

**CARROLL COUNTY BOARD OF COMMISSIONERS
211 MOODY AVE SW OFFICE RENOVATION****HAI PROJECT NO. 24013.000****TO: ALL BIDDERS**

This Addendum becomes a part of the Contract Documents and modifies the original Bidding Documents dated October 15, 2024, as noted below. The Bidder shall acknowledge receipt of this Addendum on the Form of Proposal. Failure to do so may subject the Bidder to disqualification.

CHANGES TO PRIOR ADDENDA:

1. None.

GENERAL CLARIFICATIONS:

1. See attached attendance sheet from the Pre-Bid meeting.
2. Refer to specifications section 004343 Prevailing Wage Rates for prevailing wage requirements.
3. Additional walk-through will be conducted on November 13, 2024 from 9 am – 11 am. The design team will not be available, but the building will be open for review of existing conditions.

QUESTIONS FROM BIDDERS:

1. **Question:** Drawing M101 has a note to provide a separate price to install new balance valves on existing equipment. How should this cost be shown on the bid form?
Answer: Refer to added Alternate No. 4. See 'Changes to Project Manual' section below.
2. **Question:** Would grooved mechanical-joint fittings and couplings be acceptable for hot-water heating piping, aboveground, NPS 2 1/2" and larger?
Answer: Yes, mechanical-joint fittings and couplings are acceptable for this application. Refer to attached revised specification section 232113 – Hydronic Piping.
3. **Question:** Has a schedule been established for the Asbestos Abatement? That will determine when the GC can start on site. I assume they are doing one full containment and we wouldn't start on site until they are complete and cleared.
Answer: Abatement will begin on November 11 and continue for 35 working days. With the holidays, assume site access beginning on January 6.
4. **Question:** Is the awarded GC expected to have a site superintendent on site during the Abatement process?
Answer: No. Abatement should be complete before the contract is approved for the renovation project.
5. **Question:** On the Bid Form, it requests a duration for completion. Is there a "must finish by" date that the commissioners require? If they must have the building in 10 months we don't want to assume 12 month project.
Answer: There is not a 'must finish by' date, but the Commissioners would like to move the occupants in as soon as possible. Indicated completion duration indicated by bidder will be used to determine lowest responsive bidder.

6. **Question:** There is a pair of doors on this project, opening #124B which is detailed as a Wood Door x Hollow Metal Frame. There is a 180 minute (3 Hour) fire rating. Wood doors can only be fire rated upto 90 minutes. If these doors need to be 3 hour fire rated, they would have to be hollow metal doors, or if wood doors are required, then the fire rating will have to be 90 minute. Please advise on what kind of doors needs to be in this opening.
Answer: Door to be hollow metal. Refer to revised door schedule on Sheet A8-0.
7. **Question:** According to drawing number A2-2 in the open office area there are walls not identified. These walls make up the managers' offices, call centers, and the training room. Do these walls go to deck? What are the walls constructed out of? As there are not identified on A2- 0. Please clarify the intent.
Answer: Refer to A2-0 General Notes #1 & #2. These walls will go to deck due to sensitive nature of conversations that occur in these rooms.
8. **Question:** According to the drawings, a drop box is to be used in multiple locations. Please provide a spec for the drop box. Is this owner supplied, or contractor supplied? Please advise.
Answer: Refer to 083113 – Access Doors and Frames, paragraph 2.4.
9. **Question:** Can “Siemen Cerberus Pro” equipment be used for the fire alarm? The plans seem to be deficient on fire alarm devices. Is it the contractor’s responsibility to fully design the fire alarm system? Or do we bid as drawn? Please advise.
Answer: System is only a fire alarm monitoring system, not a full fire alarm. Siemens is an acceptable manufacturer.

CHANGES TO PROJECT MANUAL:

1. Section 004100 BID FORM
 - a. Replace bid form with attached updated form adding Alternate No. 4.
 - b. Replace bid bond with form with corrected project name.
2. Section 012300 ALTERNATES
 - a. Replace section with updated section attached.
 - b. Alternate No. 4 added.
3. Section 232113 HYDRONIC PIPING
 - a. Replace section with updated section attached.
 - b. Section 3.1.B.3 updated per question 2 above.

CHANGES TO DRAWINGS:

1. Remove the following sheets from the drawing set:
 - A1R-1 DEMOLITION PLAN - ROOF PLAN - BASE BID
 - A1R-2 DEMOLITION PLAN - ROOF PLAN - BID ALTERNATE
 - A2R-0-1 GENERAL INFO & TYPICAL ROOF DETAILS
 - A2R-1 ROOF PLAN - BASE BID
 - A2R-2 ROOF PLAN - BID ALTERNATE
2. A2-1 FLOOR PLAN – LOWER LEVEL
 - a. Updated structural steel canopy details at lower level.
3. A2-2 FLOOR PLAN – UPPER LEVEL
 - a. Updated structural steel canopy details at lower level.
4. A2R-0 GENERAL INFO & TYPICAL ROOF DETAILS
 - a. Replace sheet in it entirety.
5. A8-0 DOOR & FRAME SCHEDULE & DETAILS
 - a. Revised door material type for door 124B.

END OF ADDENDUM



ATTENDEES - PLEASE PRINT

Name	Company	Phone No.	Email
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24013.000 211 Moody Ave SW Office Renovation Pre-Bid			October 29, 2024
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24013.000 211 Moody Ave SW Office Renovation Pre-Bid

October 29, 2024

Doug Nett

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SECTION 004100

BID FORM

PROJECT IDENTIFICATION: Carroll County Board of Commissioners
Carroll County Office – Roof Repair & Replacement
at 211 Moody Ave SW, Carrollton, OH 44615

BID TO: Carroll County Board of Commissioners
119 S. Lisbon Street, Suite 201
Carrollton, OH 44615

BID FROM:

(Firm Name)

(Business Address, line 1)

(Business Address, line 2)

ITEM 1 – ACKNOWLEDGEMENTS

1. The undersigned BIDDER agrees, if this Bid is accepted, to enter into an agreement with OWNER, in the form referenced in the Bidding Documents, to perform and furnish the Work as specified or indicated in the Bidding Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
 - a. This Bid will remain subject to acceptance for 60 days after the day of Bid opening;
 - b. The Owner has the right to reject this Bid;
 - c. BIDDER accepts the provisions of the Instructions and Supplementary Instructions to Bidders regarding disposition of Bid Security;
 - d. BIDDER will sign and submit the Agreement with applicable Bonds and other documents required by the Bidding Requirements within 15 days after the date of Owner's Notice of Award;
 - e. BIDDER has examined copies of all the Bidding Documents;
 - f. BIDDER has visited the site and become familiar with the general, local and site conditions;
 - g. BIDDER is familiar with federal, state and local laws and regulations;
 - h. BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the Bidding Documents and additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
 - i. This Bid is genuine and not made in the interest of or on behalf of an undisclosed person, firm or corporation and is not submitted in conformity with an agreement or rules of a group, association, organization, or corporation; BIDDER has not directly or indirectly induced or solicited another BIDDER to submit a false or sham Bid; BIDDER has not solicited or induced a person, firm, or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself an advantage over another BIDDER or over OWNER;

ITEM 2 – ADDENDA

A. BIDDER has received the following Addenda receipt of which is hereby acknowledged.

Number	Date
_____	_____
_____	_____
_____	_____

ITEM 3 – BIDS

1. BIDDER will complete the Work in accordance with the Contract Documents for the following prices:

ALL LABOR AND MATERIALS, for the sum of:	\$
plus, applicable Allowances (Refer to Section 012100):	\$
plus, applicable cost for Performance / Payment Bond:	\$
TOTAL (SUM):	\$

Sum in Words: _____

ITEM 4 – ALTERNATES

Alternate 1 – All work as shown in Room 171 – EOC, Room 172 – Waiting, Room 173 – Reception, Room 174 – Office, Room 175 Corridor, and Room 176 – Vestibule as indicated on construction documents under Alternate No. 1.

Amount to be (added to) (deducted from) the BASE BID to complete all work for Alternate as described in specifications and on the Drawings.

Add: \$ _____, _____
(in figures) (in words)

Deduct: \$ _____, _____
(in figures) (in words)

Alternate 2 – Provide fabric canopy at entrance to Waiting 121 as indicated on construction documents under Alternate No. 2.

Amount to be (added to) (deducted from) the BASE BID to complete all work for Alternate as described in specifications and on the Drawings.

Add: \$ _____, _____
(in figures) (in words)

Deduct: \$ _____, _____
(in figures) (in words)

Alternate 3 – Replacement of boiler plant as indicated on construction documents under Alternate No. 3.

Amount to be (added to) (deducted from) the BASE BID to complete all work for Alternate as described in specifications and on the Drawings.

Add: \$ _____,
(in figures) (in words)

Deduct: \$ _____,
(in figures) (in words)

Alternate 4 – Replacement of balancing valves on existing equipment per note on drawing M101.

Amount to be (added to) (deducted from) the BASE BID to complete all work for Alternate as described in specifications and on the Drawings.

Add: \$ _____,
(in figures) (in words)

Deduct: \$ _____,
(in figures) (in words)

ITEM 5 – TIME OF COMPLETION

- A. BIDDER agrees that the Work will be substantially complete in accordance with the General Conditions within _____ calendar days from the Date of Commencement.

ITEM 6 – ATTACHMENTS

The following documents and items shall be attached to and made a condition of this Bid:

A.	Qualification Questionnaire	Attached	Yes	No
B.	Bid Form (this document)			
C.	Affidavits	Attached	Yes	No
D.	Contractor Equal Employment Opportunity Certification	Attached	Yes	No
E.	Certification Regarding Debarment, Suspension, & Other Responsibility Matters	Attached	Yes	No
F.	American Iron & Steel Acknowledgement	Attached	Yes	No
G.	Bid Guaranty and Contract Bond	Attached	Yes	No
H.	Form HLS 0038	Attached	Yes	No

SUBMITTED on _____,
_____, 20_____.

By _____
(Firm Name)

(Name of Person Authorized to Sign)

Business Address: _____

Phone No.: _____

Bid Contact Information Name/E-mail Address: _____

The Bidder shall supplement the Bid by supplying the following information for use in preparation of the Contract:

COMPANY _____

ADDRESS _____

CITY & STATE (ZIP) _____

FEDERAL TAX I.D. NO. _____

TELEPHONE _____

FACSIMILE NUMBER _____

E-MAIL ADDRESS _____

INCORPORATION LOCATION _____

TYPE OF BUSINESS: Corporation Partnership Sole Proprietorship LLC

AUTHORIZED REPRESENTATIVE _____ **TITLE** _____
(please print or type)

SIGNATURE _____

DATE _____

END OF BID FORM

BID GUARANTY AND CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____¹and
_____²

as Surety, are hereby held and firmly bound unto the Board of Commissioners of Carroll County, Ohio³ hereinafter called the Obligee, in the penal sum of the dollar amount of the bid submitted by the Principal to the Obligee on _____ to undertake the project known as:

Carroll County Office Renovation

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, incorporating any additive or deductive alternative proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee. In no case shall the penal sum exceed the amount of _____ DOLLARS (\$_____). If this item is left blank, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if completed, the amount stated must not be less than the full amount of the bid, including the alternatives in dollars and cents. A percentage is not acceptable.

For the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above-named Principal has submitted a bid on the above referred to project;

NOW, THEREFORE, if the Obligee accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the Principal pays to the Obligee the difference not to exceed ten percent of the penalty hereto between the amount specified in the bid and such larger amount or which the Obligee may in good faith contract with the next lower bidder to perform the work covered by the bid; or in the event the Obligee does not award the contact to the next lower bidder and resubmits the project for bidding, the Principal will pay the Obligee the difference, not to exceed ten percent of the penalty hereon between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract documents, required advertising and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect. If the Obligee accepts the bid of the Principal and the Principal within sixty (60) days after the awarding of the contract, enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein; and

¹Here insert full name or legal title of Bidder and address

²Here insert full name or legal title of Surety

³Here insert full name or legal title of Owner

If the said Principal shall well and faithfully perform each and every condition of such contract; and indemnify the Obligee against all damage suffered by failure to perform such contract according to the provisions thereof and in accordance with the plans, details, specifications, and bills of material therefore; and shall pay all lawful claims of subcontractors, material men, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract: we agreeing and assenting that this undertaking shall be for benefit of any material man or laborer having a just claim, as well as for the Obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans and specifications therefore shall in any way affect the obligations of said Surety on this bond, and it does hereby waive notice of any such modifications, omissions or additions to the term of the contract or to the work or to the specifications.

SIGNED AND SEALED this ____ day of _____, 20__.

PRINCIPAL

By: _____
Title: _____

SURETY

By: _____
Attorney-in-Fact

Surety Company Address:

Surety Agent's Name and Address:

SECTION 012300

ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

- 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1:

1. Base Bid: No work in Room 171 – EOC, Room 172 – Waiting, Room 173 – Reception, Room 174 – Office, Room 175 Corridor, and Room 176 – Vestibule. No work related to relocation of generator included in base bid.
2. Alternate: All work as shown in Room 171 – EOC, Room 172 – Waiting, Room 173 – Reception, Room 174 – Office, Room 175 Corridor, and Room 176 – Vestibule, including mechanical, electrical, and plumbing work. Relocation of generator and chain link fencing and gate included in alternate.

B. Alternate No. 2:

1. Base Bid: No fabric canopy at entrance to Waiting 121.
2. Alternate: Provide fabric canopy at entrance to Waiting 121 as indicated on construction documents.

C. Alternate No. 3:

1. Base Bid: Existing boiler plant to remain.
2. Alternate: Replacement of boiler plant as indicated on construction documents.

D. Alternate No. 4:

1. **Base Bid: Existing balancing valves to remain.**
2. **Alternate: Replacement of balancing valves on existing equipment per note on drawing M101.**

END OF SECTION

SECTION 232113
HYDRONIC PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes pipe and fitting materials and joining methods for the following:
 - 1. Copper tube and fittings.
 - 2. Steel pipe and fittings.
 - 3. Joining materials.
 - 4. General duty valves and strainers.
 - 5. Transition fittings.
 - 6. Dielectric fittings.
 - 7. Bypass chemical feeder.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of the following:
 - 1. Pipe.
 - 2. Fittings.
 - 3. Joining materials.
 - 4. Bypass chemical feeder.
- B. Delegated-Design Submittal:
 - 1. Design calculations and detailed fabrication and assembly of pipe anchors and alignment guides, hangers and supports for multiple pipes, expansion joints and loops, and attachments of the same to the building structure.
 - 2. Locations of pipe anchors and alignment guides and expansion joints and loops.
 - 3. Locations of and details for penetrations, including sleeves and sleeve seals for exterior walls, floors, basement, and foundation walls.
 - 4. Locations of and details for penetration and firestopping for fire- and smoke-rated wall and floor and ceiling assemblies.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Piping layout, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Suspended ceiling components.
2. Other building services.
3. Structural members.

B. Qualification Data: For Installer.

C. Welding certificates.

D. Field quality-control reports.

E. Preconstruction Test Reports:

1. Water Analysis: Submit a copy of the water analysis to illustrate water quality available at Project site.

1.5 QUALITY ASSURANCE

A. Installer Qualifications:

1. Installers of Pressure-Sealed Joints: Installers shall be certified by pressure-seal joint manufacturer as having been trained and qualified to join piping with pressure-seal pipe couplings and fittings.
2. Fiberglass Pipe and Fitting Installers: Installers of RTRF and RTRP shall be certified by manufacturer of pipes and fittings as having been trained and qualified to join fiberglass piping with manufacturer-recommended adhesive.

B. Steel Support Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

C. Pipe Welding: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code: Section IX.

1. Comply with ASME B31.9, "Building Services Piping," for materials, products, and installation.
2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.

1.6 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: [Owner will engage] [Engage] a qualified testing agency to perform preconstruction testing on water quality.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Hydronic piping components and installation shall be capable of withstanding the following minimum working pressure and temperature unless otherwise indicated:

1. Hot-Water Heating Piping: 100 psig at 200 deg F.

Carroll County Office Renovation

2. Condensate-Drain Piping: 180 deg F.
3. Blowdown-Drain Piping: 200 deg F.
4. Air-Vent Piping: 200 deg F
5. Safety-Valve-Inlet and -Outlet Piping: Equal to the pressure of the piping system to which it is attached.

2.2 COPPER TUBE AND FITTINGS

- A. Drawn-Temper Copper Tubing: [ASTM B88, Type L] [ASTM B88, Type M].
- B. Annealed-Temper Copper Tubing: ASTM B88, Type K.
- C. DWV Copper Tubing: ASTM B306, Type DWV.
- D. Grooved, Mechanical-Joint, Wrought-Copper Fittings: ASME B16.22.
 1. Grooved-End Copper Fittings: ASTM B75, copper tube or ASTM B584, bronze casting.
 2. Grooved-End-Tube Couplings: Rigid pattern unless otherwise indicated; gasketed fitting. Ductile-iron housing with keys matching pipe and fitting grooves, [prelubricated] EPDM gasket rated for minimum 230 deg F for use with housing, and steel bolts and nuts.
- E. Copper or Bronze Pressure-Seal Fittings:
 1. Housing: Copper.
 2. O-Rings and Pipe Stops: EPDM.
 3. Tools: Manufacturer's special tools.
 4. Minimum 200-psig working-pressure rating at 250 deg F.
- F. Wrought-Copper Unions: ASME B16.22.

2.3 STEEL PIPE AND FITTINGS

- A. Steel Pipe: ASTM A53/A53M, black steel with plain ends; welded and seamless, Grade B, and wall thickness as indicated in "Piping Applications" Article.
- B. Cast-Iron Threaded Fittings: ASME B16.4; Classes 125 and 250 as indicated in "Piping Applications" Article.
- C. Malleable-Iron Threaded Fittings: ASME B16.3, Classes 150 and 300 as indicated in "Piping Applications" Article.
- D. Malleable-Iron Unions: ASME B16.39; Classes 150, 250, and 300 as indicated in "Piping Applications" Article.
- E. Cast-Iron Pipe Flanges and Flanged Fittings: ASME B16.1, Classes 25, 125, and 250; raised ground face, and bolt holes spot faced as indicated in "Piping Applications" Article.
- F. Wrought-Steel Fittings: ASTM A234/A234M, wall thickness to match adjoining pipe.
- G. Wrought Cast- and Forged-Steel Flanges and Flanged Fittings: ASME B16.5, including bolts, nuts, and gaskets of the following material group, end connections, and facings:
 1. Material Group: 1.1.
 2. End Connections: Butt welding.
 3. Facings: Raised face.

