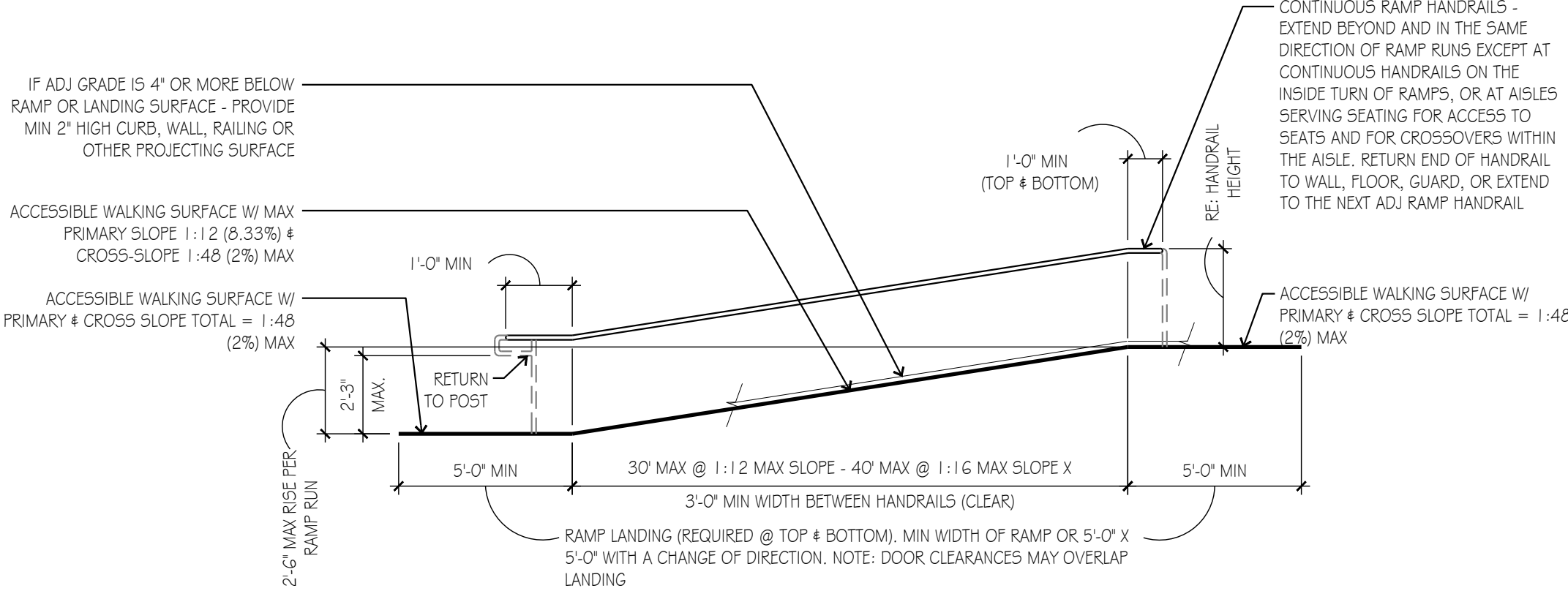
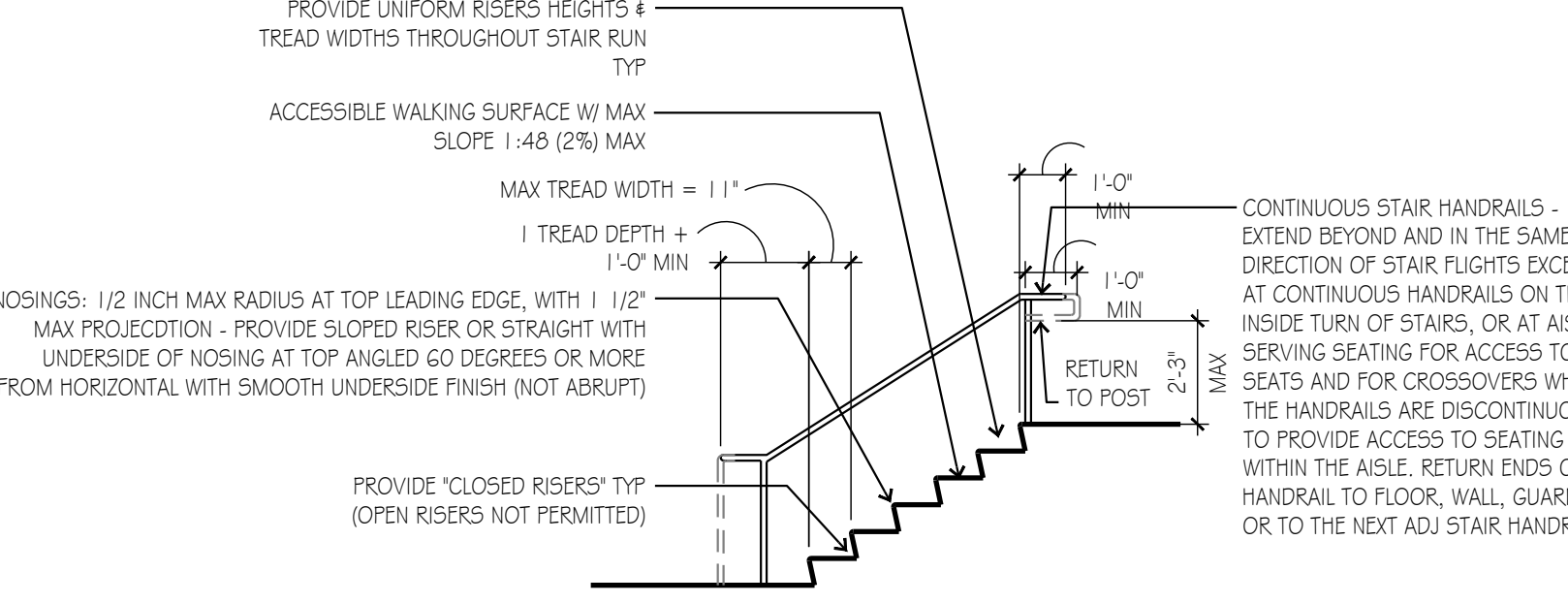


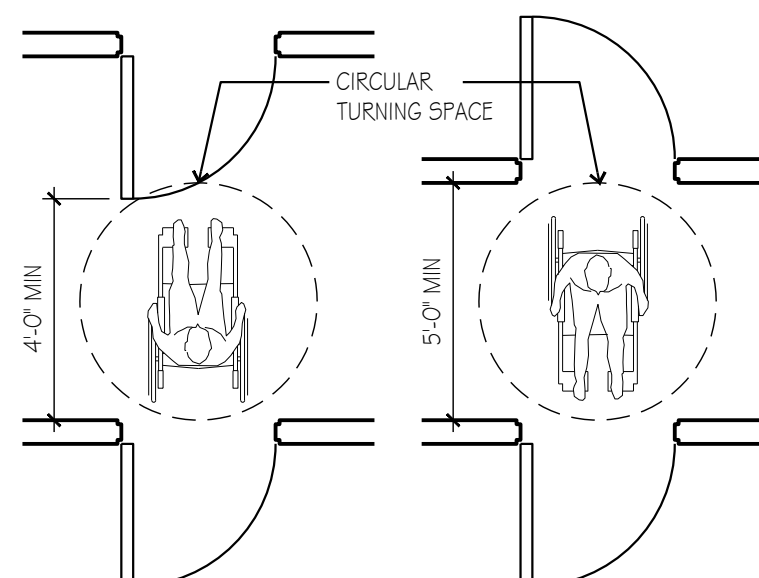
