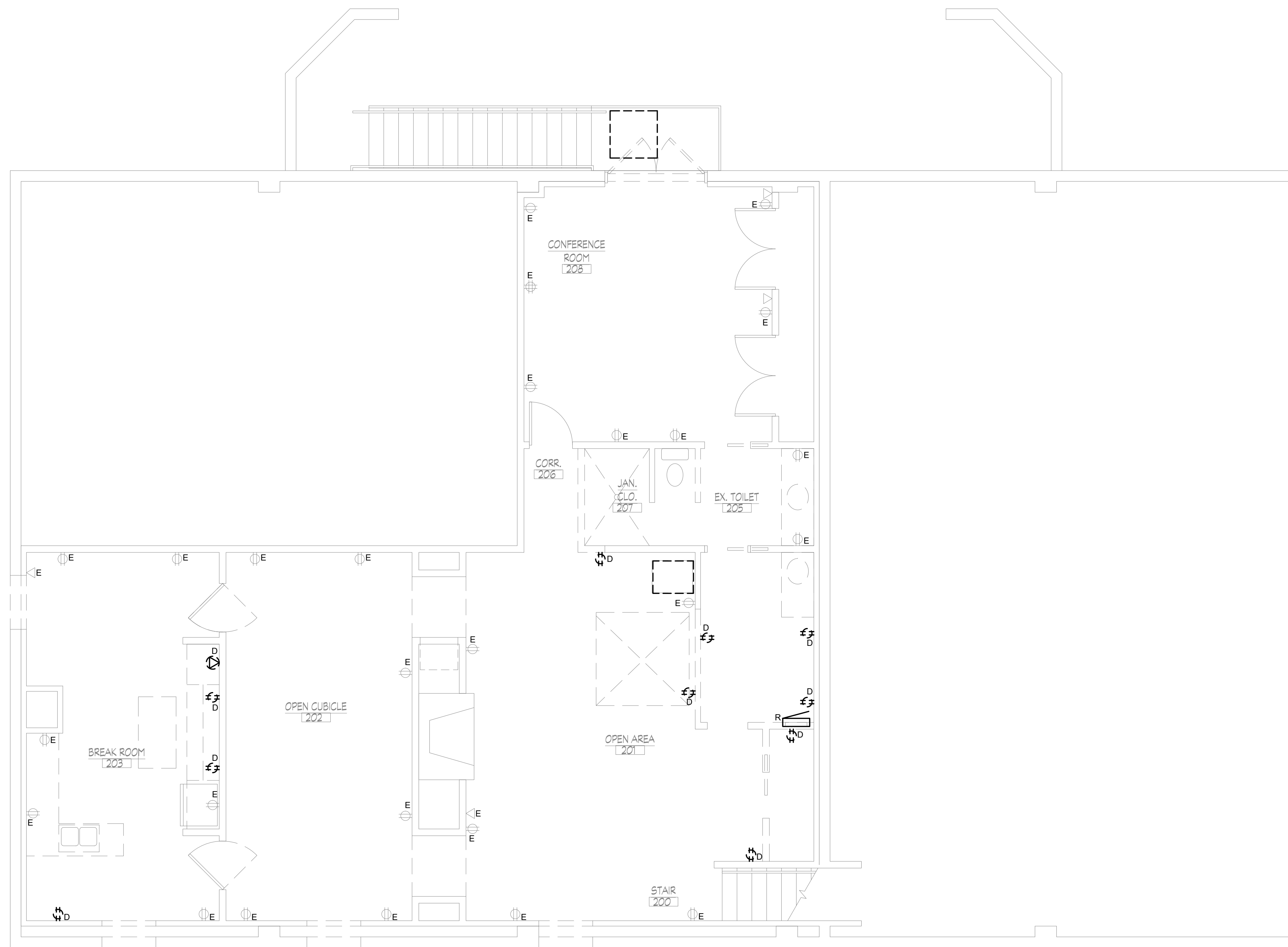
RENOVATION OF:  
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**ROADS BUILDING**  
 BERLIN, MARYLAND

LIGHTING DEMO

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 Project Management  
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E1.1