- H. Grooved Mechanical-Joint Fittings and Couplings:
 - 1. Joint Fittings: ASTM A536, Grade 65-45-12 ductile iron; ASTM A47/A47M, Grade 32510 malleable iron; ASTM A53/A53M, Type F, E, or S, Grade B fabricated steel; or ASTM A106/A106M, Grade B steel fittings with grooves or shoulders constructed to accept grooved-end couplings; with nuts, bolts, locking pin, locking toggle, or lugs to secure grooved pipe and fittings.
 - 2. Couplings: Ductile- or malleable-iron housing and EPDM or nitrile gasket of central cavity pressure-responsive design; with nuts, bolts, locking pin, locking toggle, or lugs to secure grooved pipe and fittings.
- I. Plain-End Mechanical-Joint Couplings:
 - 1. Housing: ASTM A536 Grade 65-45-12 segmented ductile iron or type 304 stainless steel.
 - 2. Gasket: EPDM or NBR.
 - 3. Sealing Mechanism: Double-lip sealing system or carbon steel case-hardened jaws.
 - 4. Bolts, hex nuts, washers, or lock bars based on manufacturer's design.
 - 5. Minimum Pressure Rating: Equal to that of the joined pipes.
- J. Steel Pressure-Seal Fittings:
 - 1. Housing: Steel.
 - 2. O-Rings and Pipe Stop: EPDM.
 - 3. Tools: Manufacturer's special tool.
 - 4. Minimum 300-psig working-pressure rating at 230 deg F.
- K. Steel Pipe Nipples: ASTM A733, made of same materials and wall thicknesses as pipe in which they are installed.

2.4 JOINING MATERIALS

- A. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.
 - 1. ASME B16.21, nonmetallic, flat, asbestos free, 1/8-inch maximum thickness unless otherwise indicated.
 - a. Full-Face Type: For flat-face, Class 125, cast-iron and cast-bronze flanges.
 - b. Narrow-Face Type: For raised-face, Class 250, cast-iron and steel flanges.
- B. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.
- C. Solder Filler Metals: ASTM B32, lead-free alloys. Include water-flushable flux according to ASTM B813.
- D. Brazing Filler Metals: AWS A5.8/A5.8M, BCuP Series, copper-phosphorus alloys for joining copper with copper; or BAg-1, silver alloy for joining copper with bronze or steel.
- E. Welding Filler Metals: Comply with AWS D10.12M/D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

2.5 TRANSITION FITTINGS

- A. Plastic-to-Metal Transition Fittings:
 - 1. One-piece fitting with one threaded brass or copper insert and one solvent-cement-joint end of material and wall thickness to match plastic pipe material.

05-05/09-10

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- B. Plastic-to-Metal Transition Unions:
 - 1. Brass or copper end, solvent-cement-joint end of material and wall thickness to match plastic pipe material, rubber gasket, and threaded union.

2.6 DIELECTRIC FITTINGS

- A. General Requirements: Assembly of copper alloy and ferrous materials with separating nonconductive insulating material. Include end connections compatible with pipes to be joined.
- B. Dielectric Unions:
 - 1. Description:
 - a. Standard: ASSE 1079.
 - b. Pressure Rating: 125 psig minimum at 200 deg F.
 - c. End Connections: Solder-joint copper alloy and threaded ferrous.
- C. Dielectric Flanges:
 - 1. Description:
 - a. Standard: ASSE 1079.
 - b. Factory-fabricated, bolted, companion-flange assembly.
 - c. Pressure Rating: 125 psig minimum at 200 deg F.
 - d. End Connections: Solder-joint copper alloy and threaded ferrous; threaded solder-joint copper alloy and threaded ferrous.
- D. Dielectric-Flange Insulating Kits:
 - 1. Description:
 - a. Nonconducting materials for field assembly of companion flanges.
 - b. Pressure Rating: 150 psig.
 - c. Gasket: Neoprene or phenolic.
 - d. Bolt Sleeves: Phenolic or polyethylene.
 - e. Washers: Phenolic with steel backing washers.
- E. Dielectric Nipples:
 - 1. Description:
 - a. Standard: IAPMO PS 66.
 - b. Electroplated steel nipple, complying with ASTM F1545.
 - c. Pressure Rating: 300 psig at 225 deg F.
 - d. End Connections: Male threaded or grooved.
 - e. Lining: Inert and noncorrosive, propylene.

2.7 BYPASS CHEMICAL FEEDER

- A. Description: Welded steel construction; 125-psig working pressure; 5-gal. capacity; with fill funnel and inlet, outlet, and drain valves.
 - 1. Chemicals: Specially formulated, based on analysis of makeup water, to prevent accumulation of scale and corrosion in piping and connected equipment.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS

- A. Hot-water heating piping, aboveground, NPS 2 and smaller, shall be any of the following:
 - 1. Type L, drawn-temper copper tubing, wrought-copper fittings, and soldered, brazed, or pressure-seal joints.
 - 2. Schedule 40 Type E, Grade B black steel conforming to ASTM A 53; welded couplings/fittings conforming to ASTM A 234 and ASTM A 536.
- B. Hot-water heating piping, aboveground, NPS 2-1/2 and larger, shall be any of the following:
 - 1. Type L, drawn-temper copper tubing, wrought-copper fittings, and soldered or brazed. Pressure seal shall NOT be acceptable.
 - 2. Schedule 40 Type E, Grade B black steel conforming to ASTM A 53; welded couplings/fittings conforming to ASTM A 234 and ASTM A 536.
 - 3. Schedule 40 steel pipe; grooved, mechanical joint coupling and fittings; and grooved, mechanical joints.
- C. Hot-water heating piping installed belowground and within slabs shall be either of the following:
 - 1. Type K, annealed-temper copper tubing, wrought-copper fittings, and soldered or brazed joints. Use the fewest possible joints.
 - 2. RTRP and RTRF with adhesive or flanged joints.
- D. Makeup-water piping installed aboveground shall be the following:
 - 1. Type L, drawn-temper copper tubing, wrought-copper fittings, and soldered or brazed joints.
- E. Condensate-Drain Piping: Type DWV, drawn-temper copper tubing, wrought-copper fittings, and soldered joints or Schedule 40 PVC plastic pipe and fittings and solvent-welded joints.
- F. Blowdown-Drain Piping: Same materials and joining methods as for piping specified for the service in which blowdown drain is installed.
- G. Air-Vent Piping:
 - 1. Inlet: Same as service where installed with metal-to-plastic transition fittings for plastic piping systems according to piping manufacturer's written instructions.
 - 2. Outlet: Type K, annealed-temper copper tubing with soldered or flared joints.
- H. Safety-Valve-Inlet and -Outlet Piping for Hot-Water Piping: Same materials and joining methods as for piping specified for the service in which safety valve is installed with metal-to-plastic transition fittings for plastic piping systems according to piping manufacturer's written instructions.

3.2 PIPING INSTALLATIONS

- A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.

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- B. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.
- C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- D. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
- E. Install piping to permit valve servicing.
- F. Install piping at indicated slopes.
- G. Install piping free of sags and bends.
- H. Install fittings for changes in direction and branch connections.
- I. Install piping to allow application of insulation.
- J. Select system components with pressure rating equal to or greater than system operating pressure.
- K. Install groups of pipes parallel to each other, spaced to permit applying insulation and servicing of valves.
- L. Install drains, consisting of a tee fitting, NPS 3/4 ball valve, and short NPS 3/4 threaded nipple with cap, at low points in piping system mains and elsewhere as required for system drainage.
- M. Install piping at a uniform grade of 0.2 percent upward in direction of flow.
- N. Reduce pipe sizes using eccentric reducer fitting installed with level side up.
- O. Install branch connections to mains using [mechanically formed] tee fittings in main pipe, with the branch connected to the bottom of the main pipe. For up-feed risers, connect the branch to the top of the main pipe.
- P. Install valves according to the following:
 - 1. Air Vent, Automatic: Body shall be cast bronze or cast iron with non-ferrous internal parts, and noncorrosive metal float. Inlet connection shall be 1/2", outlet connection shall be 1/8"; 240 degrees-F / 150 psig.
 - 2. Air Vent, Manual: Body shall be cast bronze with non-ferrous internal parts, and screwdriver operator. Inlet connection shall be 1/2", outlet connection shall be 1/8"; 225 degrees-F / 150 psig.
 - 3. Balance Valves, 2" and less: Calibrated-orifice with stainless steel trim. Body shall be forged brass or cast bronze with stainless steel or brass ball, blowout proof stem, PTFE seat, and threaded or socketed ends. Provide pressure/temperature test port and lever handle with memory stop to retain set position; 250 degrees-F / 125 psig.
 - 4. Balance Valves, 2-1/2" to 6": Calibrated orifice with stainless steel trim. Body shall be cast iron or stainless steel with stainless steel or brass ball, blowout proof stem, PTFE seat, and flanged ends. Provide pressure/temperature test port and lever handle with memory stop to retain set position; 250 degrees-F / 125 psig.

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5. Balance Valves, 6" and larger: Body shall be cast iron with EPDM coated cast iron disc, brass stem, PTFE seat, and flanged ends. Provide pressure/temperature test port and hand wheel operator; 250 degrees-F / 175 psig.
 6. Ball Valves, Metal, 2" and less: Two-piece, full-port with stainless steel trim. Body shall be forged brass or cast bronze with stainless steel ball, stainless steel vented stem, PTFE or TFE seats, and threaded or sweated ends; MSS SP-110; 600 psig WOG / 150 psig SWP.
 7. Ball Valves, Metal, 2-1/2" and larger: Two-piece, full-port with stainless steel trim. Body shall be forged brass or cast bronze with stainless steel ball, stainless steel vented stem, PTFE or TFE seats, and flanged ends; MSS SP-110; 600 psig WOG / 150 psig SWP.
 8. Check Valves, Lift, Metal 2" and less: Body shall be cast bronze with cast bronze disc, cast bronze trim, and threaded or sweated end connections; MSS SP-80; 200 psig.
 9. Check Valves, Swing, Metal 2" and less: Body shall be cast bronze with bronze disc, cast bronze trim, and threaded or sweated end connections; MSS SP-80 Type 1; 200 psig.
 10. Check Valves, Swing, Metal 2-1/2" and larger: Body shall be cast iron with cast iron disc, brass trim, and flanged end connections; MSS SP-80 Type 3; 200 psig.
 11. Check Valves, Lift, Metal 2-1/2" and larger: Body shall be cast iron with cast iron disc, brass trim, and flanged end connections; MSS SP-80 Type 1; 200 psig.
 12. Flow Control Valves, all sizes: Body shall be forged brass with stainless steel piston and spring assembly. Valve shall be tamper proof, self-cleaning, and fully removable. Valve shall be installed with ball valve upstream; 200 degrees-F / 175 psig.
 13. Pressure Reducing Valves, all sizes: EPT diaphragm operated. Body shall be forged brass or cast bronze with noncorrosive internal parts, glass and carbon filled disc, forged brass stem/seat, and EPDM seals. Provide with low-inlet pressure check valve, and strainer (removable without system shutdown). Contractor shall select valve suitable for the system with factory preset operating pressure/flow. Valve shall be field adjustable.
 14. Safety Valves, all sizes: EPT diaphragm operated. Body shall be forged brass or cast bronze with glass and carbon filled disc, forged brass stem/seat, and EPDM seals.
 15. Strainer Valves, 2" and less: Body shall be cast iron with bolted cover, bottom drain, and threaded end connections. Provide 60-mesh stainless steel screen and stainless-steel perforated basket; 125 psig.
 16. Strainer Valves, 2-1/2" and larger: Body shall be cast iron with bolted cover, bottom drain, and flanged end connections. Provide 60-mesh stainless steel screen and stainless-steel perforated basket; 125 psig.
- Q. Install unions in piping, NPS 2 and smaller, adjacent to valves, at final connections of equipment, and elsewhere as indicated.
- R. Install flanges in piping, NPS 2-1/2 and larger, at final connections of equipment and elsewhere as indicated.
- S. Install shutoff valve immediately upstream of each dielectric fitting.
- T. Comply with requirements in Section 230516 "Expansion Fittings and Loops for HVAC Piping" for installation of expansion loops, expansion joints, anchors, and pipe alignment guides.

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- U. Comply with requirements in Section 230553 "Identification for HVAC Piping and Equipment" for identifying piping.
- V. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Section 230517 "Sleeves and Sleeve Seals for HVAC Piping."
- W. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with requirements for sleeve seals specified in Section 230517 "Sleeves and Sleeve Seals for HVAC Piping."
- X. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 230518 "Escutcheons for HVAC Piping."

3.3 DIELECTRIC FITTING INSTALLATION

- A. Install dielectric fittings in piping at connections of dissimilar metal piping and tubing.
- B. Dielectric Fittings for NPS 2 and Smaller: Use dielectric nipples, unions.
- C. Dielectric Fittings for NPS 2-1/2 to NPS 4: Use dielectric flanges, flange kits, nipples.

3.4 HANGERS AND SUPPORTS

- A. Comply with requirements in Section 230529 "Hangers and Supports for HVAC Piping and Equipment" for hanger, support, and anchor devices. Comply with the following requirements for maximum spacing of supports.
- B. Comply with requirements in Section 230548 "Vibration and Seismic Controls for HVAC" for seismic restraints.
- C. Install the following pipe attachments:
 - 1. Adjustable steel clevis hangers for individual horizontal piping less than 20 feet long.
 - 2. Adjustable roller hangers and spring hangers for individual horizontal piping 20 feet or longer.
 - 3. Pipe Roller: MSS SP-58, Type 44 for multiple horizontal piping 20 feet or longer, supported on a trapeze.
 - 4. Spring hangers to support vertical runs.
 - 5. Provide copper-clad hangers and supports for hangers and supports in direct contact with copper pipe.
- D. Install hangers for steel piping with the following maximum spacing and minimum rod sizes:
 - 1. NPS 3/4: Maximum span, 7 feet.
 - 2. NPS 1: Maximum span, 7 feet.
 - 3. NPS 1-1/2: Maximum span, 9 feet.
 - 4. NPS 2: Maximum span, 10 feet.
 - 5. NPS 2-1/2: Maximum span, 11 feet.
 - 6. NPS 3 and Larger: Maximum span, 12 feet.
- E. Install hangers for drawn-temper copper piping with the following maximum spacing and minimum rod sizes:
 - 1. NPS 3/4: Maximum span, 5 feet; minimum rod size, 1/4 inch.

2. NPS 1: Maximum span, 6 feet; minimum rod size, 1/4 inch.
3. NPS 1-1/4: Maximum span, 7 feet; minimum rod size, 3/8 inch.
4. NPS 1-1/2: Maximum span, 8 feet; minimum rod size, 3/8 inch.
5. NPS 2: Maximum span, 8 feet; minimum rod size, 3/8 inch.
6. NPS 2-1/2: Maximum span, 9 feet; minimum rod size, 3/8 inch.
7. NPS 3 and Larger: Maximum span, 10 feet; minimum rod size, 3/8 inch.

F. Support vertical runs at roof, at each floor, and at 10-foot intervals between floors.

3.5 PIPE JOINT CONSTRUCTION

- A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- C. Soldered Joints: Apply ASTM B813, water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B828 or CDA's "Copper Tube Handbook," using lead-free solder alloy complying with ASTM B32.
- D. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8/A5.8M.
- E. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- F. Welded Joints: Construct joints according to AWS D10.12M/D10.12, using qualified processes and welding operators according to "Quality Assurance" Article.
- G. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- H. Fiberglass Bonded Joints: Prepare pipe ends and fittings, apply adhesive, and join according to pipe manufacturer's written instructions.
- I. Grooved Joints: Assemble joints with coupling and gasket, lubricant, and bolts. Cut or roll grooves in ends of pipe based on pipe and coupling manufacturer's written instructions for pipe wall thickness. Use grooved-end fittings and rigid, grooved-end-pipe couplings.
- J. Plain-End Mechanical-Coupled Joints: Prepare, assemble, and test joints in accordance with manufacturer's written installation instructions.
- K. Mechanically Formed, Copper-Tube-Outlet Joints: Use manufacturer-recommended tool and procedure, and brazed joints.
- L. Pressure-Sealed Joints: Use manufacturer-recommended tool and procedure. Leave insertion marks on pipe after assembly.

3.6 TERMINAL EQUIPMENT CONNECTIONS

- A. Sizes for supply and return piping connections shall be the same as or larger than equipment connections.
- B. Install control valves in accessible locations close to connected equipment.
- C. Install bypass piping with globe valve around control valve. If parallel control valves are installed, only one bypass is required.
- D. Install ports for pressure gages and thermometers at coil inlet and outlet connections. Comply with requirements in Section 230519 "Meters and Gages for HVAC Piping."

3.7 CHEMICAL TREATMENT

- A. Perform an analysis of makeup water to determine type and quantities of chemical treatment needed to keep system free of scale, corrosion, and fouling, and to sustain the following water characteristics:
 - 1. pH: 9.0 to 10.5.
 - 2. "P" Alkalinity: 100 to 500 ppm.
 - 3. Boron: 100 to 200 ppm.
 - 4. Chemical Oxygen Demand: Maximum of [100] <Insert value> ppm. Revise this value if closed system contains glycol.
 - 5. Corrosion Inhibitor:
 - a. Sodium Nitrate: 1000 to 1500 ppm.
 - b. Molybdate: 200 to 300 ppm.
 - c. Chromate: 200 to 300 ppm.
 - d. Sodium Nitrate Plus Molybdate: 100 to 200 ppm each.
 - e. Chromate Plus Molybdate: 50 to 100 ppm each.
 - 6. Soluble Copper: Maximum of 0.20 ppm.
 - 7. Tolyriazole Copper and Yellow Metal Corrosion Inhibitor: Minimum of 10 ppm.
 - 8. Total Suspended Solids: Maximum of 10 ppm.
 - 9. Ammonia: Maximum of 20 ppm.
 - 10. Free Caustic Alkalinity: Maximum of 20 ppm.
 - 11. Microbiological Limits:
 - a. Total Aerobic Plate Count: Maximum of 1000 organisms/mL.
 - b. Total Anaerobic Plate Count: Maximum of 100 organisms/mL.
 - c. Nitrate Reducers: 100 organisms/mL.
 - d. Sulfate Reducers: Maximum of zero organisms/mL.
 - e. Iron Bacteria: Maximum of zero organisms/mL.
- B. Install bypass chemical feeders in each hydronic system where indicated.
 - 1. Install in upright position with top of funnel not more than 48 inches above the floor.
 - 2. Install feeder in minimum NPS 3/4 bypass line, from main with full-size, full-port, ball valve in the main between bypass connections.
 - 3. Install NPS 3/4 pipe from chemical feeder drain to nearest equipment drain and include a full-size, full-port, ball valve.