RAMP & STAIR HANDRAILS (INTERIOR OR EXTERIOR)



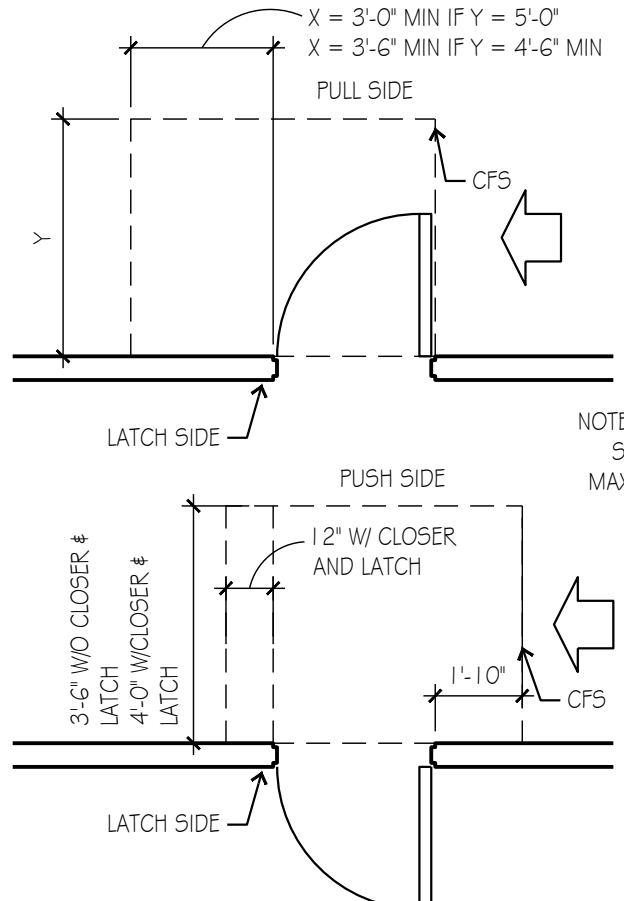
ACCESSIBLE RAMPS (INTERIOR OR EXTERIOR)



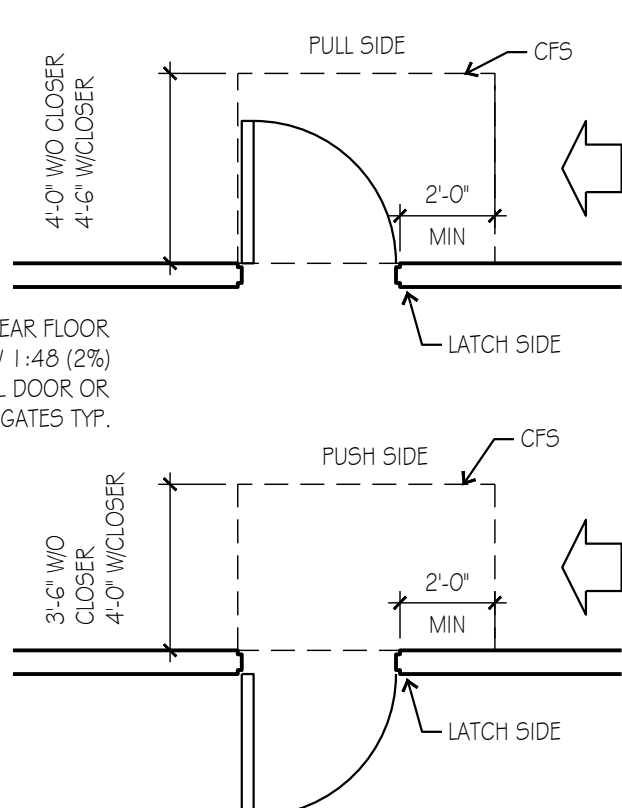