**GENERAL POWER DEMOLITION NOTES:**

1. GENERAL: DEMOLITION DRAWINGS ARE BASED ON EXISTING PLANS AND FIELD INVESTIGATION PRIOR TO DEMOLITION. VISIT THE EXISTING BUILDING PRIOR TO BID IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND IN ORDER TO AVOID CONFLICTS.
2. EXISTING ITEMS: ALL ITEMS SHOWN WITH AN "D" ON THE DEMOLITION PLANS ARE EXISTING AND SHALL BE REMOVED COMPLETE INCLUDING BOXES, CONDUIT, WIRE, FASTENERS, AND ASSOCIATED APPURTENANCES UON. ALL ITEMS SHOWN WITH AN "E" ON THE DEMOLITION PLANS ARE EXISTING TO REMAIN AS-IS. ALL ITEMS SHOWN WITH AN "R" SHALL BE RELOCATED, EXTEND CIRCUITS AS REQUIRED.
3. CIRCUITING TO REMAIN: WHERE AFFECTED BY NEW WORK, EXISTING CIRCUITING TO REMAIN SHALL BE REROUTED OR RECONNECTED AS REQUIRED, IN ORDER TO MAINTAIN CONTINUITY OF CIRCUIT.
4. REUSE OF EXISTING CIRCUITRY: EXISTING CIRCUITS SHALL BE REUSED WHERE CONVENIENT TO SERVE THE NEW LAYOUT. PROVIDE CIRCUIT MODIFICATIONS INDICATED OR REQUIRED TO MAINTAIN CONTINUITY OF EXISTING CIRCUITS THAT REMAIN.
5. EXISTING CONDUIT: ALL EXISTING CONDUITS AND WIRING THAT WILL NOT BE REUSED SHALL BE REMOVED. EXISTING CONDUIT TO REMAIN CONCEALED IN WALLS SHALL BE ABANDONED. EXISTING CONDUIT TO REMAIN BELOW FLOOR SLAB SHALL BE CUT OFF ONE INCH BELOW ROUGH FLOOR AND GROUTED FLUSH. ALL EXISTING WIRING IN CONDUITS TO BE ABANDONED SHALL BE DISCONNECTED FROM POWER SOURCE AND REMOVED.
6. REPAIR DAMAGE: EXERCISE CARE IN REMOVAL OF DEMOLITION ITEMS. REPAIR, AT NO ADDITIONAL COST TO OWNER, ANY DAMAGE CAUSED TO EXISTING CONSTRUCTION AND/OR EQUIPMENT TO REMAIN.
7. ASSOCIATED APPURTENANCES: REMOVE ALL ELECTRICAL APPURTENANCES (DISCONNECTS, STARTERS, WIRING, CONDUIT, ETC.) ASSOCIATED WITH EQUIPMENT TO BE REMOVED BY OTHERS.
8. KNOCKOUT PLUGS AND COVERS: ALL CONDUIT REMOVED SHALL BE REMOVED IN ITS ENTIRETY, INCLUDING FITTINGS, MOUNTING DEVICES, MOUNTING HARDWARE, ETC. PROVIDE CONDUIT PLUGS AND BLANKS FOR ALL OPENINGS CREATED BY THE REMOVAL OF CONDUIT. PROVIDE BLANK COVER PLATES FOR ALL OPENED OUTLET BOXES CREATED BY THE REMOVAL OF THE EQUIPMENT AND/OR DEVICES.
9. DEMOLISHED MATERIALS: ALL MATERIALS REMOVED UNDER DEMOLITION, NOT TO BE RELOCATED OR DESIGNATED TO BE TURNED OVER TO THE OWNER, SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED COMPLETELY FROM THE SITE.
10. SCHEDULE OUTAGES: ALL WORK AND ALL POWER OUTAGES SHALL BE SCHEDULED AT TIMES CONVENIENT TO THE OWNER.
11. NOTIFICATION: NOTIFY THE OWNER PRIOR TO TURNING OFF ANY CIRCUITS.
12. EXISTING CIRCUITS: IF DURING THE COURSE OF CONSTRUCTION, IT IS DETERMINED BY THE CONTRACTOR THAT AN EXISTING CIRCUIT BECOMES SPARE, THE CONTRACTOR SHALL UPDATE THE PANELBOARD DIRECTORY TO INDICATE SUCH, EVEN IF IT IS NOT EXPLICITLY MARKED ON THE ELECTRICAL PLANS.