- C. Fill system with fresh water and add liquid alkaline compound with emulsifying agents and detergents to remove grease and petroleum products from piping. Circulate solution for a minimum of 24 hours, drain, clean strainer screens, and refill with fresh water.
- D. Add initial chemical treatment and maintain water quality in ranges noted above for the first year of operation.

3.8 FIELD QUALITY CONTROL

- A. Prepare hydronic piping according to ASME B31.9 and as follows:
 - 1. Leave joints, including welds, uninsulated and exposed for examination during test.
 - 2. Provide temporary restraints for expansion joints that cannot sustain reactions due to test pressure. If temporary restraints are impractical, isolate expansion joints from testing.
 - 3. Flush hydronic piping systems with clean water; then remove and clean or replace strainer screens.
 - 4. Isolate equipment from piping. If a valve is used to isolate equipment, its closure shall be capable of sealing against test pressure without damage to valve. Install blinds in flanged joints to isolate equipment.
 - 5. Install safety valve, set at a pressure no more than one-third higher than test pressure, to protect against damage by expanding liquid or other source of overpressure during test.
- B. Perform the following tests on hydronic piping:
 - 1. Use ambient temperature water as a testing medium unless there is risk of damage due to freezing. Another liquid that is safe for workers and compatible with piping may be used.
 - 2. While filling system, use vents installed at high points of system to release air. Use drains installed at low points for complete draining of test liquid.
 - 3. Isolate expansion tanks and determine that hydronic system is full of water.
 - 4. Subject piping system to hydrostatic test pressure that is not less than 1.5 times the system's working pressure. Test pressure shall not exceed maximum pressure for any vessel, pump, valve, or other component in system under test. Verify that stress due to pressure at bottom of vertical runs does not exceed 90 percent of specified minimum yield strength or 1.7 times the "SE" value in Appendix A in ASME B31.9, "Building Services Piping."
 - 5. After hydrostatic test pressure has been applied for at least 10 minutes, examine piping, joints, and connections for leakage. Eliminate leaks by tightening, repairing, or replacing components, and repeat hydrostatic test until there are no leaks.
 - 6. Prepare written report of testing.
- C. Perform the following before operating the system:
 - 1. Open manual valves fully.
 - 2. Inspect pumps for proper rotation.
 - 3. Set makeup pressure-reducing valves for required system pressure.
 - 4. Inspect air vents at high points of system and determine if all are installed and operating freely (automatic type), or bleed air completely (manual type).
 - 5. Set temperature controls so all coils are calling for full flow.
 - 6. Inspect and set operating temperatures of hydronic equipment, such as boilers, chillers, cooling towers, to specified values.
 - 7. Verify lubrication of motors and bearings.

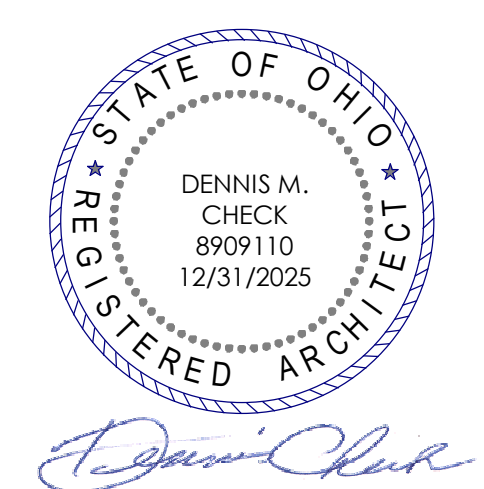
END OF SECTION 232113

CODED NOTES

- NOTE: ALL CODED NOTES MAY NOT APPEAR ON EVERY SHEET
1. INSTALL ANGLE AROUND PERIMETER OF CONCRETE OPENING IN FLOOR, INFILL WITH METAL DECK AND CONCRETE SLAB.
 2. INSTALL METAL STUDS, METAL DECK, AND CONCRETE SLAB AT FLOOR INFILL.
 3. CENTER GYPSUM BOARD WALL ON EXISTING MASONRY WALL.
 4. PROVIDE OPAQUE WINDOW FILM (GF-2) ON INSIDE OF EXISTING WINDOW.
 5. PATCH WALL AS NEEDED FROM CHALKBOARD REMOVAL.
 6. CONCRETE SLAB FLOORING INFILL.
 7. EXISTING DOOR AND FRAME TO BE PAINTED P-5.
 8. GRIPMET IN COUNTER.
 9. 6" CONCRETE DRIVE WITH 6#6-W1.4W1.4 WWP REINFORCING OVER 6" ODDT 304 COMPACTED AGGREGATE BASE. PROVIDE 1/4" CONTROL JOINTS (SAW CUT) AT 9'-0" O.C. MAX. SLOPE TO DRAIN.
 10. ALIGN NEW CONCRETE DRIVE WITH INTERSECTION OF STOREFRONT AND MASONRY WALL.
 11. PROVIDE TWO VENTS IN DRWALL ON TOP AND BOTTOM (TOTAL 4), COORDINATE LOCATION WITH ARCHITECT IN FIELD.
 12. BOTTOM LITE IN EXISTING WINDOW TO BE REPLACED.
 13. PATCH AND REPAIR COLUMN SURROUND. PAINT IN ITS ENTIRETY.
 14. EXISTING MOP BASIN TO REMAIN. CLEAN AND PROVIDE NEW MOP HOLDER.
 15. STEEL STRUCTURE TO BE PAINTED P-5.
 16. HSS 4x4x1/2
 17. SOME CHIPPING AWAY OF EXISTING FOOTING MAY BE REQUIRED TO INSTALL NEW FOUNDATION.
 18. L3 5x3.5x1/2x1'-0" centered under HSS Beam w/ (3) 5/8" Hilti Kwik Bolt T22 (4" Embed) spaced 1'-0" from edge and 4'-0" o.c. from each other.
 19. Vulcraft 20GA. 3IN. 32 Metal Roof Deck or equivalent.
5/8" Purple Weld with 3/5" Connection Pattern at HSS Beams and Perimeter Angles, (3) #10 Sidship Screw per Span



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 CARROLLTON OHIO 44615

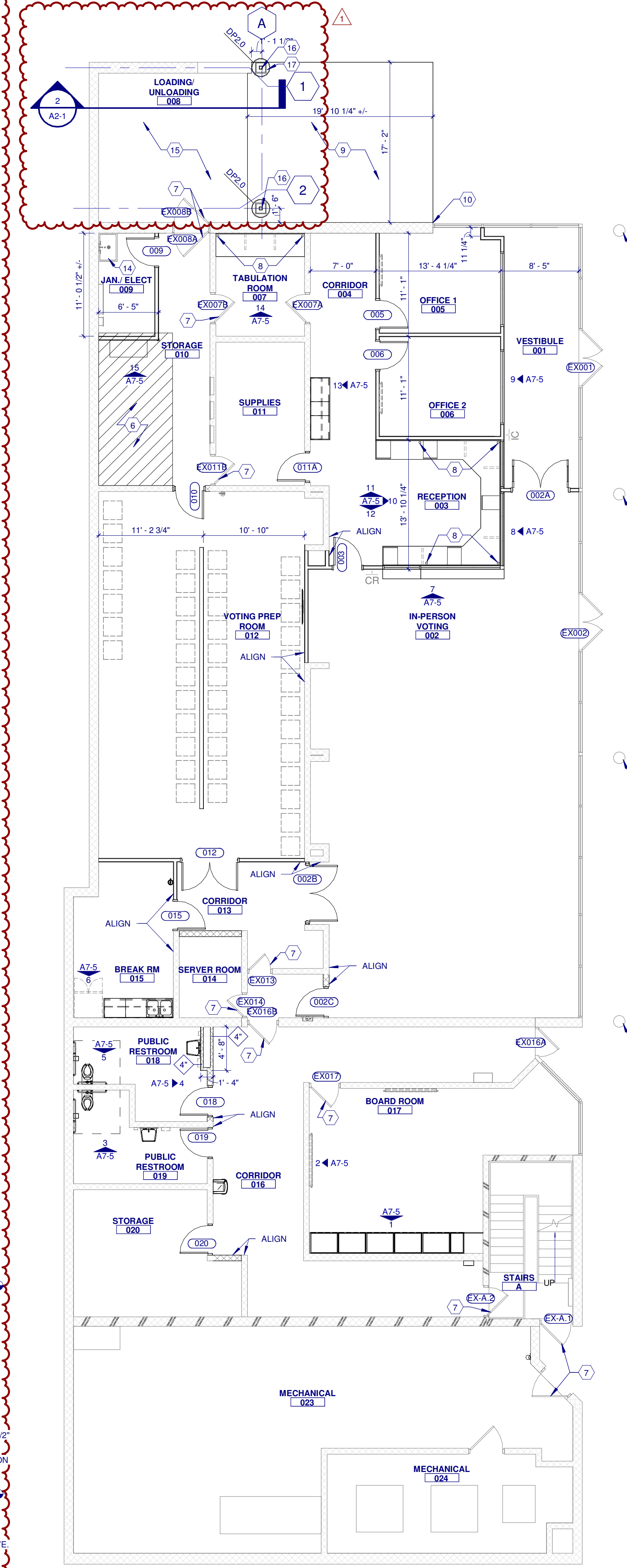


ISSUE / REVISION	DATE
BIDDING AND PLAN REVIEW	10/15/2024
ADDENDUM 01	11/7/2024

PROJECT NO. 24013.000

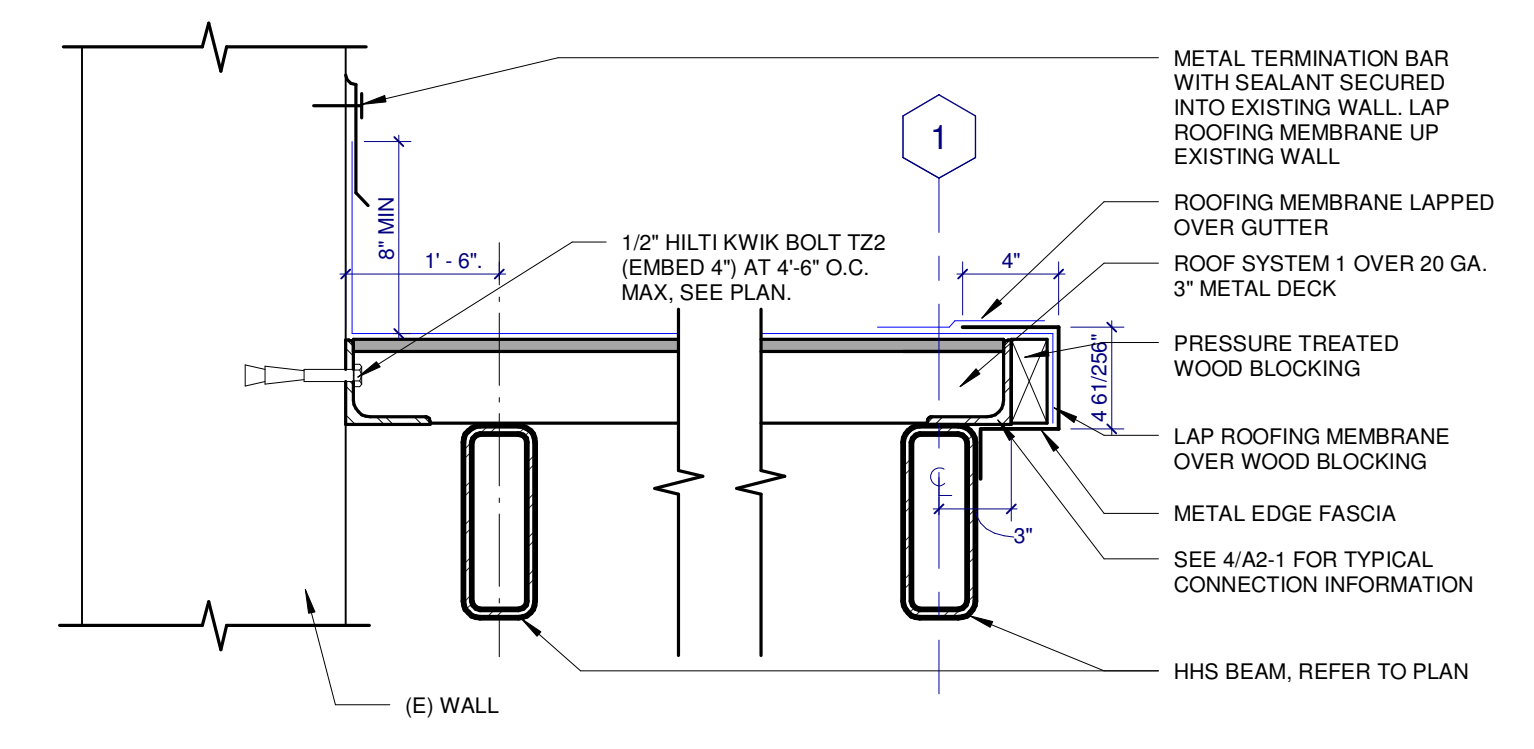
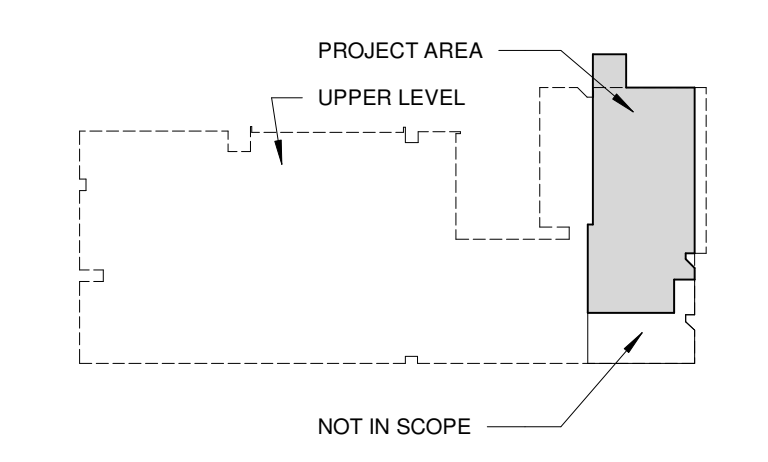
FLOOR PLAN - LOWER LEVEL