ACCESSIBLE STAIRS (INTERIOR OR EXTERIOR)



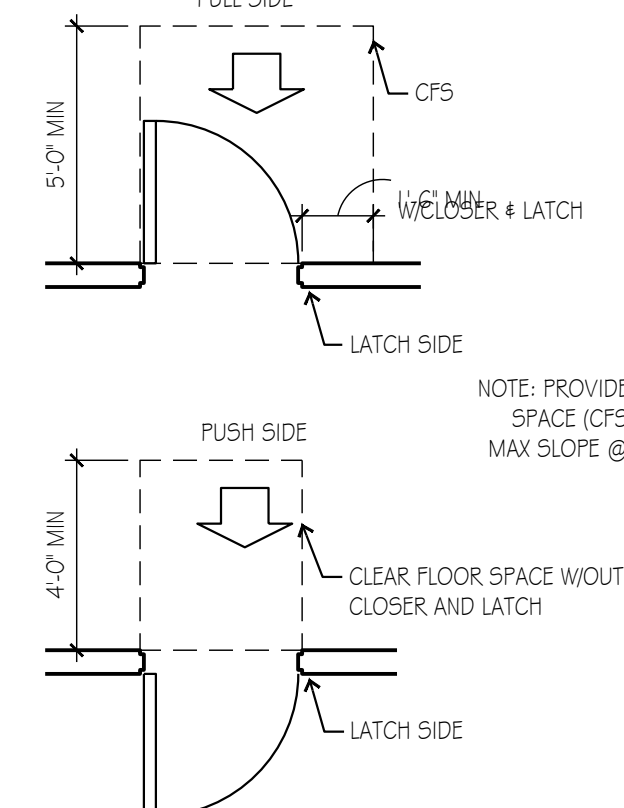
DOORS/GATES IN SERIES



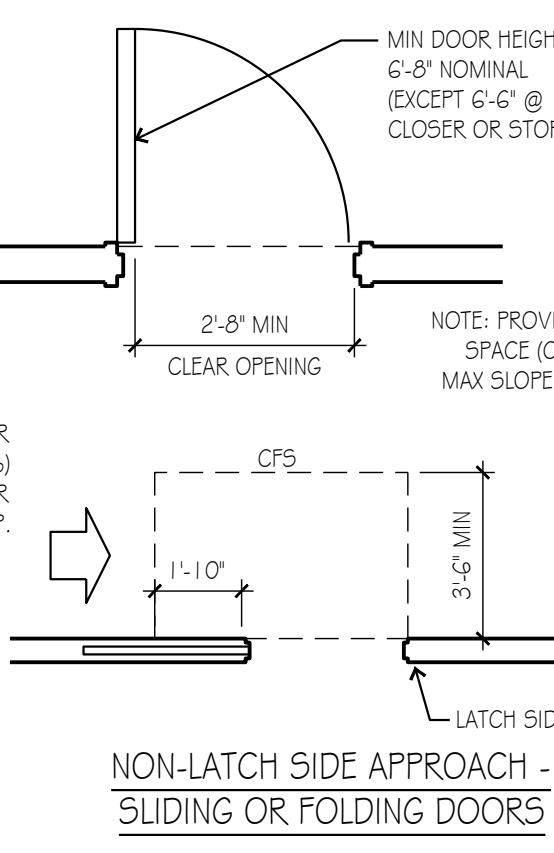