1 POWER SECOND FLOOR PLAN DEMO  
E2.1 1/4" = 1'-0"



NO.	1	DATE	4-12-22
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POWER DEMO  
 PLAN

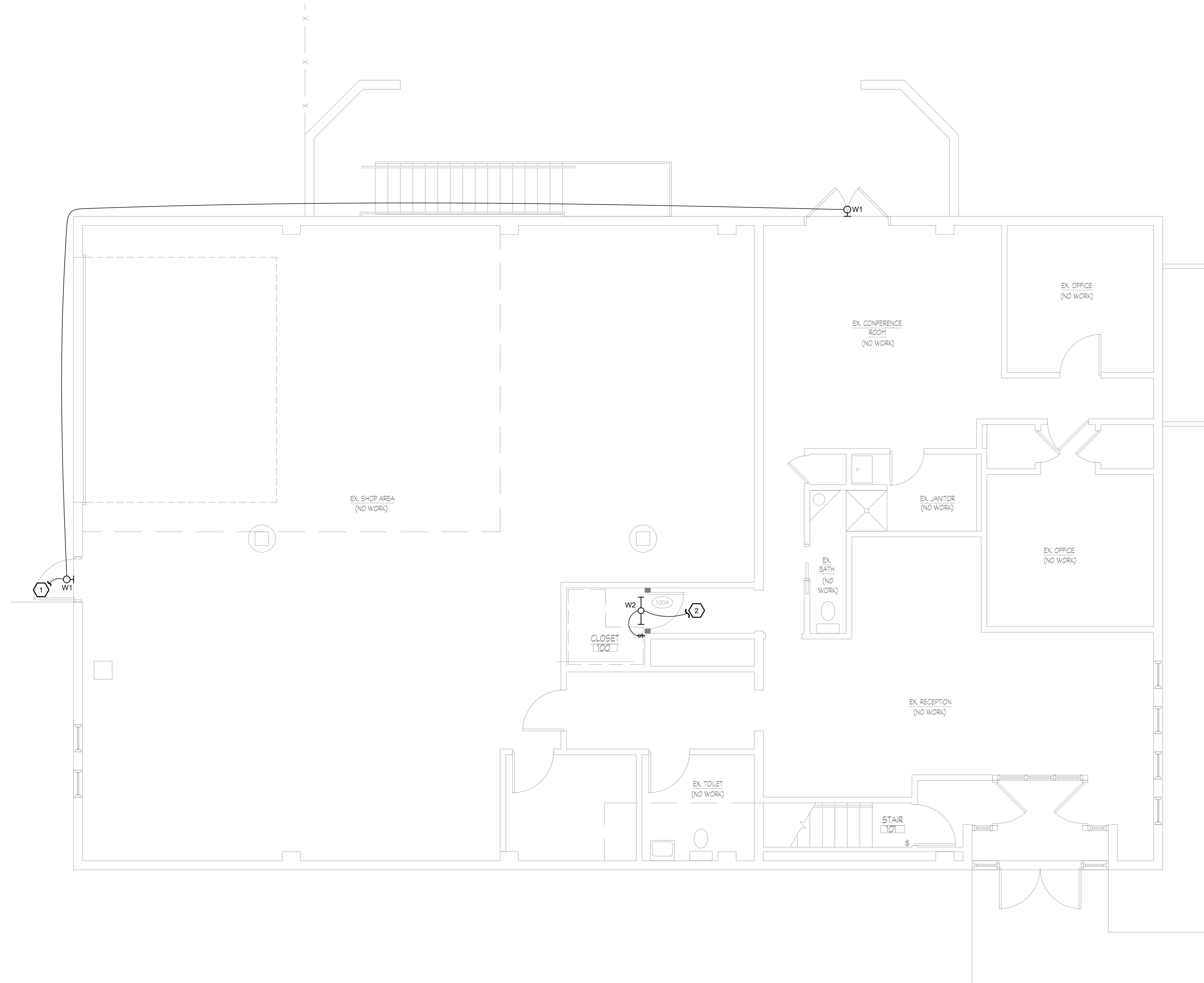
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- LIGHTING GENERAL NOTES:**
1. FIRE STOP ALL FIRE RATED FLOORS, CEILINGS, AND WALLS AS REQUIRED BY CODE PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
  2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL PLANS.
  3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE.
  4. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND EXACT LIGHTING FIXTURE LOCATIONS, DIMENSIONAL INFORMATION, AND MOUNTING HEIGHTS.
  5. EXIT SIGNS, EM SIGNS, EM BATTERY-BACKUP LIGHTING, AND NIGHT LIGHTS (NL) SHALL BE CIRCUITED HOT, AHEAD OF LOCAL CONTROLS.
  6. UTILIZE RETAINED LIGHTING BRANCH CIRCUITS FOR NEW LIGHTING, UON.
  7. WHERE WIRE SIZE IS NOT INDICATED, #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH, #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 TO 150 FEET IN LENGTH, AND #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 TO 250 FEET IN LENGTH. CIRCUIT LENGTHS GREATER THAN 250 FEET SHALL BE WIRED USING #6 MINIMUM, SUBJECT TO FIELD DETERMINED BY THE EC. PER ALL APPLICABLE CODES BASED ON ACTUAL CONDUIT AND WIRE ROUTING. THE INFORMATION ABOVE SHALL BE USED FOR PRICING PURPOSES ONLY.