A2-1

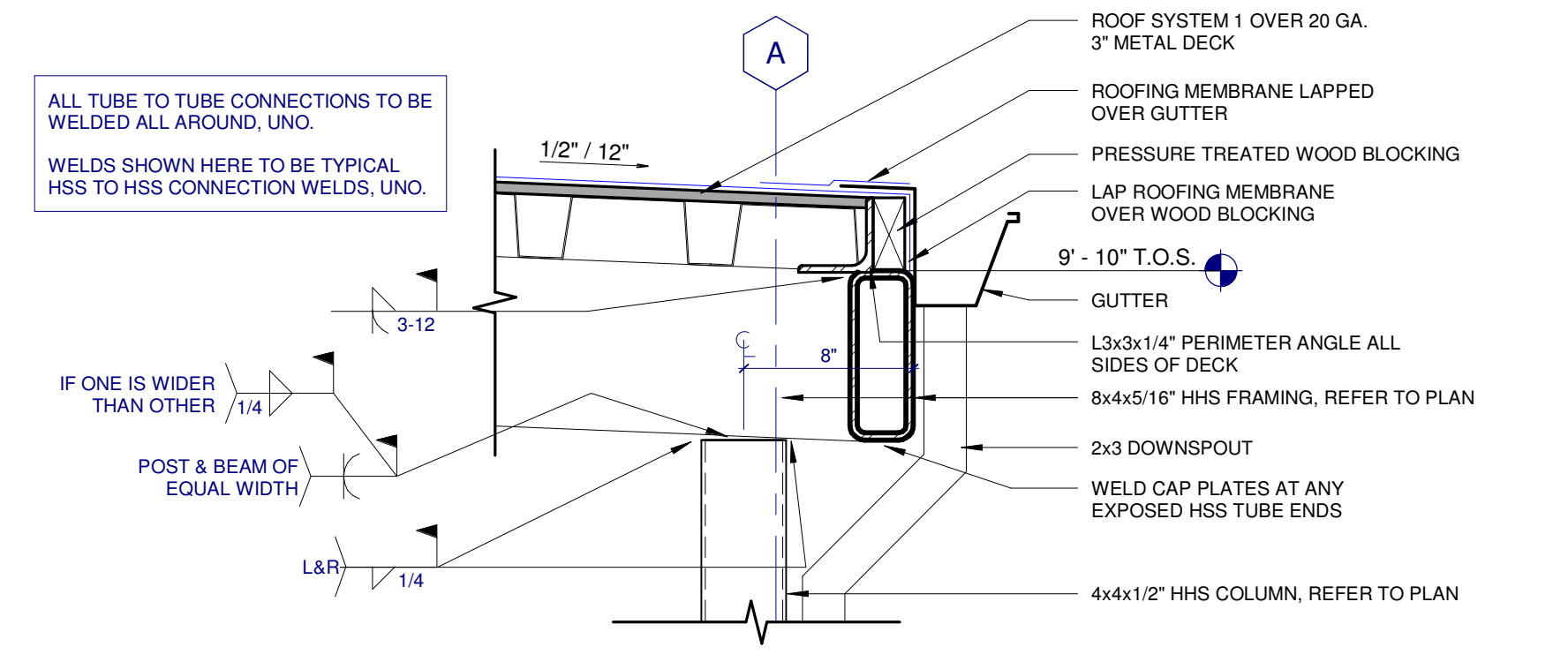


1 FLOOR PLAN - LOWER LEVEL
SCALE: 1/8" = 1'-0"

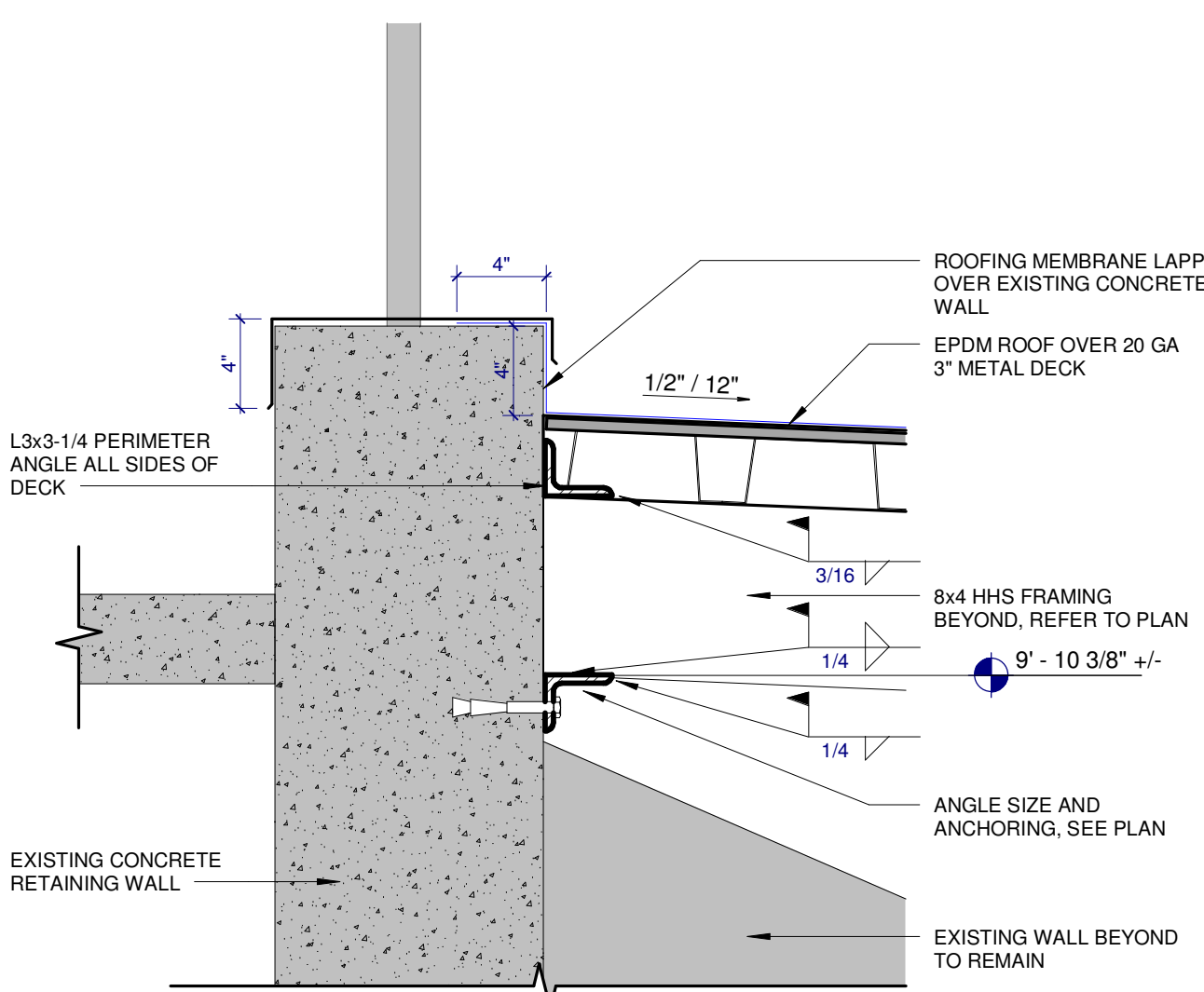
LOWER LEVEL KEY PLAN



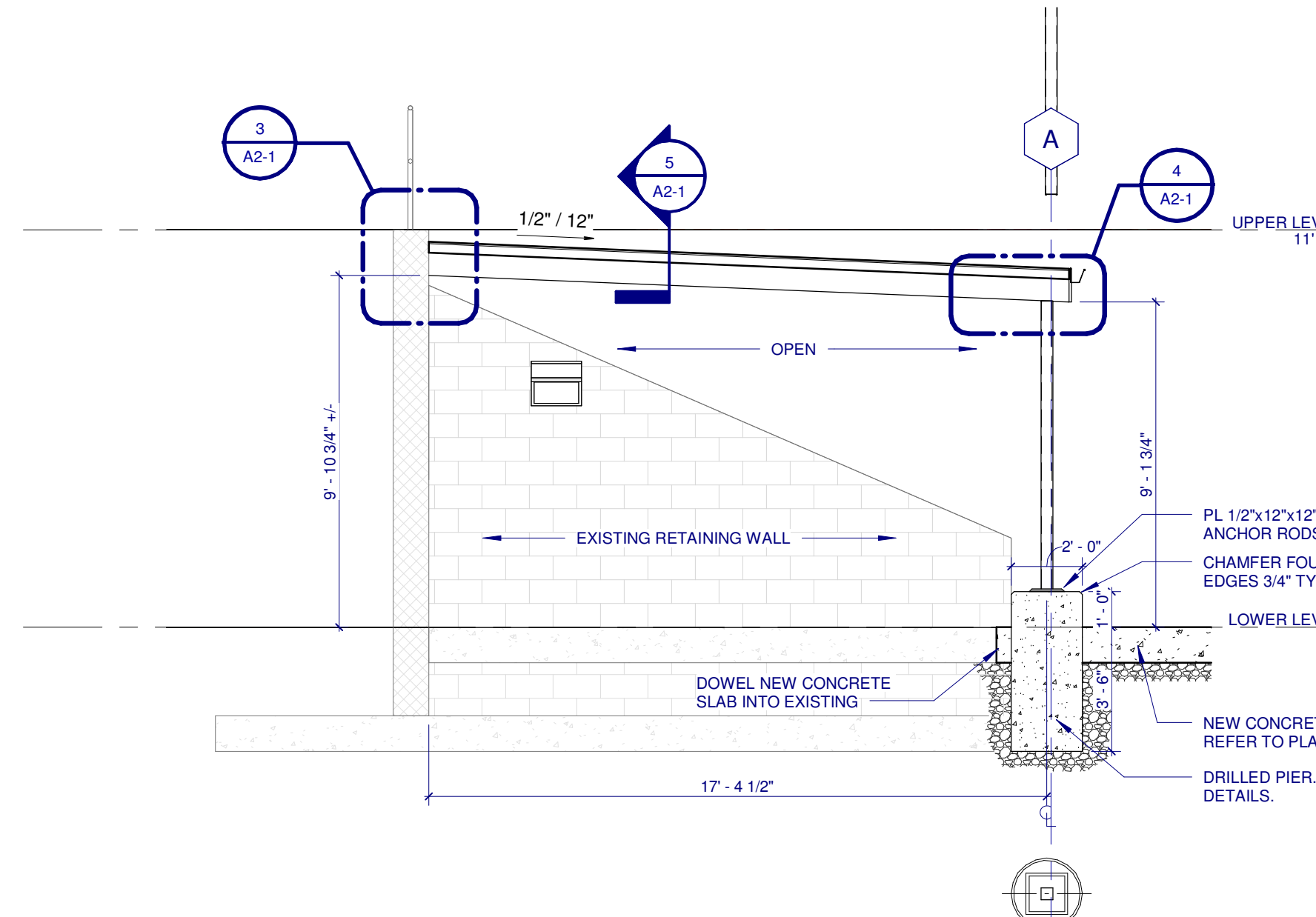
5 CANOPY DETAIL
SCALE: 1 1/2" = 1'-0"



4 CANOPY EAVE DETAIL
SCALE: 1 1/2" = 1'-0"



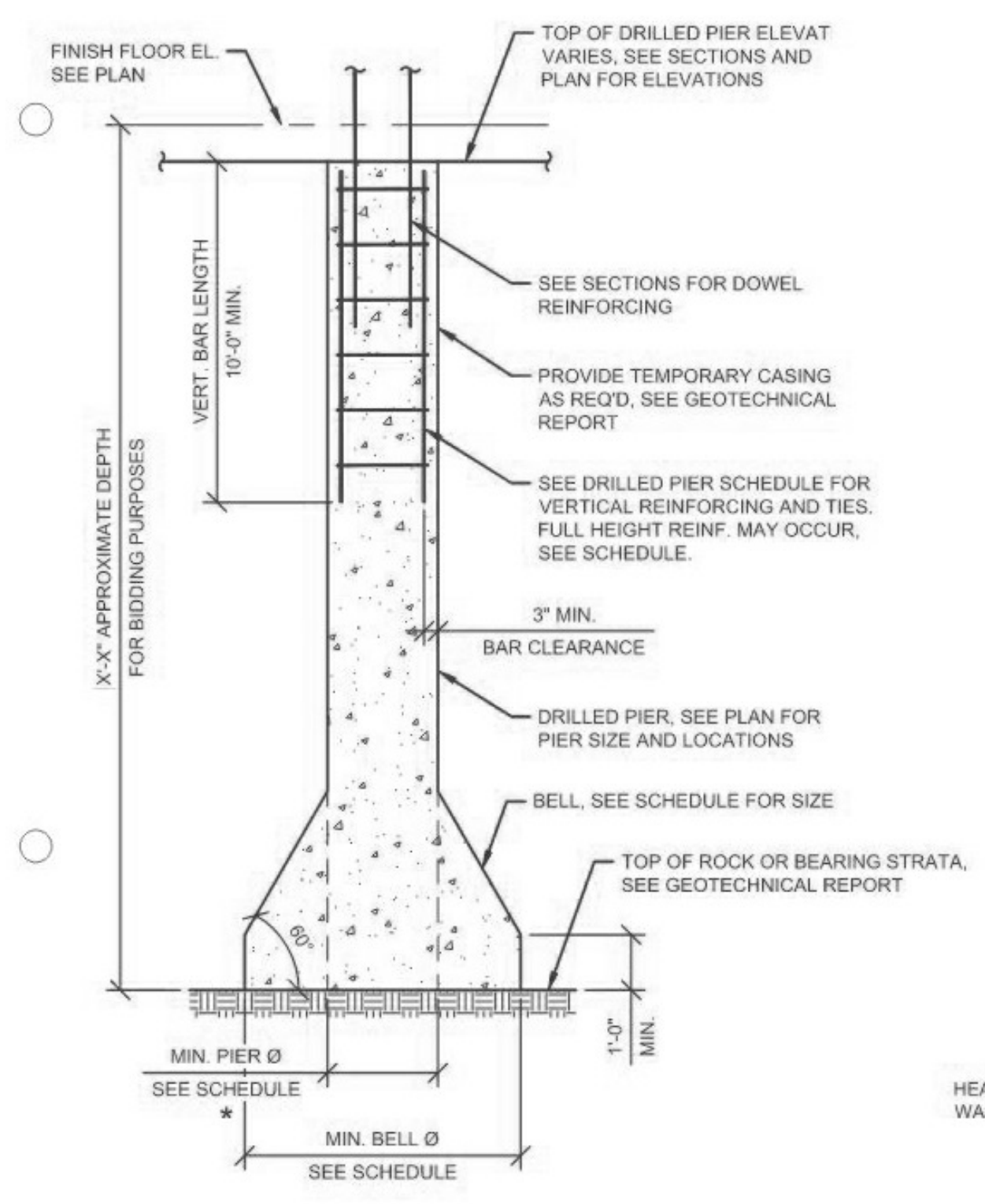
3 CANOPY DETAIL AT EXISTING WALL INTERFACE
SCALE: 1 1/2" = 1'-0"



2 LOADING/UNLOADING BUILDING SECTION
SCALE: 1/4" = 1'-0"

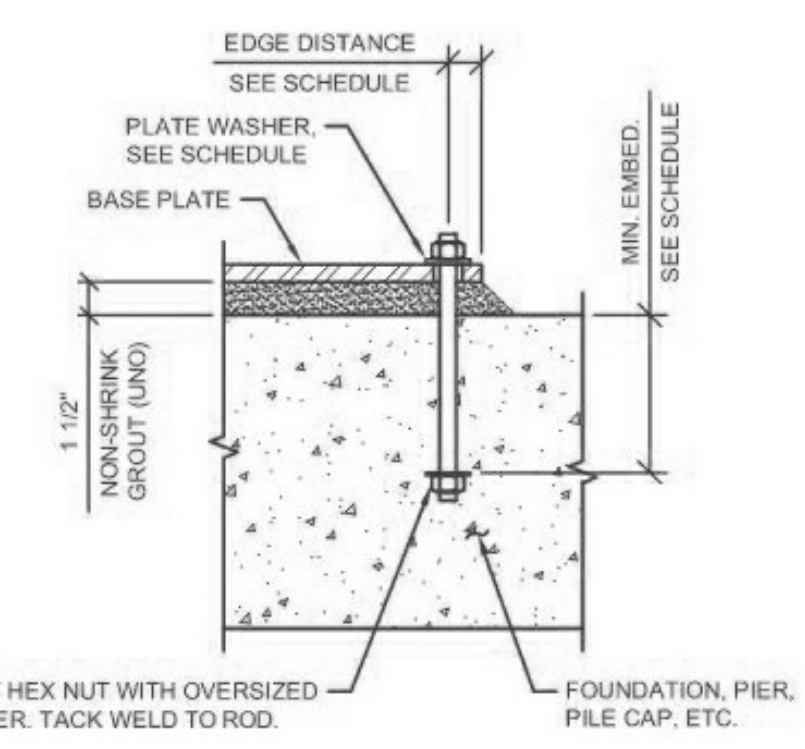
STRUCTURAL GENERAL NOTES

1. ALL EXPOSED STEEL TO BE GALVANIZED.
2. DOMESTIC STEEL USE REQUIREMENTS AS SPECIFIED IN SECTION 133.011 OF THE OHIO REVISION CODE APPLY TO THIS PROJECT. COPIES OF SECTION 133.011 OF THE OHIO REVISION CODE CAN BE OBTAINED FROM THE OFFICE OF THE OHIO FACILITIES CONSTRUCTION COMMISSION.
3. CONTRACTOR TO VERIFY COMPRESSIVE STRENGTH OF EXISTING WALL. EXISTING WALL MUST MEET 2500 PSI.



TYPICAL DRILLED PIER SECTION (BELLED)

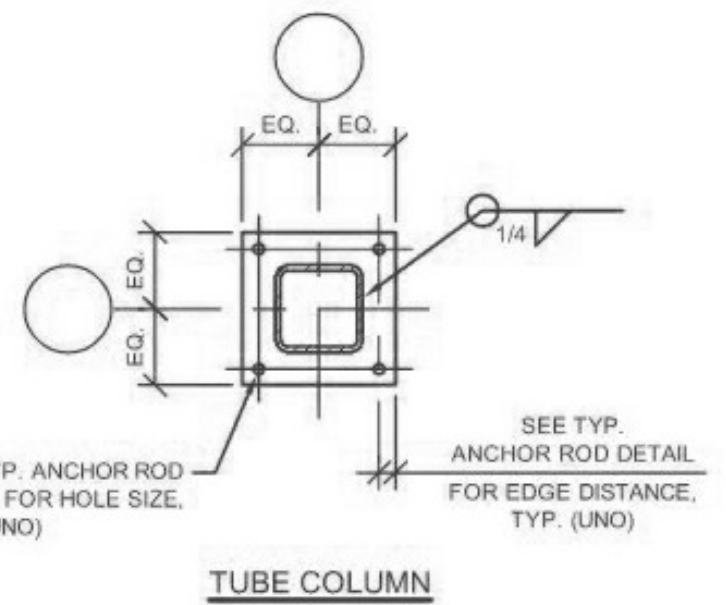
* MINIMUM DRILLED PIER DIAMETER SHALL BE REQUIRED WITHIN ROCK OR BEARING STRATA. OVERSIZED SHAFT MAY BE REQUIRED ABOVE TO ACHIEVE THIS.



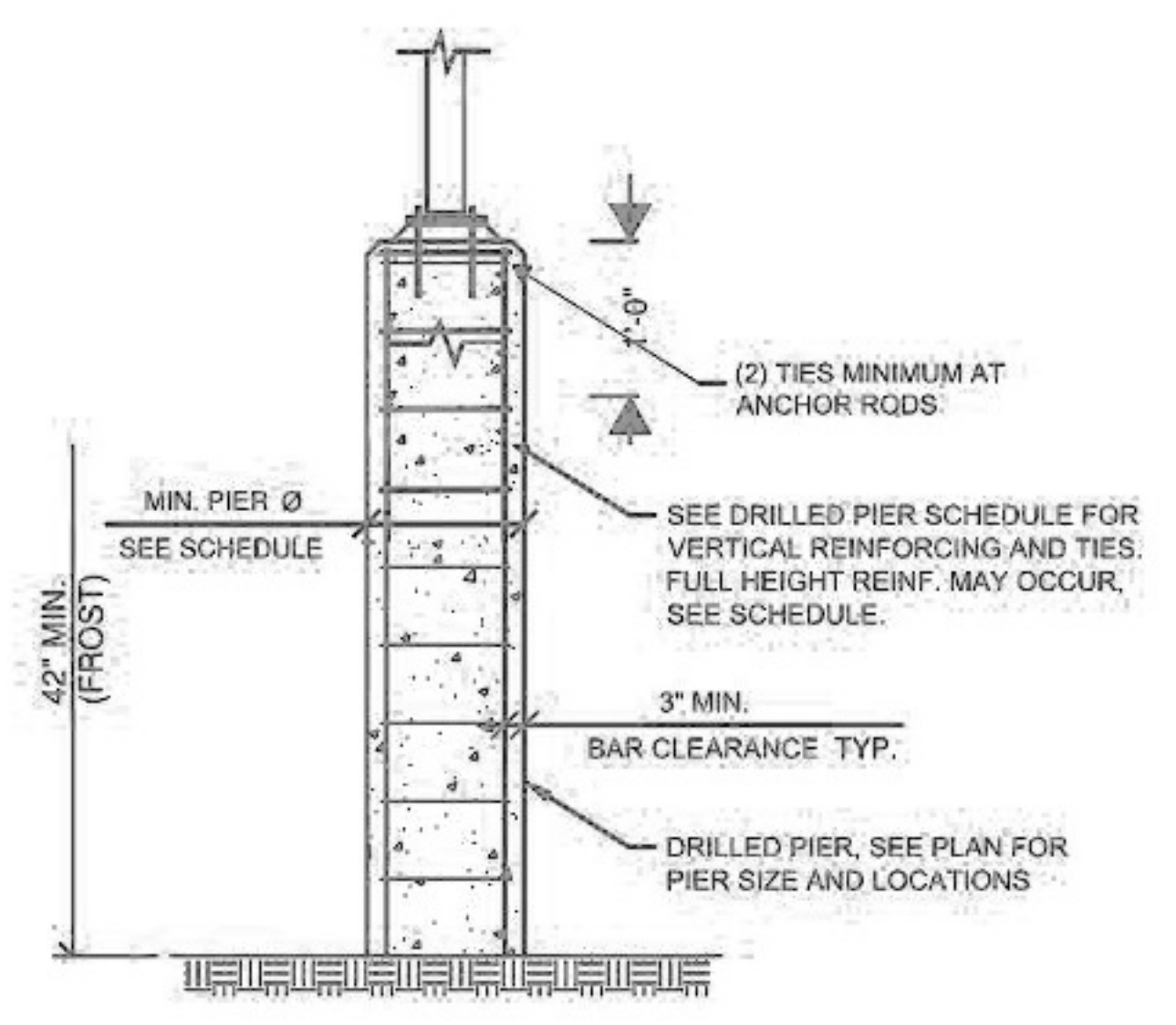
TYPICAL ANCHOR ROD DETAIL
(ASTM F-1554 GR. 36)

ANCHOR ROD SCHEDULE					
ANCHOR ROD DIAMETER (inches)	BASE PLATE HOLE DIAMETER (inches)	BASE PLATE EDGE DISTANCE (inches)	MIN. PLATE WASHER DIMENSION (inches)	MIN. PLATE WASHER THICKNESS (inches)	MIN. EMBED.
1/2	1	1-1/4	2	1/4	3"

- CIRCULAR OR SQUARE WASHERS MEETING THE SIZE SHOWN ARE ACCEPTABLE.
- WASHER HOLE DIAMETER = 1/16" LARGER THAN ROD DIAMETER.
- ADEQUATE CLEARANCE MUST BE PROVIDED FOR THE WASHER SIZE SELECTED.



TUBE COLUMN



TYPICAL DRILLED PIER SECTION

MARK	SHAFT SIZE	BELL SIZE	VERTICAL REINFORCING		TIES	TIES TOP 0'-6" OF PIER
			QUANTITY & SIZE	LENGTH		
DP2.0	24" Ø	N/A	(5) - #5	FULL HEIGHT	#3 @ 9" O.C.	#3 @ 2" O.C.

- FULL HEIGHT REINFORCEMENT SHALL EXTEND FROM TOP OF PIER TO BOTTOM OF EMBEDMENT INTO ROCK OR BOTTOM OF BELL.
- PIERS TO BE MADE OF 4500 PSI CONCRETE (28-DAY COMPRESSIVE STRENGTH)

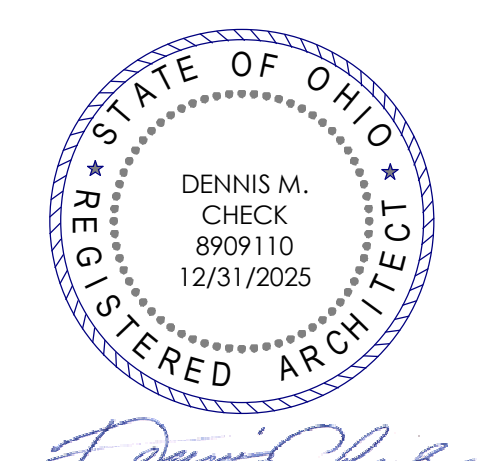
CODED NOTES

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- 1 INSTALL ANGLE AROUND PERIMETER OF CONCRETE OPENING IN FLOOR, INFILL WITH METAL DECK AND CONCRETE SLAB
- 2 INSTALL METAL STUDS, METAL DECK, AND CONCRETE SLAB AT FLOOR INFILL
- 3 CENTER GYPSUM BOARD WALL ON EXISTING MASONRY WALL
- 4 PROVIDE OPAQUE WINDOW FILM (GF-2) ON INSIDE OF EXISTING WINDOW
- 5 PATCH WALL AS NEEDED FROM CHAIRBOARD REMOVAL
- 6 CONCRETE SLAB FLOORING INFILL
- 7 EXISTING DOOR AND FRAME TO BE PAINTED P-5
- 8 GROMMET IN COUNTER
- 9 6" CONCRETE DRIVE WITH 6#6-W1.4W1.4 WWF REINFORCING OVER 6" ODDY 304 COMPACTED AGGREGATE BASE. PROVIDE 1/4" CONTROL JOINTS (SAW CUT) AT 9'-0" O.C. MAX. SLOPE TO DRAIN
- 10 ALIGN NEW CONCRETE DRIVE WITH INTERSECTION OF STOREFRONT AND MASONRY WALL
- 11 PROVIDE TWO VENTS IN DRWALL ON TOP AND BOTTOM (TOTAL 4), COORDINATE LOCATION WITH ARCHITECT IN FIELD
- 12 BOTTOM LITE IN EXISTING WINDOW TO BE REPLACED
- 13 PATCH AND REPAIR COLUMN SURROUND, PAINT IN ITS ENTIRETY
- 14 EXISTING MOP BASIN TO REMAIN, CLEAN AND PROVIDE NEW MOP HOLDER
- 15 STEEL STRUCTURE TO BE PAINTED P-5
- 16 HSS 4x4x1/2
- 17 SOME CHIPPING AWAY OF EXISTING FOOTING MAY BE REQUIRED TO INSTALL NEW FOUNDATION
- 18 L3 5x3.5x1/2x1'-0" centered under HSS Beam w/ (3) 5/8" Hll Kwik Bolt T22 (4" Embed) spaced 1'-0" from angle edges and 4'-0" o.c. from each other
- 19 Vulcraft 20GA .3IN. 32 Metal Roof Deck or equivalent.
5/8" Purple Weld with 3025 Connection Pattern at HSS Beams and Perimeter Angles, (3) #10 Sidelap Screw per Span



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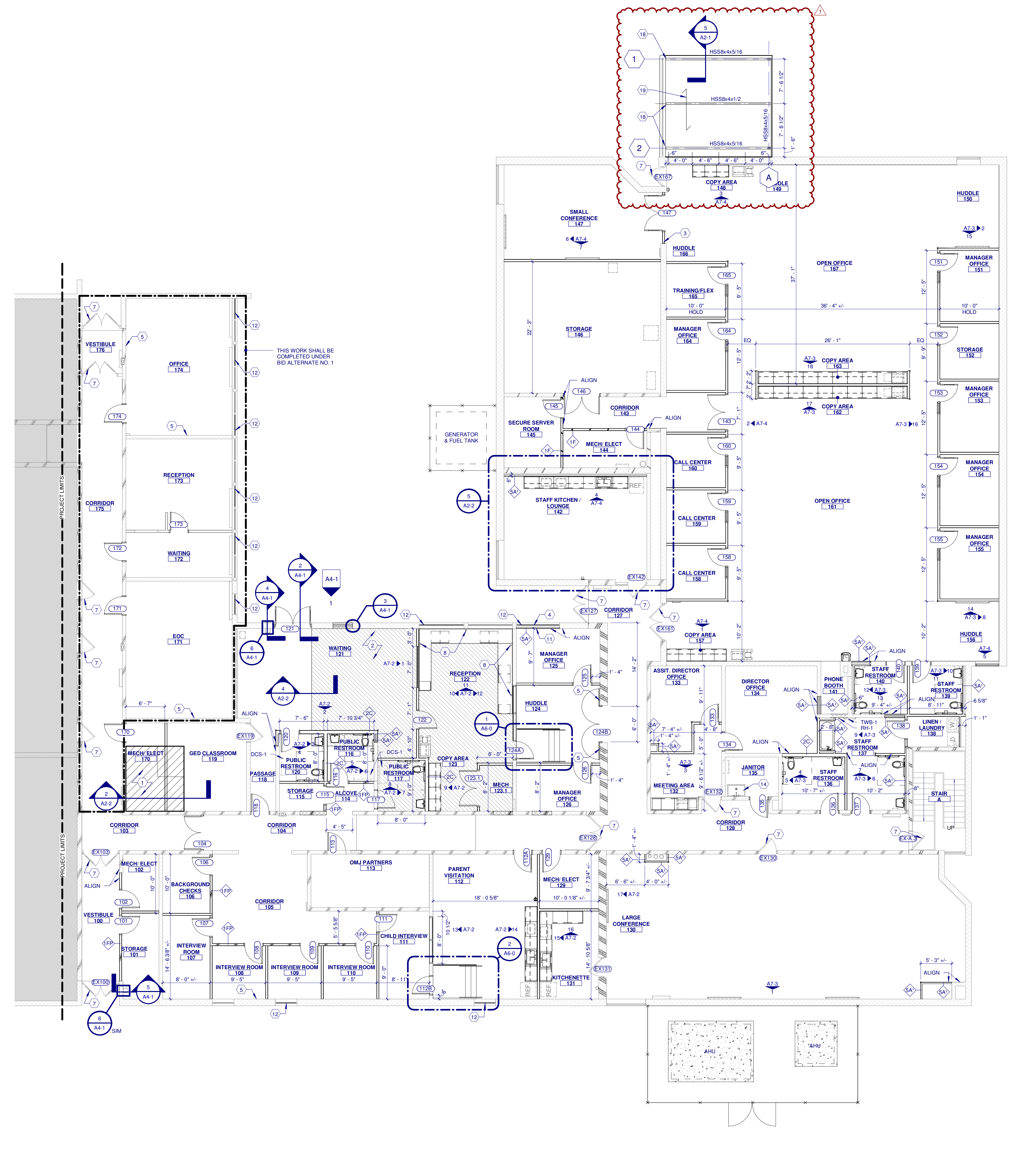
ISSUE / REVISION	DATE
BIDDING AND PLAN REVIEW	10/15/2024
ADDENDUM 01	11/7/2024

PROJECT NO. 24013.000

FLOOR PLAN - UPPER LEVEL

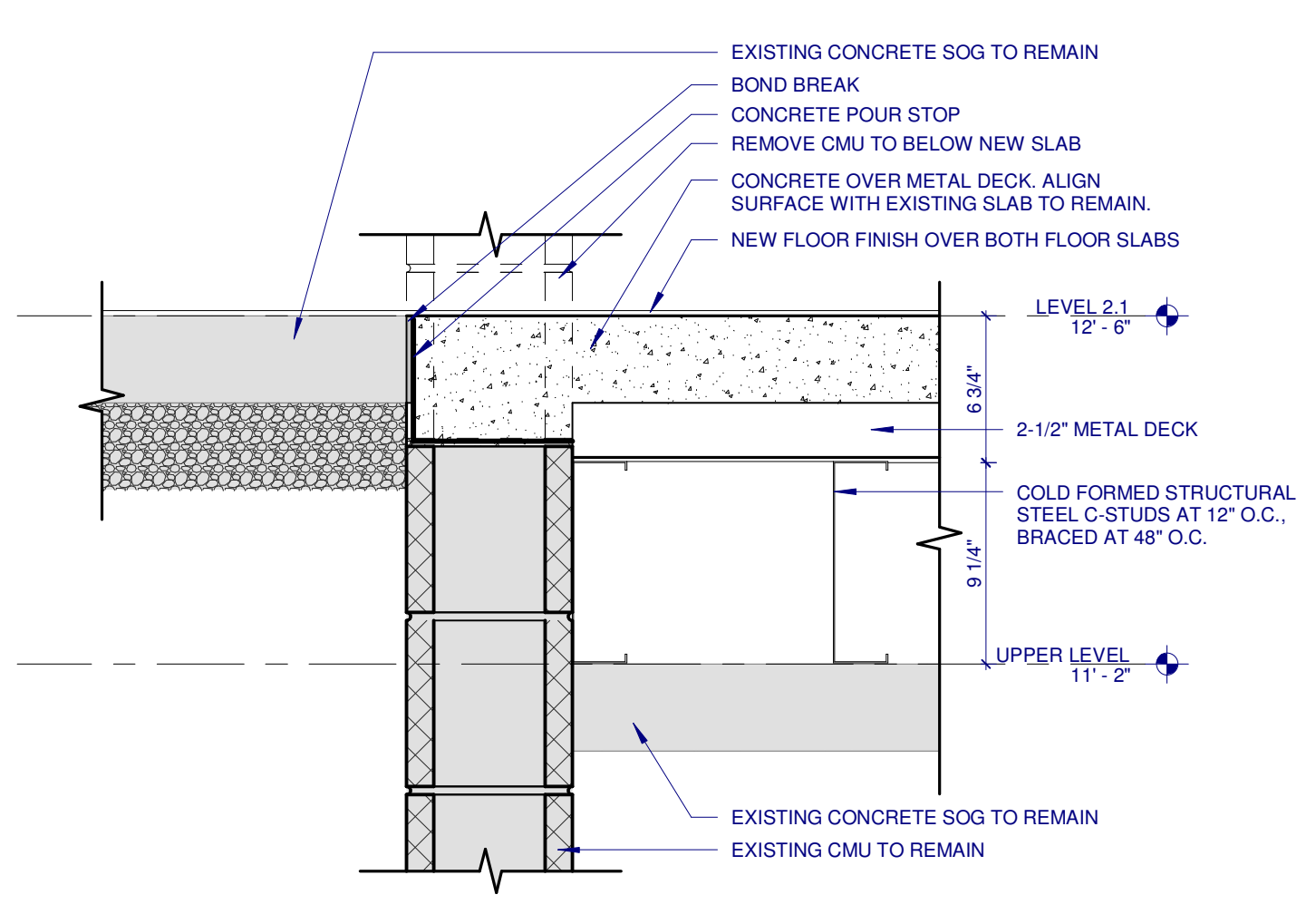
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NO. 2024

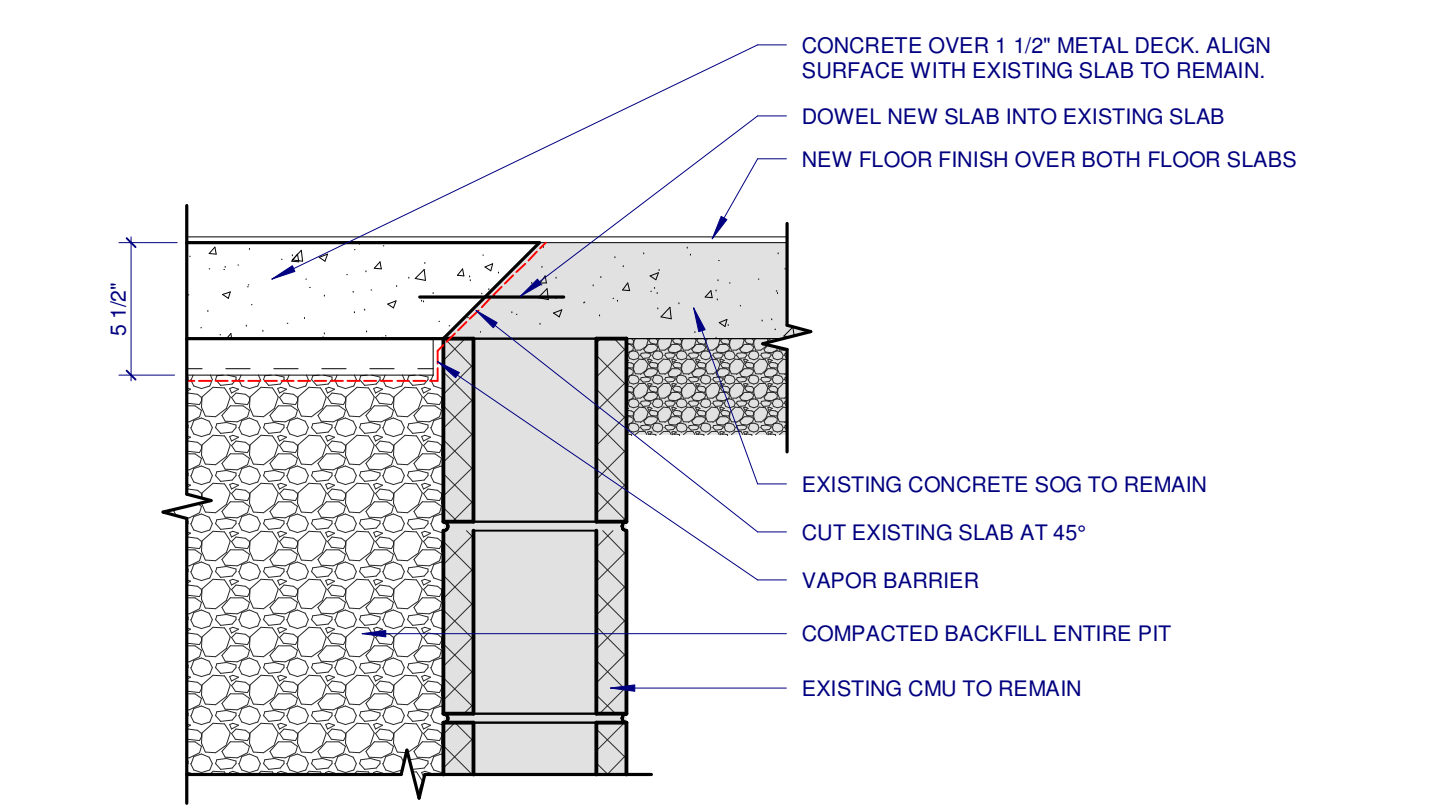


1 FLOOR PLAN - UPPER LEVEL
SCALE: 1/8" = 1'-0"

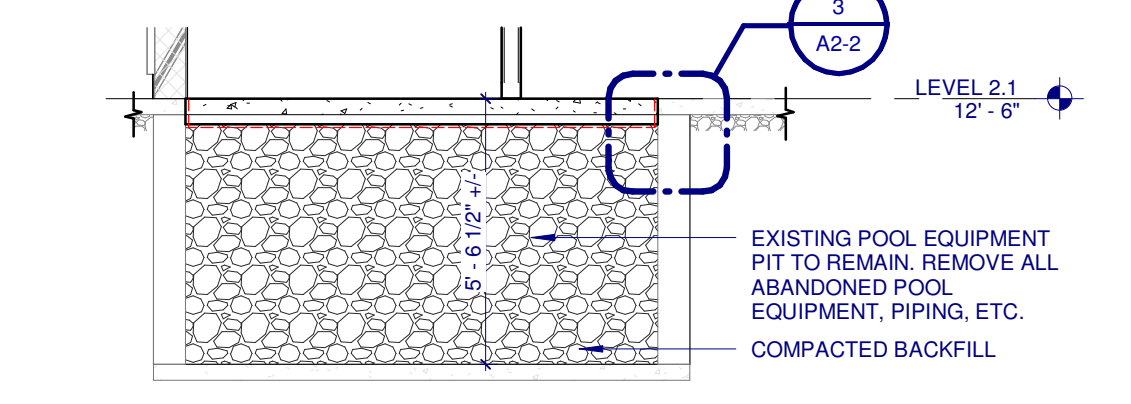
5 FLOOR PLAN - MEZZANINE
SCALE: 1/8" = 1'-0"