- LIGHTING KEY NOTES:** #
1. EXTERIOR LIGHTING CIRCUIT CONTINUES TO SECOND FLOOR SHOWN ON SHEET E3.1.
  2. CONNECT NEW LIGHTING FIXTURE TO EXISTING UNSWITCHED HOT CONDUCTOR ON CORRIDOR LIGHTING CIRCUIT.

1 LIGHTING FIRST FLOOR PLAN  
E4.1 1/4" = 1'0"



NO.	REVISION	OWNER REVIEW	DATE
1			4-12-22

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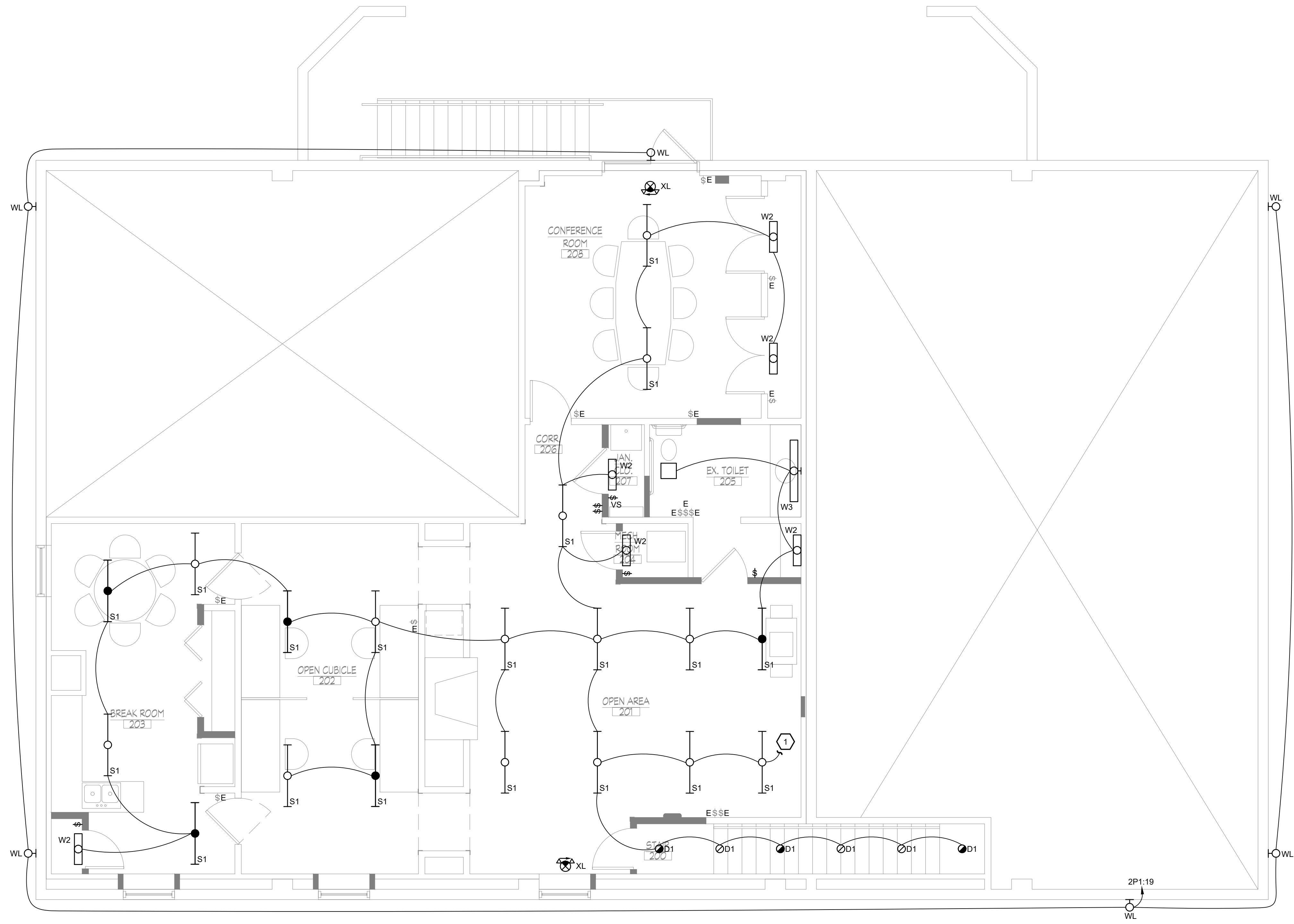
RENOVATION OF:  
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LIGHTING FIRST  
 FLOOR PLAN

**Allen + Shariff**  
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 205 East Market Street  
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⊕ E3.0



- LIGHTING GENERAL NOTES:**
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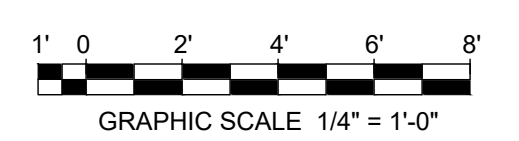
- LIGHTING KEY NOTES:** (#)
1. CONNECT LIGHTING TO EXISTING SWITCHED LOCAL LIGHTING CIRCUIT.

1 LIGHTING SECOND FLOOR PLAN  
E4.2 1/4" = 1'0"

LIGHTING FIXTURE SCHEDULE								
TYPE	FIXTURE DESCRIPTION	MANUFACTURER	MODEL	DRIVER/BALLAST	INPUT WATTS	VOLTS	MOUNTING	NOTES
D1	6" LED DOWNLIGHT	LITHONIA	LDN6 07LM 35K L08 MVOLT UGZ	0-10V	9	120	RECESSED	
S1	HIGH PERFORMANCE 2" SURFACE MOUNT LED	FINELITE	HP 2 SM D V 835 120 FC-10%	0-10V	19.6	120	SURFACE	MOUNT FIXTURE TO BOTTOM OF JOISTS, IN AREAS WHERE FIXTURES DO NOT LINE UP WITH JOIST, MOUNT UNISTRUT BETWEEN JOIST.
W1	WEDGE1 LED	LITHONIA	WDGE1 LED P1 35K 80CRI MVOLT	0-10V	10	120	WALL	
W2	CLOSET LIGHT	LITHONIA	WL2 12L MVOLT GZ10 LP835	N/A	12	120	WALL	
W3	CLOSET LIGHT	LITHONIA	WL4 30L MVOLT GZ10 LP835	N/A	29	120	WALL	
XL	EMERGENCY EXIT LIGHT COMBO	LITHONIA	LHQM LED	4.3	1.5	120	CEILING	

**NOTES:**

1. ARCHITECT SHALL SPECIFY / VERIFY ALL FINISH SELECTIONS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MOUNTING ACCESSORIES.
4. LIGHTING FIXTURE SUBSTITUTIONS THAT ARE CONSIDERED EQUAL TO THE SPECIFIED PRODUCTS MAY BE SUBMITTED AND WILL BE REVIEWED BY ARCHITECT AND ELECTRICAL ENGINEER. ACCEPTANCE WILL BE EVALUATED BASED ON AESTHETICS, PERFORMANCE, AND QUALITY. DO NOT PROVIDE VALUE ENGINEERING OPTIONS UNLESS SPECIFICALLY DIRECTED BY THE OWNER, ARCHITECT, OR ENGINEER.
5. THE STANDARD DRIVER OPTION FOR MOST FIXTURES IS 0-10V DIM. THE CONTRACTOR IS ONLY REQUIRED TO PROVIDE 0-10V WIRING WHERE DIMMING CONTROLS ARE SHOWN ON THE LIGHTING PLAN.
6. FIXTURES WITH HALF FILLED OR FILLED CENTERS SHALL BE PROVIDED WITH A 1100 LUMEN MIN EMERGENCY BATTERY BACKUP.