4 FLOOR INFILL DETAIL AT LOBBY
SCALE: 1 1/2" = 1'-0"

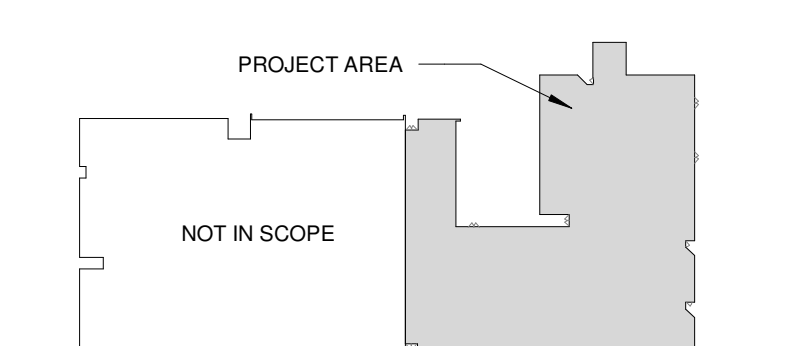


3 FLOOR INFILL DETAIL AT POOL EQUIPMENT PIT
SCALE: 1 1/2" = 1'-0"



2 POOL EQUIPMENT PIT SECTION
SCALE: 1/4" = 1'-0"

UPPER LEVEL KEY PLAN

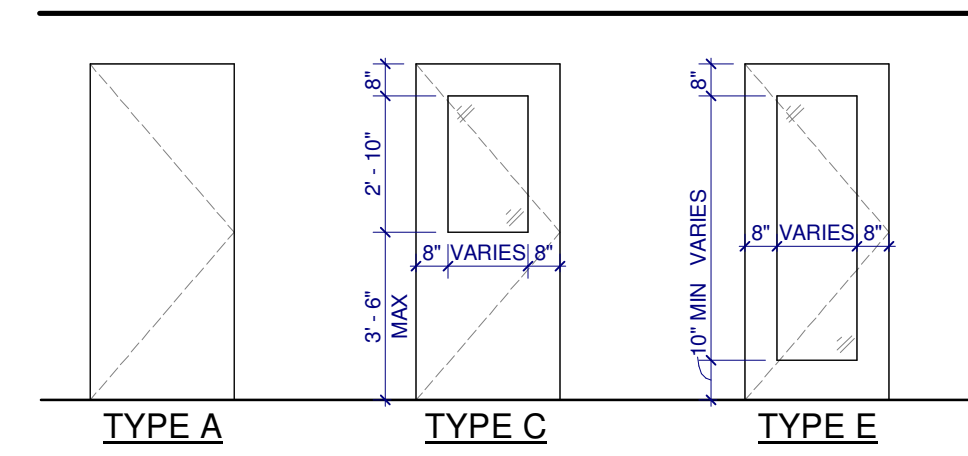


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DOOR & FRAME SCHEDULE

NO.	DOOR OPENING	DOOR PANEL INFORMATION			FRAME	FIRE LABEL	HARDWARE SET #	DETAILS	REMARKS
		MAJOR LEAF	MINOR LEAF	MATERIAL					
	WIDTH	HEIGHT	TYPE	WIDTH	TYPE	MATERIAL			
002A	6'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	002
002B	6'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	21A
003	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	004
005	3'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	005
006	3'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	006
008	3'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	008
009	3'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	009
010	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	007
011A	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	011
012	6'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	013
015	3'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	014
018	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	015
019	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	015
020	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	007
EX001	6'-0"	7'-0"	E	3'-0"	GLASS	F1	HM	0	001
EX002	6'-0"	7'-0"	E	3'-0"	GLASS	F1	HM	0	001
EX007A	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	007
EX007B	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	008
EX008A	3'-8"	7'-0"	A	3'-8"	WOOD	F1	HM	0	010
EX008B	3'-8"	7'-0"	A	3'-8"	WOOD	F1	HM	0	048
EX011B	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	012
EX013	2'-4"	7'-0"	A	2'-4"	WOOD	F1a	HM	0	042
EX014	2'-4"	7'-0"	A	2'-4"	GLASS	F1	HM	0	042
EX016A	3'-0"	7'-0"	E	3'-0"	GLASS	F1	HM	0	017
EX016B	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	043
EX017	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	016
101	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	019
102	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	019
104	3'-8"	6'-8"	A	2'-10"	WOOD	F1	HM	0	021
106	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	020
107	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	020
108	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	020
109	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	020
110	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	020
111	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	020
112A	3'-0"	6'-8"	C	3'-0"	WOOD	F1	HM	20	020
112B	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	0	022
113	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	020
115	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	020
116	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	015
117	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	015
118	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	024
120	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	0	015
121	6'-0"	6'-8"	E	3'-0"	WOOD	F1	HM	0	025
122	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	0	028
123.1	6'-0"	6'-8"	A	3'-0"	WOOD	F1a	HM	0	027
124A	3'-0"	6'-8"	C	3'-0"	WOOD	F1	HM	0	028
124B	6'-0"	7'-0"	A	3'-0"	WOOD	F1b	HM	180	029
125	3'-0"	7'-0"	E	3'-0"	WOOD	F1	HM	0	028
134	3'-0"	7'-0"	E	3'-0"	WOOD	F1	HM	0	006
135	3'-0"	7'-0"	A	3'-0"	WOOD	F1b	HM	20	023
136	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	20	015
137	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	20	015
138	3'-0"	7'-0"	A	3'-0"	WOOD	F1b	HM	0	030
139	3'-0"	7'-0"	A	3'-0"	WOOD	F1b	HM	0	015
140	3'-0"	7'-0"	A	3'-0"	WOOD	F1b	HM	0	015
143	6'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	0	032
144	3'-0"	7'-0"	A	3'-0"	WOOD	F1b	HM	45	019
145	3'-0"	7'-0"	A	3'-0"	WOOD	F1b	HM	45	034
146	6'-0"	7'-0"	A	3'-0"	WOOD	F1b	HM	20	035
147	6'-0"	7'-0"	E	3'-0"	WOOD	F1	HM	0	033
151	3'-0"	7'-0"	E	3'-0"	WOOD	F2	HM	0	006
152	3'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	031
153	3'-0"	7'-0"	E	3'-0"	WOOD	F2	HM	0	006
154	3'-0"	7'-0"	E	3'-0"	WOOD	F2	HM	0	006
158	3'-0"	7'-0"	E	3'-0"	WOOD	F2	HM	0	006
160	3'-0"	7'-0"	E	3'-0"	WOOD	F2	HM	0	006
164	3'-0"	7'-0"	E	3'-0"	WOOD	F2	HM	0	006
165	3'-0"	7'-0"	E	3'-0"	WOOD	F2	HM	0	009
170	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	036
171	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	037
172	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	038
173	3'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	006
174	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	20	038
EX100	6'-0"	6'-8"	E	3'-0"	WOOD	F1	HM	0	044
EX103	6'-0"	6'-8"	E	3'-0"	WOOD	F1	HM	0	001
EX119	3'-0"	6'-8"	A	3'-0"	WOOD	F1	HM	0	020
EX127	6'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	001
EX128	5'-8"	7'-0"	A	2'-10"	WOOD	F1a	HM	180	001
EX130	3'-0"	7'-2"	A	3'-0"	WOOD	F1a	HM	45	040
EX131	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	180	041
EX132	3'-0"	7'-2"	A	3'-0"	WOOD	F1a	HM	45	045
EX142	3'-0"	7'-2"	A	3'-0"	WOOD	F1	HM	45	017
EX161	6'-0"	7'-2"	A	3'-0"	WOOD	F1	HM	45	001
EX167	3'-0"	7'-0"	A	3'-0"	WOOD	F1	HM	0	017
EXA.1	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	90	039
EXA.2	3'-0"	7'-0"	A	3'-0"	WOOD	F1a	HM	90	039
EXA.3	3'-0"	7'-2"	A	3'-0"	WOOD	F1a	HM	90	039

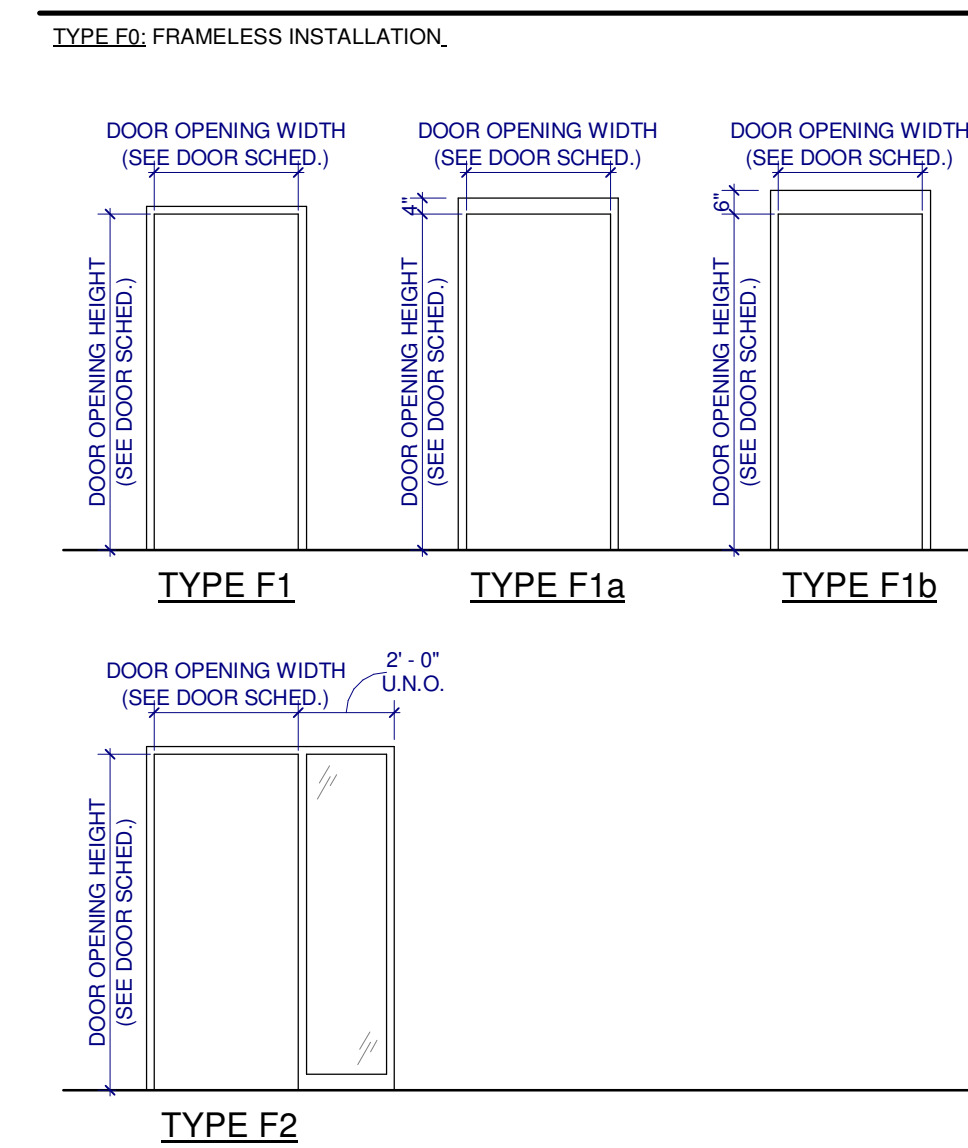
DOOR TYPES



DOOR GLAZING SCHEDULE	
DOOR APPLICATION:	GLAZING TYPE:
NO FIRE LABEL	1/4" CLEAR FULLY TEMPERED, U.N.O.
20 MIN. FIRE LABEL	FIRE-PROTECTION RATED (TEMPERED SAFETY), 20 MIN. U.N.O.
45, 60 OR 90 MIN. FIRE LABEL	FIRE-PROTECTION RATED (LAMINATED CERAMIC), MATCH DOOR RATING, U.N.O.
GREATER THAN 90 MIN. FIRE LABEL	FIRE-PROTECTION RATED, NOT PERMITTED

1. REFER TO EXTERIOR FRAME TYPES SHEET FOR GLAZING TYPES IN EXTERIOR WALLS.

DOOR FRAME TYPES



DOOR SIDELITE/TRANSOM GLAZING SCHEDULE	
DOOR APPLICATION:	GLAZING TYPE:
NO FIRE LABEL	1/4" CLEAR FULLY TEMPERED, U.N.O.
20 MIN. FIRE LABEL	FIRE-PROTECTION RATED (TEMPERED SAFETY), 20 MIN. U.N.O.
45. FIRE LABEL	FIRE-PROTECTION RATED (LAMINATED CERAMIC), 45 MIN. U.N.O.
GREATER THAN 45 MIN. FIRE LABEL	FIRE-PROTECTION RATED, NOT PERMITTED

DOOR & FRAME GENERAL NOTES

- REFER TO TYPICAL INTERIOR DOOR DETAILS FOR ALL INTERIOR DOOR FRAMES. UNO IN DOOR SCHEDULE. TYPICAL INTERIOR DOOR FRAMES ARE REFERENCED BY FRAME MATERIAL.
- FOR ALL OTHER EXTERIOR DOOR FRAME DETAILS, REFER TO EXTERIOR FRAME TYPES SHEET (A4 SERIES).
- REFER TO PROJECT MANUAL FOR DOOR HARDWARE SET INFORMATION.
- REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION ON ACCESS CONTROL SYSTEM AND POWER REQUIREMENTS OF ELECTRIFIED HARDWARE.
- OPENING WIDTH INDICATED IN DOOR SCHEDULE REFERS TO NOMINAL INSIDE WIDTH OF DOOR FRAME.
- REFER TO STRUCTURAL DRAWINGS FOR LINTEL SCHEDULE.
- INSTALL CONTINUOUS IN-WALL CONCEALED BLOCKING AT HEAD FOR DOORS WITH AUTO OPERATORS.
- DOOR AUTO OPERATORS TO BE INSTALLED ON SIDE OF DOOR LEAST VISIBLE TO THE PUBLIC.
- ALL EXISTING DOORS AND FRAMES IN PROJECT AREA TO BE PAINTED P-5.

INTERIOR FRAME TYPE GENERAL NOTES

- REFER TO FLOOR PLANS FOR LOCATIONS OF INTERIOR FRAME TYPES
- FOR DETAIL INFORMATION ON INTERIOR FRAME TYPES, REFER TO A4 SERIES
- FOR DETAIL INFORMATION ON INTERIOR FRAME TYPES CONTAINING DOORS, REFER TO DOORFRAMES SCHEDULE, DETAILS & PLAN SHEET

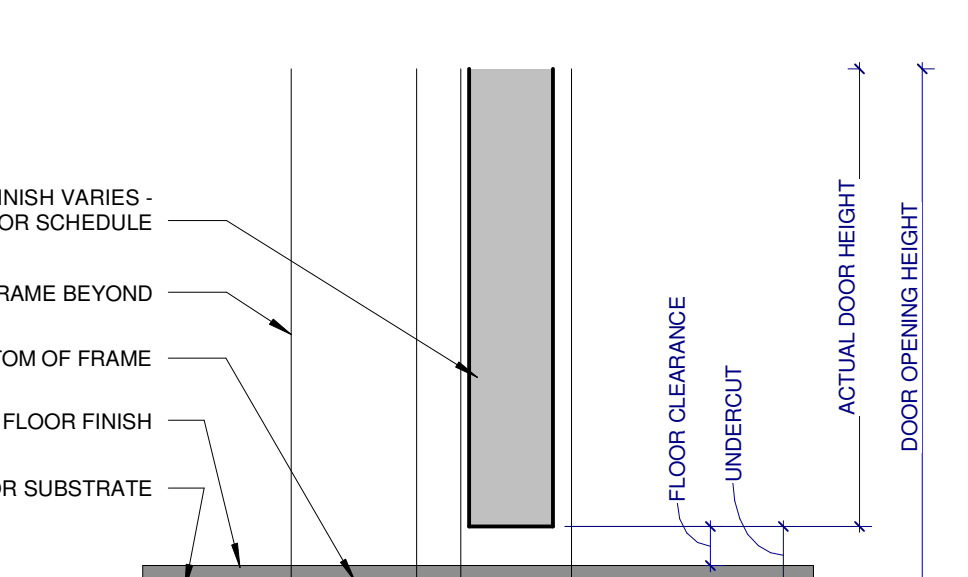
INTERIOR FRAME TYPE GLAZING SCHEDULE

ALL GLAZING IN INTERIOR FRAME TYPES IS 1/4" CLEAR FULLY TEMPERED, UNO.