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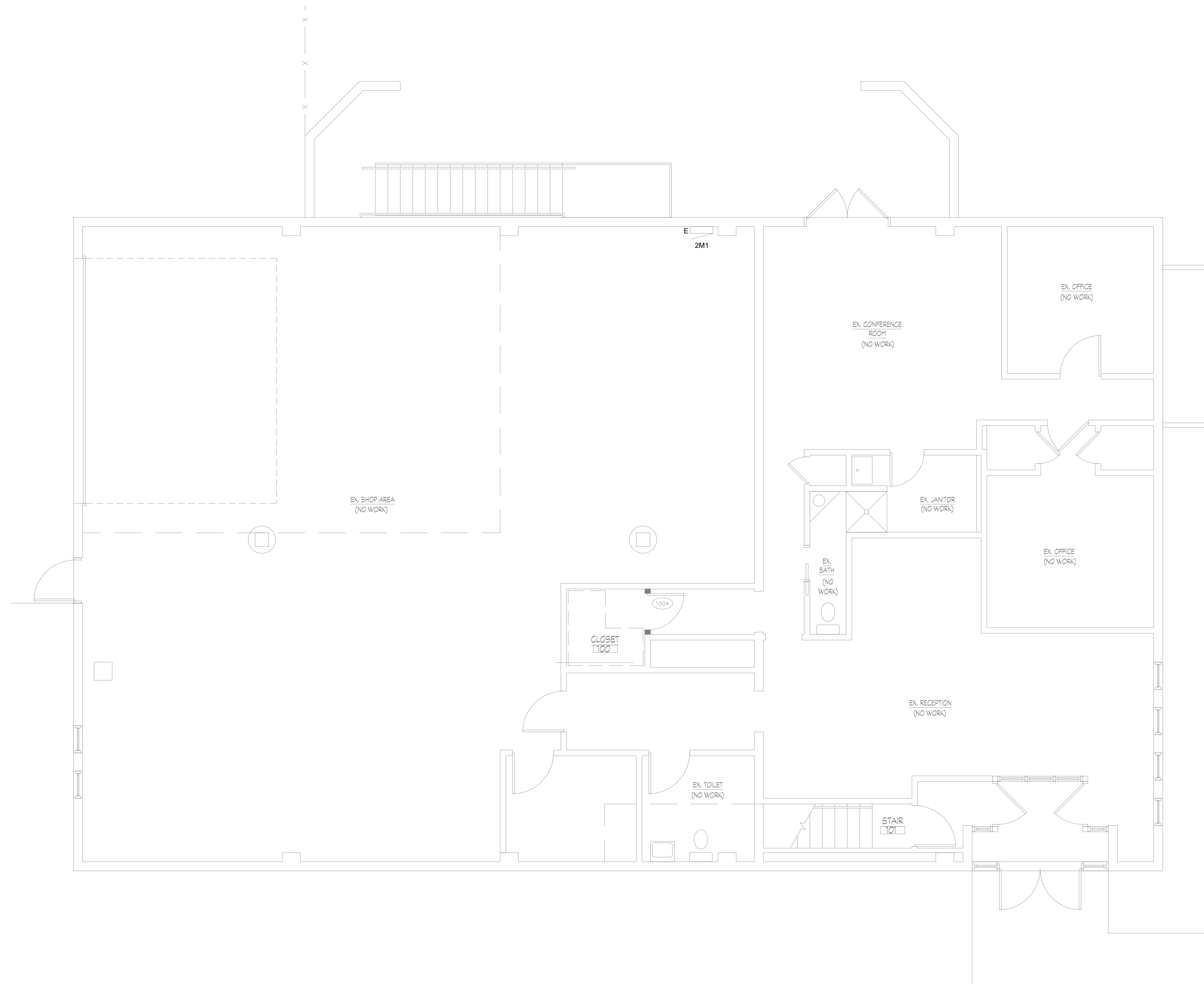
RENOVATION OF:  
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LIGHTING SECOND  
 FLOOR PLAN

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SCALE: 1/4" = 1'0"  
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E3.1



- POWER GENERAL NOTES:**
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  4. EC SHALL NOT HAVE MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A CONDUIT WITHOUT DERATING AMPACITIES PER THE NEC.
  5. VERIFY EXACT LOCATIONS OF ALL DEVICES WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
  6. WHERE DEVICES ARE DIMENSIONED ON ARCHITECTURAL DRAWINGS, INSTALL DEVICES PER THOSE DIMENSIONS. WHERE DEVICE LOCATIONS ARE NOT DIMENSIONED ON ARCHITECTURAL DRAWINGS, INSTALL IN ACCORDANCE WITH DEFAULT LOCATIONS IN ELECTRICAL SPECIFICATIONS.
  7. WHERE WIRE SIZE IS NOT INDICATED, #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH, #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 TO 150 FEET IN LENGTH, AND #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 TO 250 FEET IN LENGTH. CIRCUIT LENGTHS GREATER THAN 250 FEET SHALL BE WIRED USING #6 MINIMUM, SUBJECT TO FIELD VERIFICATION. ALL EXACT CONDUIT FOOTINGS, LENGTHS, AND WIRE SIZES SHALL BE FIELD DETERMINED BY THE E.C. PER ALL APPLICABLE CODES BASED ON ACTUAL CONDUIT AND WIRE ROUTING. THE INFORMATION ABOVE SHALL BE USED FOR PRICING PURPOSES ONLY.
  8. ALL EXISTING RECEPTACLES THAT ARE TO REMAIN SHALL RECEIVE NEW DEVICES AND COVERPLATES.

1 POWER FIRST FLOOR PLAN  
E3.1 1/4" = 1'-0"



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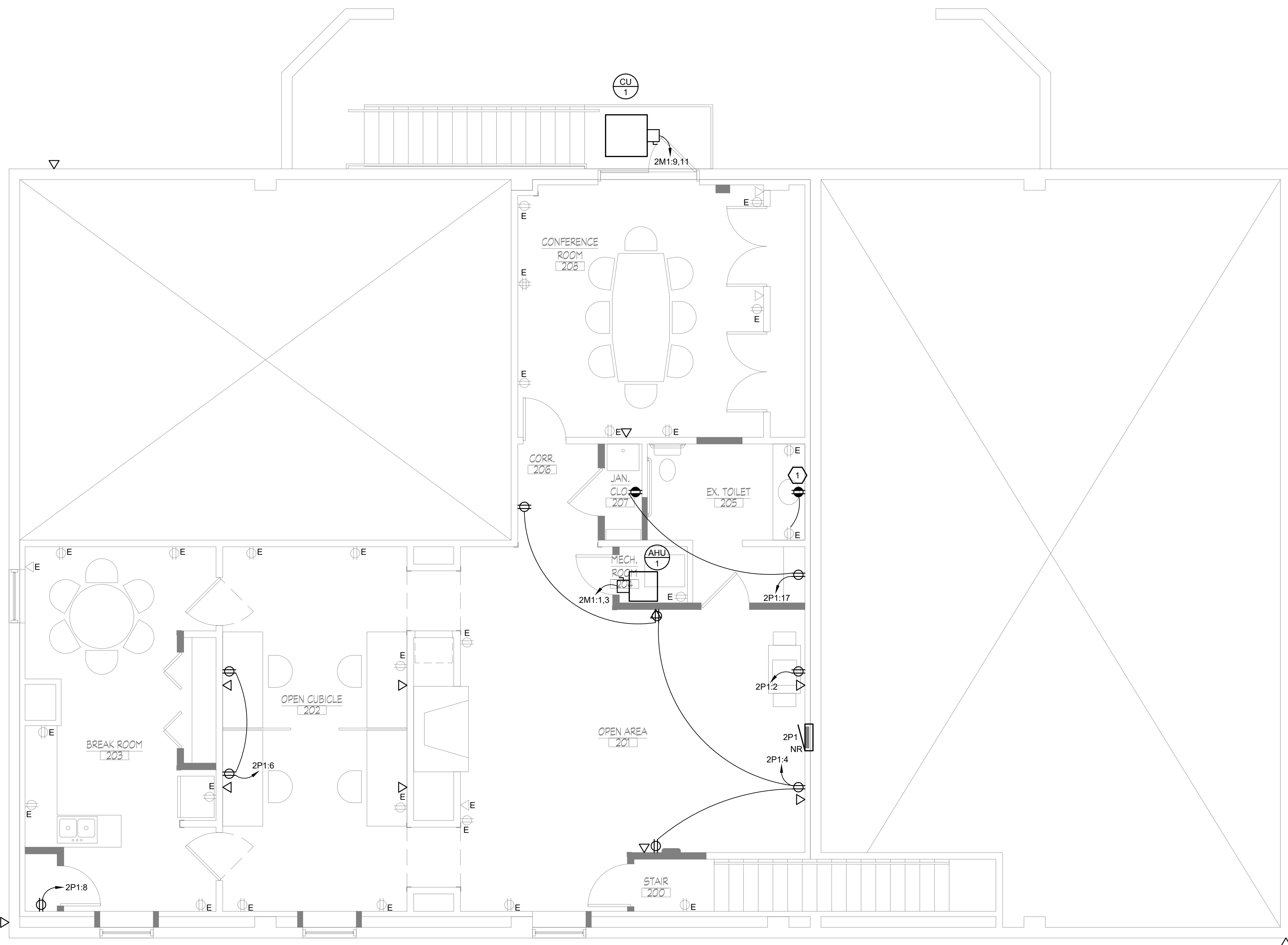
POWER FIRST  
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8. ALL EXISTING RECEPTACLES THAT ARE TO REMAIN SHALL RECEIVE NEW DEVICES AND COVERPLATES.

**POWER KEY NOTES:** (E)

1. PROVIDE LISTED GFCI RECEPTACLE FOR CONNECTION TO SENSOR FAUCET. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR.