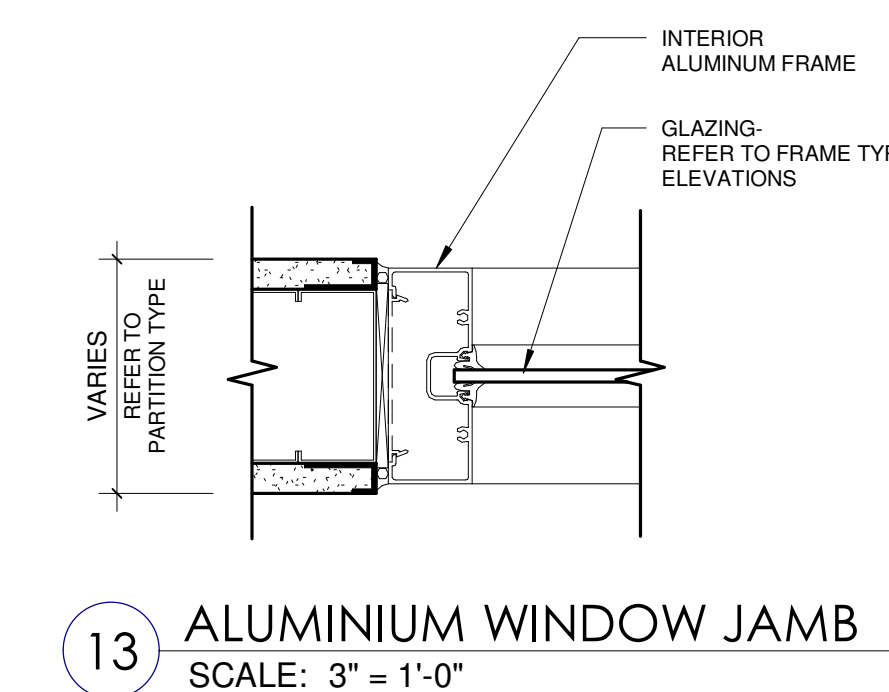
LINTEL SCHEDULE

SPAN LIMITS	SIZE	BEARING
0'-0" TO 1'-0"	1/4" PLATE	4"
1'-1" TO 3'-0"	L 3 1/2 x 3 1/2 x 1/4	4"
3'-1" TO 4'-0"	L 3 1/2 x 3 1/2 x 1/4	4"
4'-1" TO 5'-0"	L 4 x 3 1/2 x 1/4	6"
5'-1" TO 6'-0"	L 5 x 3 1/2 x 5/16	6"

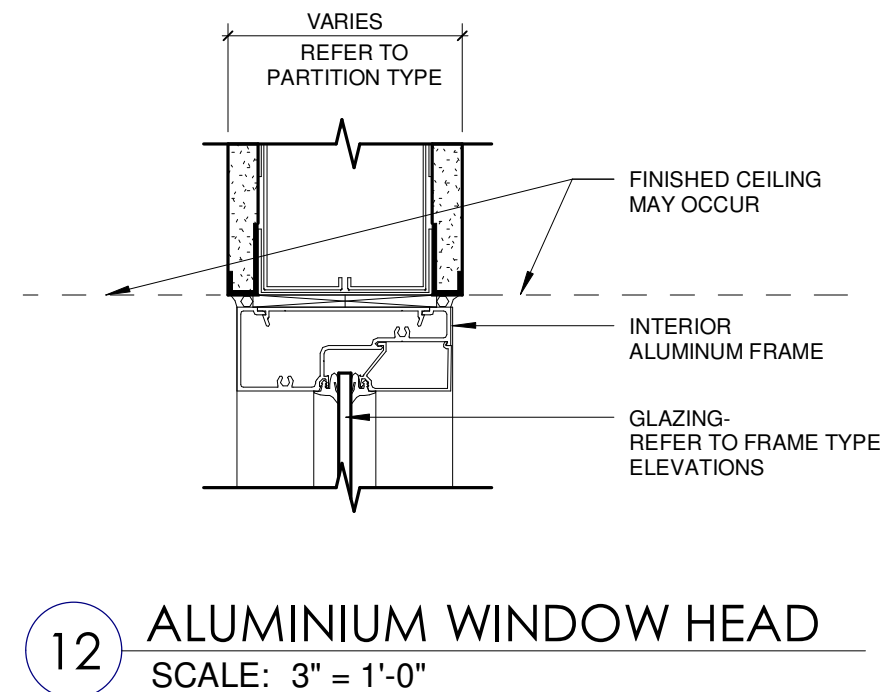
PROVIDE ONE (1) ANGLE FOR EACH 4" OF MASONRY WALL THICKNESS



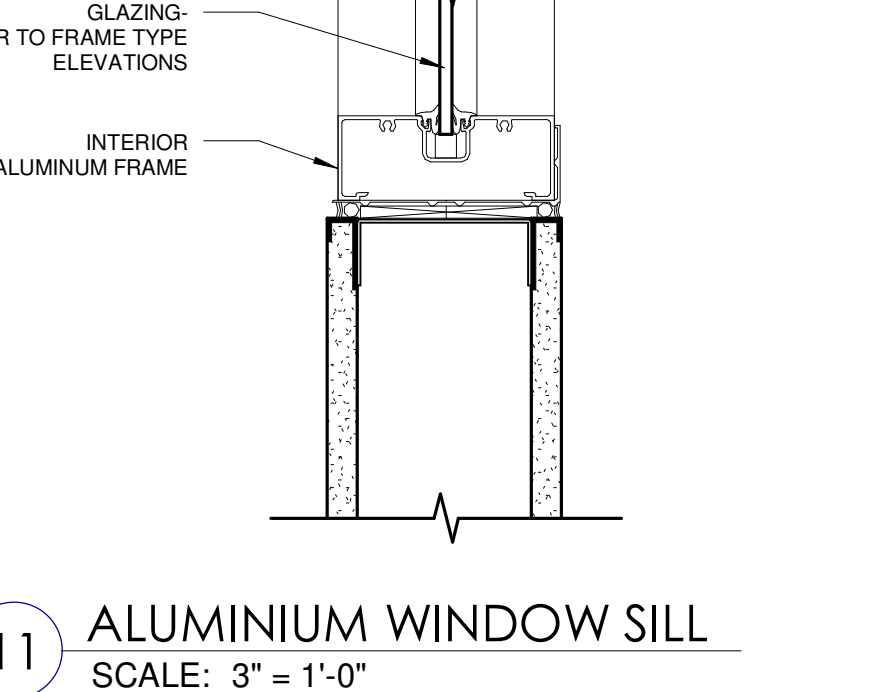
1. DOOR UNDERCUT DETAIL, TYP. SCALE: 3" = 1'-0"



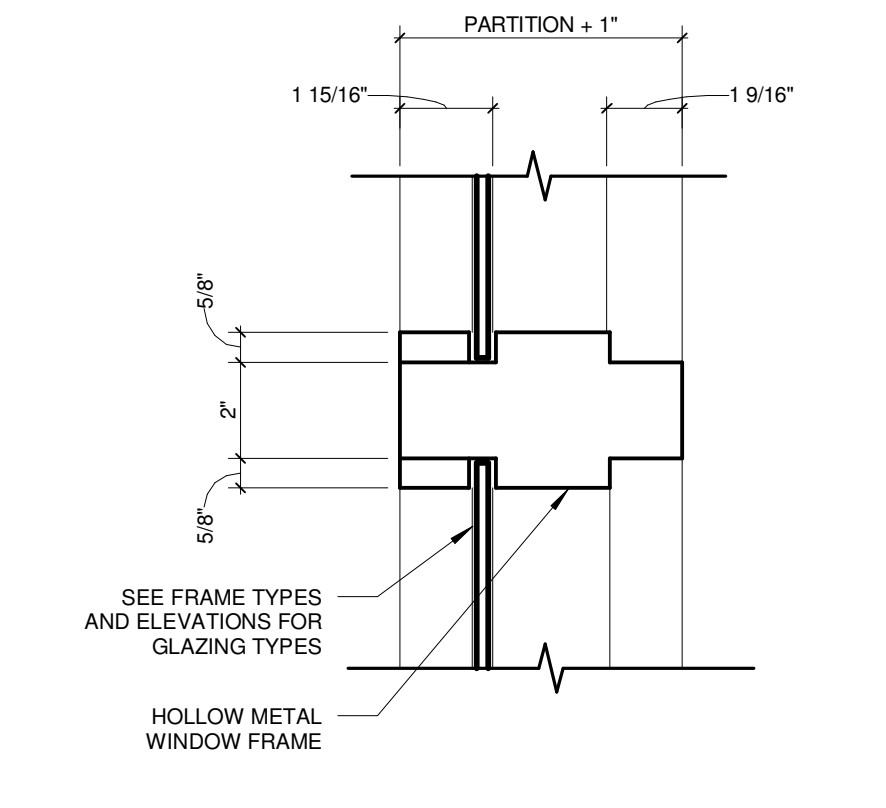
13. ALUMINIUM WINDOW JAMB SCALE: 3" = 1'-0"



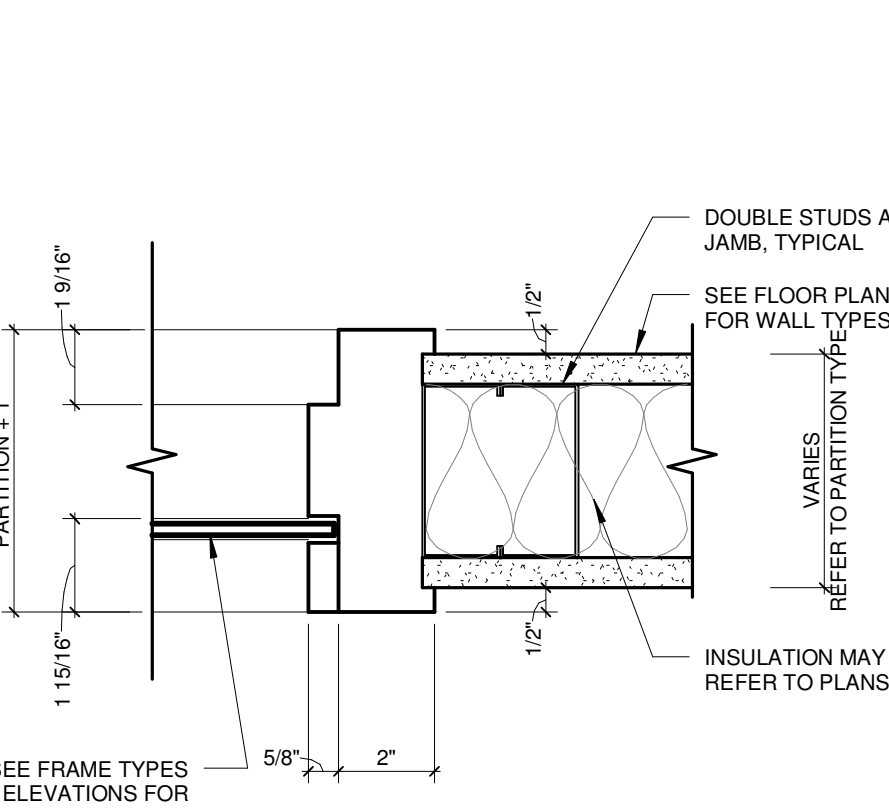
12. ALUMINIUM WINDOW HEAD SCALE: 3" = 1'-0"



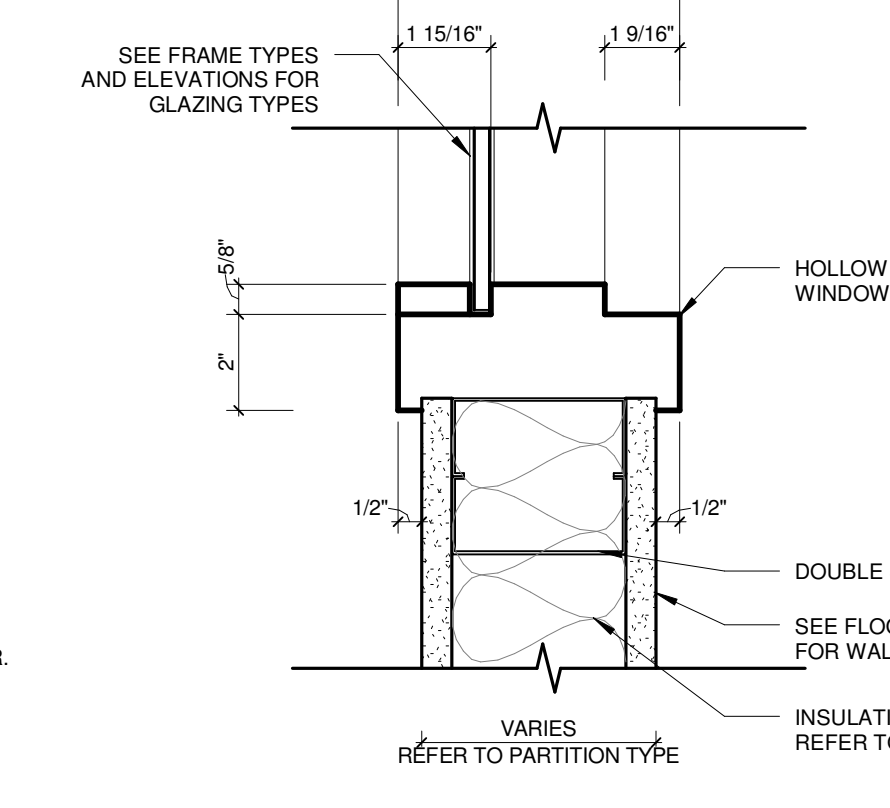
11. ALUMINIUM WINDOW SILL SCALE: 3" = 1'-0"



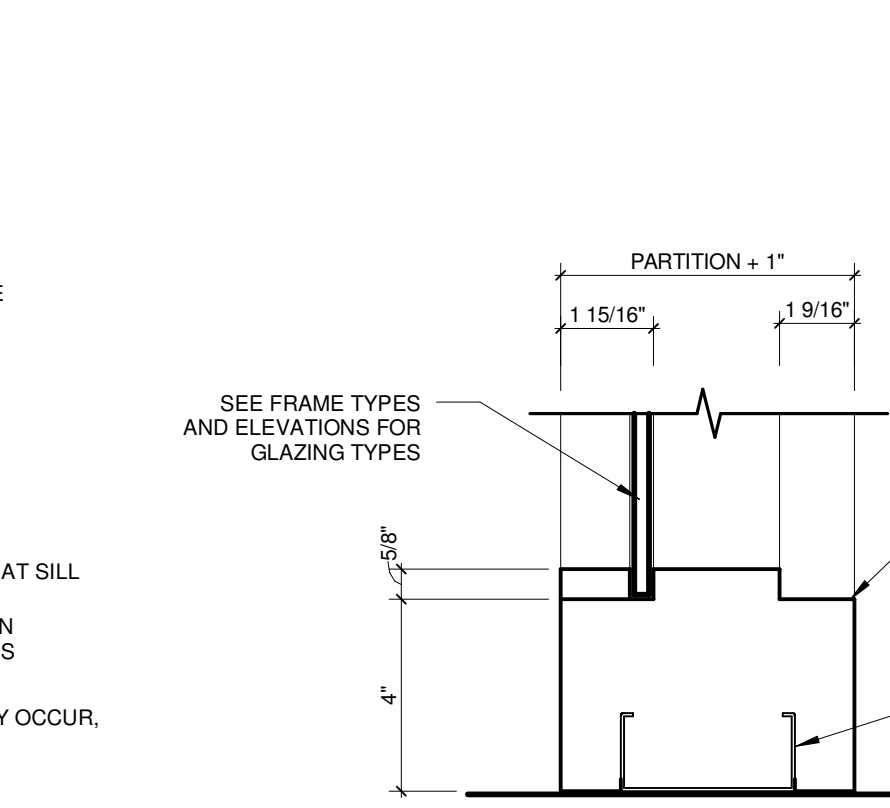
10. HOLLOW METAL MULLION SCALE: 3" = 1'-0"



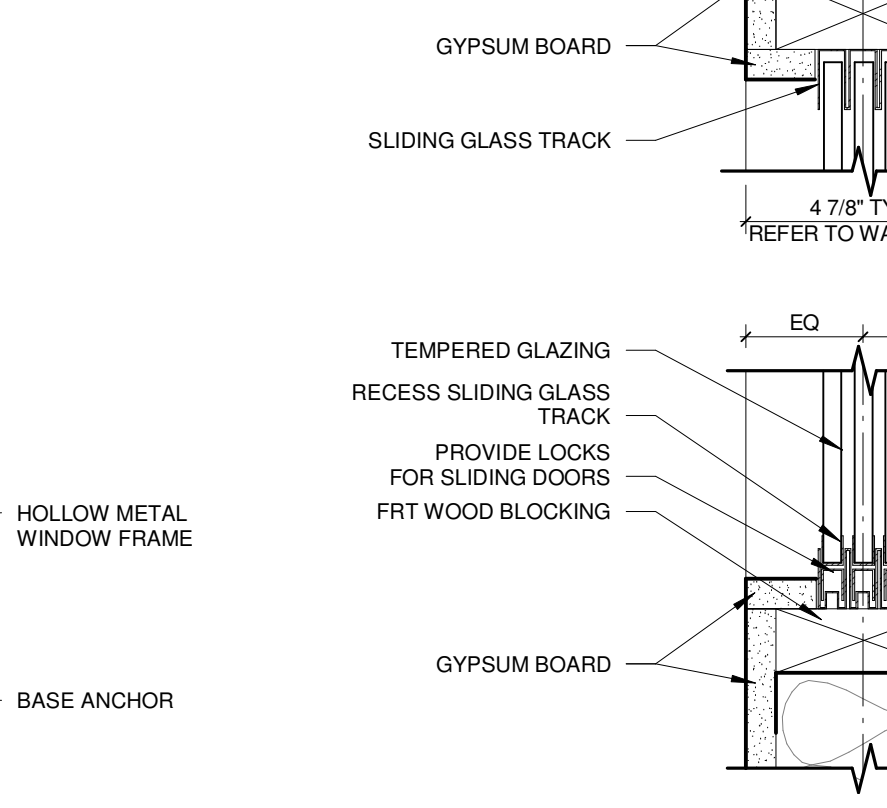
9. HOLLOW METAL WINDOW JAMB SCALE: 3" = 1'-0"



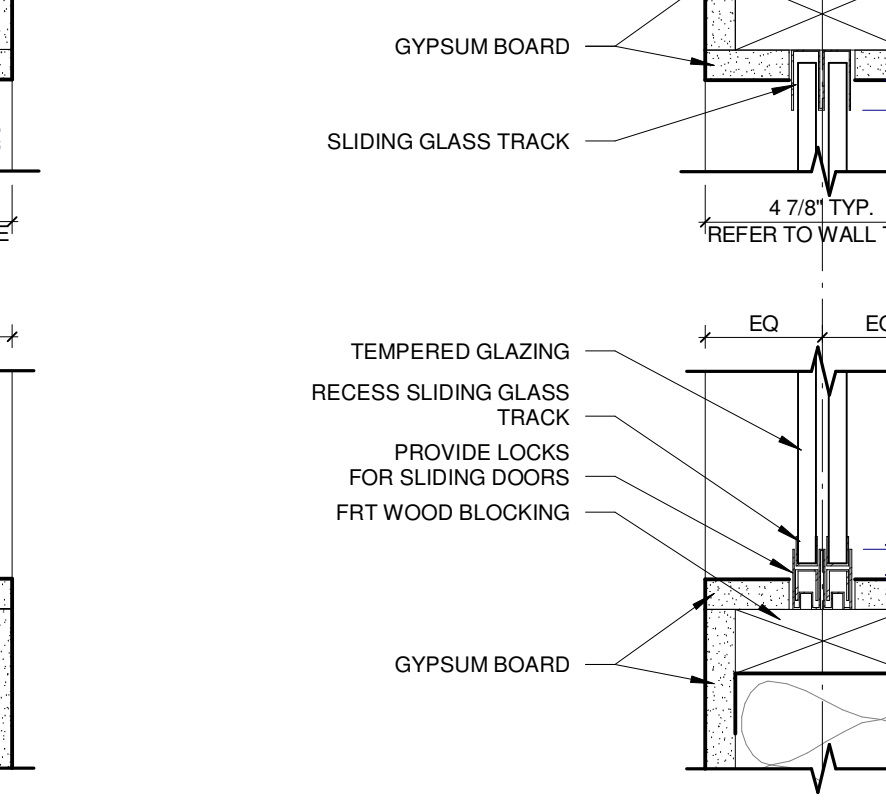
8. HOLLOW METAL WINDOW SILL/HEAD SCALE: 3" = 1'-0"