**Existing Branch Panel: 2P1**

Location: SHOP AREA		Volts: 240/120V		A.I.C. Rating: KAIC	
Supply From: SURFACE		Phases: 1		Mains Type: MLO	
Enclosure: TYPE 1		Wires: 3		Mains Rating: 0	
				MCB Rating: -	

CKT	Circuit Description	Wire Size	Trip	Pole	LOAD (VA)		Pole	Trip	Wire Size	Circuit Description	CKT	
					A	B						
1	DRYER	EXISTING	30	2	-	1000	-	1	20	2#12, 1#12G, 3/4"C	COPIER	2
3	BEDROOM	EXISTING	15	1	-	360	-	1	20	2#12, 1#12G, 3/4"C	REC OPEN AREA 201	4
7	BATH GFI REC	EXISTING	20	1	-	-	-	1	20	2#12, 1#12G, 3/4"C	REC IT CLOSET	6
9	FAN LITE HEAT BATH	EXISTING	20	1	-	-	-	1	15	EXISTING	DISHWASHER	10
11	LIVING BATH UTILITY LTG	EXISTING	15	1	-	-	-	1	20	EXISTING	KITCHEN DINING REC	12
13	WASHER	EXISTING	20	1	-	-	-	1	20	EXISTING	KITCHEN DINING REC	14
15	KIT DINING LTG	EXISTING	15	1	-	-	-	1	20	EXISTING	KITCHEN DINING REC	16
17	REC JAN CLO 207	2#12, 1#12G, 3/4"C	20	1	360	-	-	1	15	EXISTING	LIVING RM STAIRWAY REC	18
19	TO EXTERIOR	2#12, 1#12G, 3/4"C	20	1	-	-	80	-	-	-	SPACE	20
21	SPACE	-	-	-	-	-	-	-	-	-	SPACE	22
23	SPACE	-	-	-	-	-	-	-	-	-	SPACE	24
<b>Total Load:</b>					1720	980						
<b>Amps:</b>					11.3							

NOTES:  
CONTRACTOR SHALL VERIFY ALL SPARE CIRCUIT BREAKERS ONCE DEMOLITION IS COMPLETE

**Existing Branch Panel: 2M1**

Location: SHOP AREA		Volts: 240/120V		A.I.C. Rating: KAIC	
Supply From: EXISTING		Phases: 1		Mains Type: MCB	
Enclosure: TYPE 1		Wires: 3		Mains Rating: 200	
				MCB Rating: 200	

CKT	Circuit Description	Wire Size	Trip	Pole	LOAD (VA)		Pole	Trip	Wire Size	Circuit Description	CKT	
					A	B						
1	AHU-1	2#4, 1#10G, 1"C	60	2	5069	-	-	2	60	EXISTING	AHU FIRST FLOOR	2
3	AHU FIRST FLOOR	EXISTING	25	2	-	-	-	2	25	EXISTING	AHU FIRST FLOOR	4
7	AHU FIRST FLOOR	EXISTING	25	2	-	-	-	2	25	EXISTING	AHU FIRST FLOOR	8
9	CU-1	2#8, 1#10G, 3/4"C	40	2	2419	-	-	2	40	EXISTING	CU FIRST FLOOR	10
11	EXISTING LOAD	EXISTING	20	1	-	-	-	2	100	EXISTING	SUB FEED EQUIP SHED	12
13	SPACE	-	-	-	-	-	-	-	-	-	SPACE	14
15	SPACE	-	-	-	-	-	-	-	-	-	SPACE	16
17	SPACE	-	-	-	-	-	-	-	-	-	SPACE	18
19	SPACE	-	-	-	-	-	-	-	-	-	SPACE	20
<b>Total Load:</b>					7468	7468						
<b>Amps:</b>					62.4							

NOTES:  
CONTRACTOR SHALL VERIFY ALL SPARE CIRCUIT BREAKERS ONCE DEMOLITION IS COMPLETE

**1 POWER SECOND FLOOR PLAN**  
E3.2 1/4" = 1'0"



DATE: 4-12-22

REVISION: OWNER REVIEW

NO. 1

**GMB**  
GEORGE, MILES & BUHR, LLC  
ARCHITECTS & ENGINEERS  
SALISBURY • BALTIMORE • SEAFORD  
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RENOVATION OF:  
**WORCESTER COUNTY  
ROADS BUILDING**  
BERLIN, MARYLAND

POWER SECOND  
FLOOR PLAN

**Allen + Shariff**  
MEP Engineering  
Project Management  
205 East Market Street  
Salisbury, Maryland 21801  
443.545.1300

SCALE: 1/4" = 1'0"  
DESIGN BY: JTH  
DRAWN BY: PRD  
CHECKED BY: JTH  
GMB FILE: 210241  
DATE: 12-06-22

E4.1