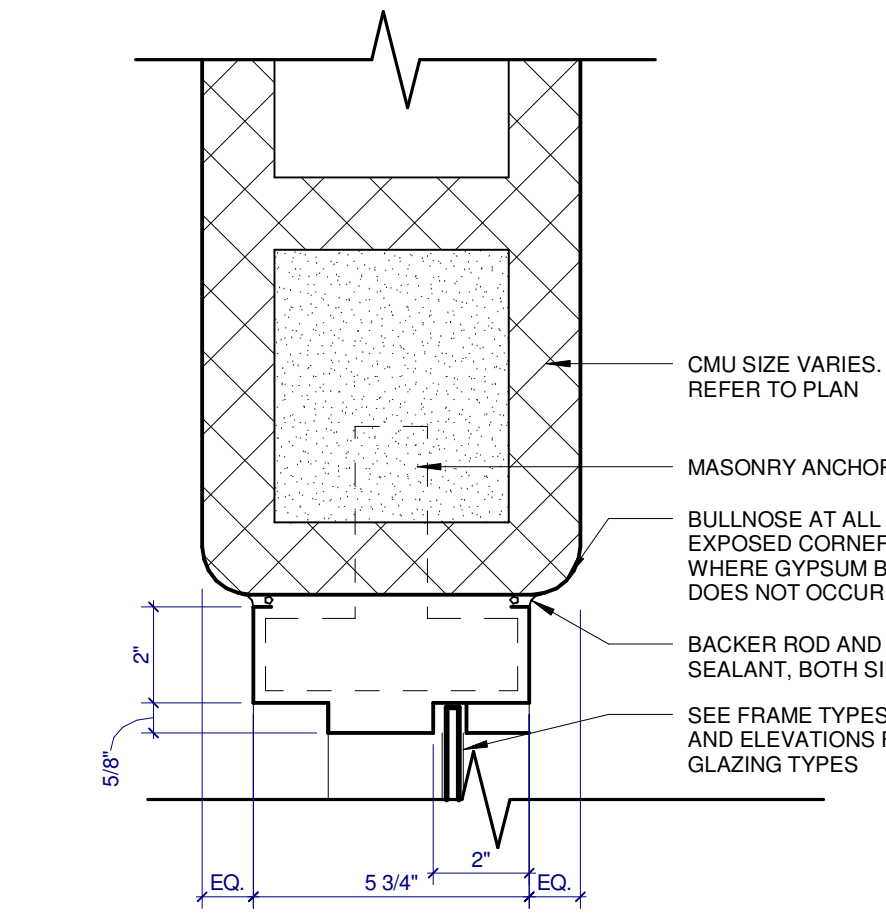
7. HOLLOW METAL WINDOW SILL AT FLOOR SCALE: 3" = 1'-0"



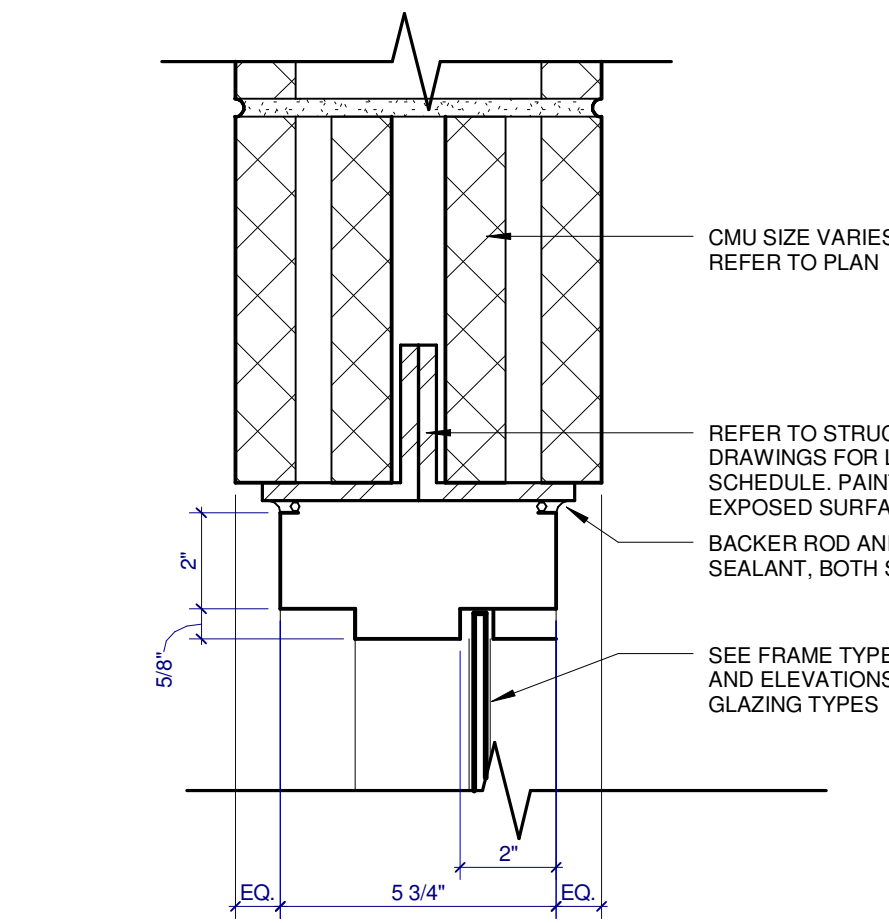
6. 3-TRACK SLIDING WINDOW SCALE: 3" = 1'-0"



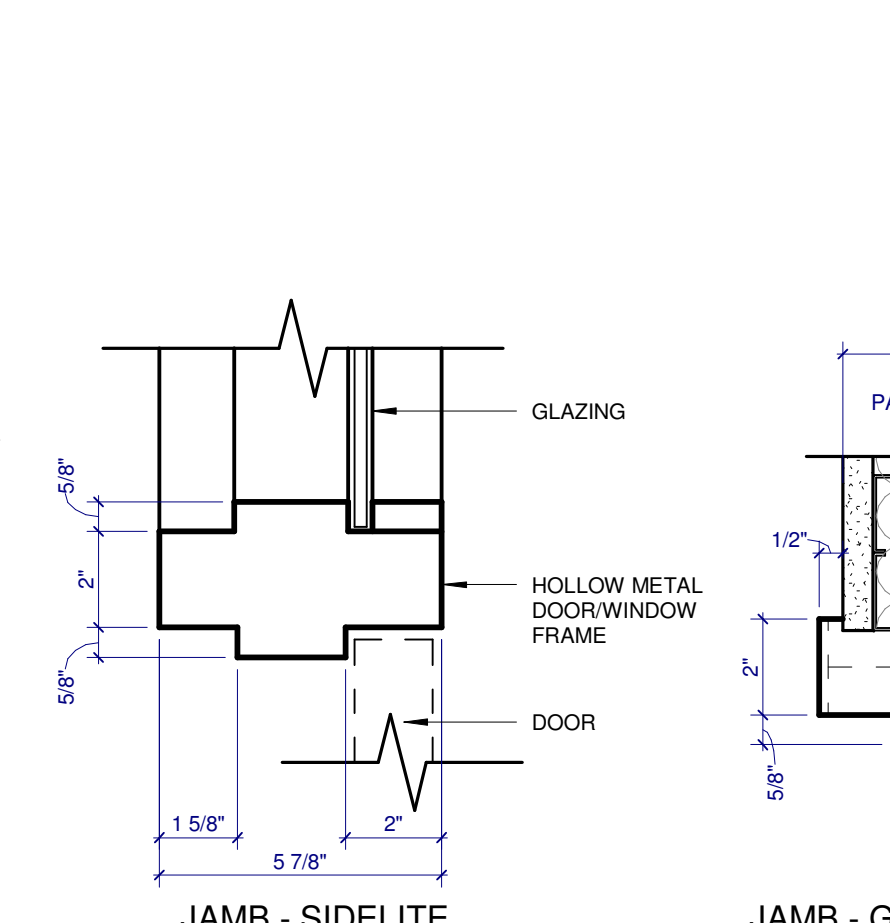
5. 2-TRACK SLIDING WINDOW SCALE: 3" = 1'-0"



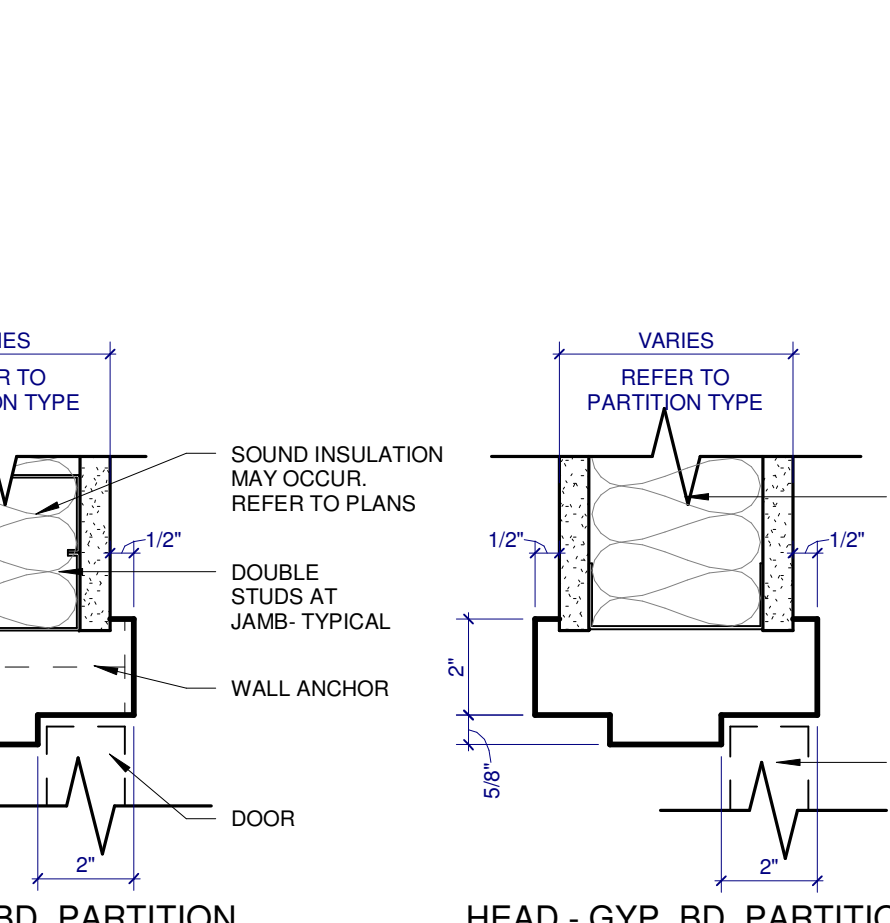
4. HOLLOW METAL WINDOW JAMB/SILL SCALE: 3" = 1'-0"



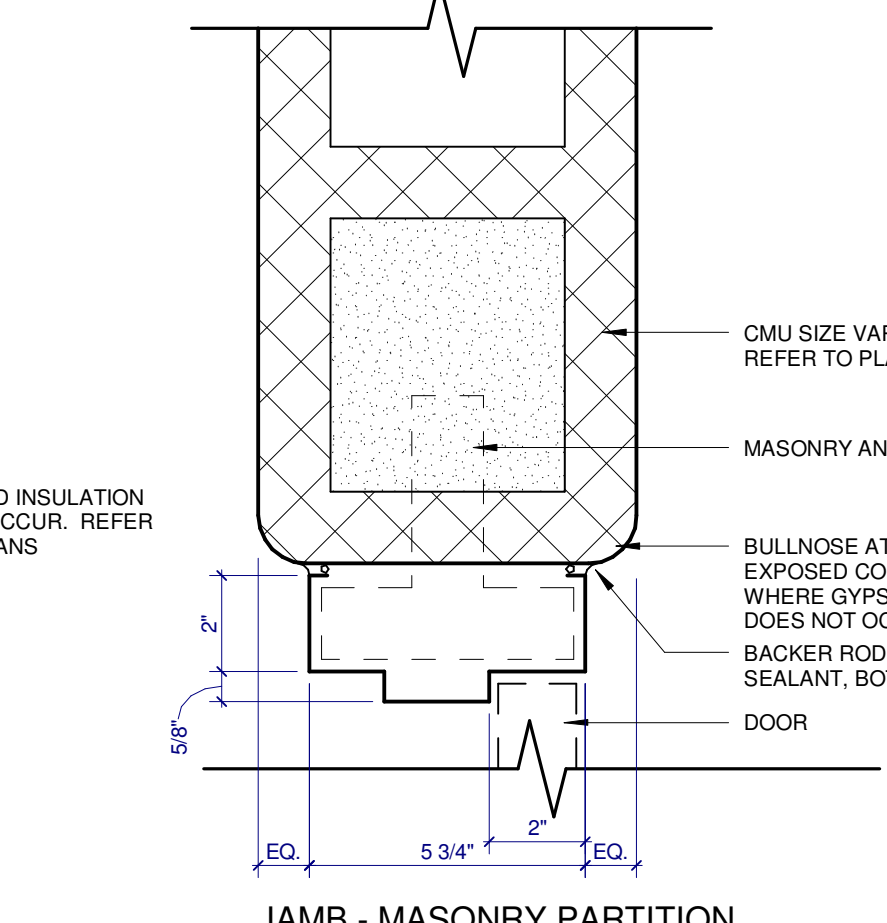
3. HOLLOW METAL WINDOW HEAD SCALE: 3" = 1'-0"



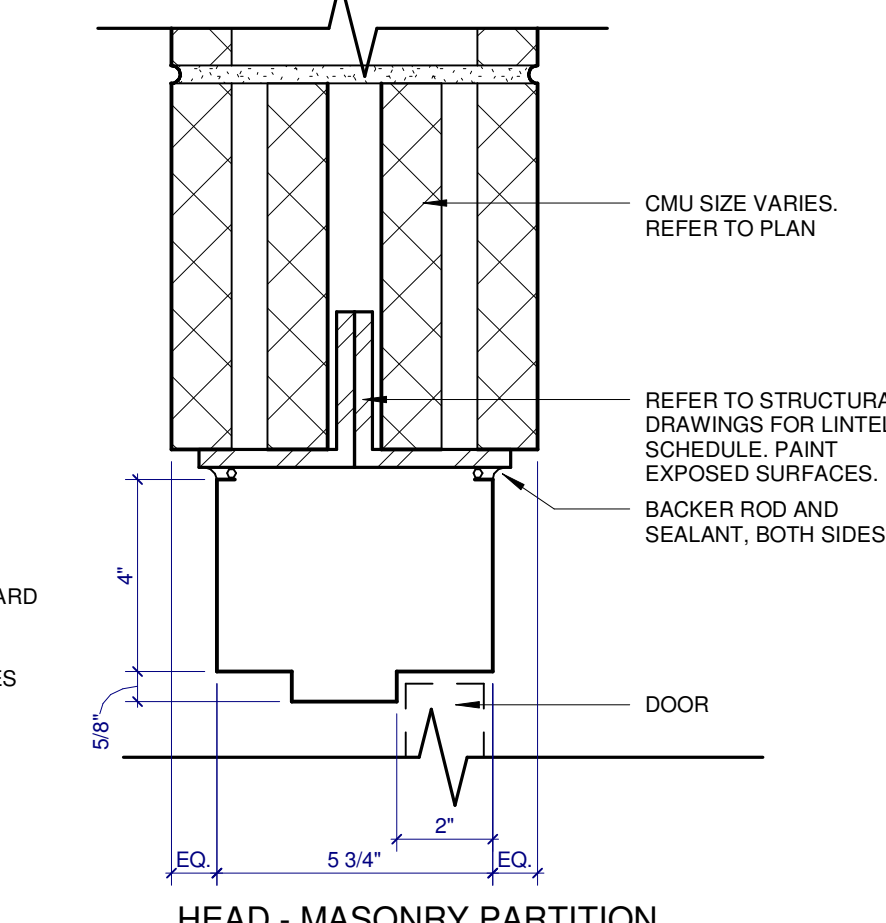
2. TYPICAL INTERIOR DOOR FRAME DETAILS - HOLLOW METAL SCALE: 3" = 1'-0"



JAMB - MASONRY PARTITION



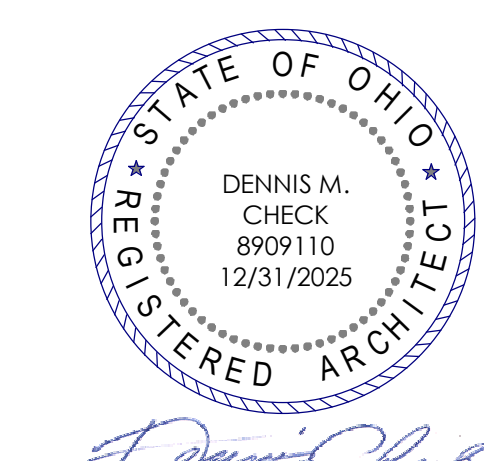
JAMB - GYP. BD. PARTITION



HEAD - MASONRY PARTITION



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 211 MOODY AVE SW
 CARROLLTON OHIO 44615



ISSUE / REVISION	DATE
(BIDDING AND PLAN REVIEW	10/15/2024
1. ADDENDUM 01	11/7/2024

PROJECT NO. 24013.000

DOOR & FRAME SCHEDULES & DETAILS

A8-0