HINGE SIDE APPROACH - SWINGING DOOR OR GATE



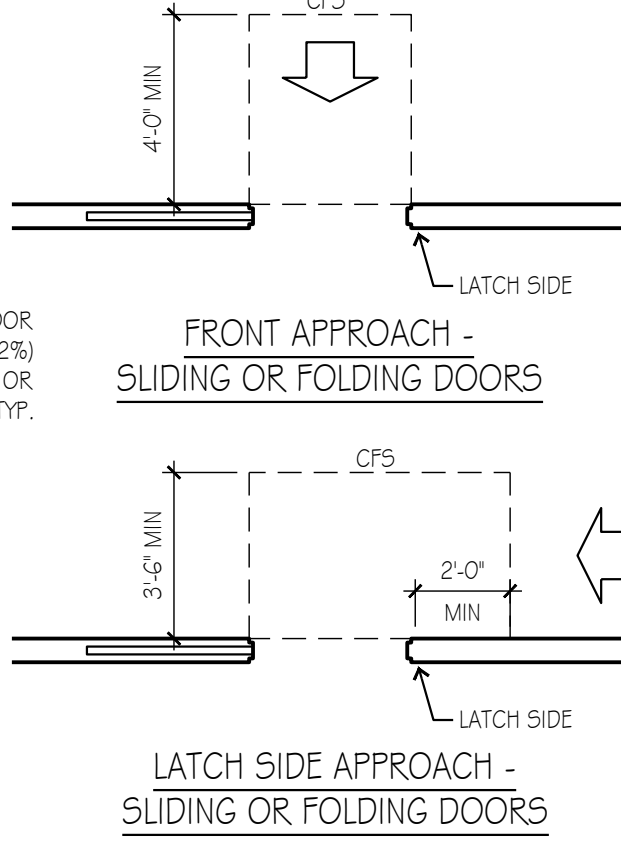
LATCH SIDE APPROACH - SWINGING DOOR OR GATE



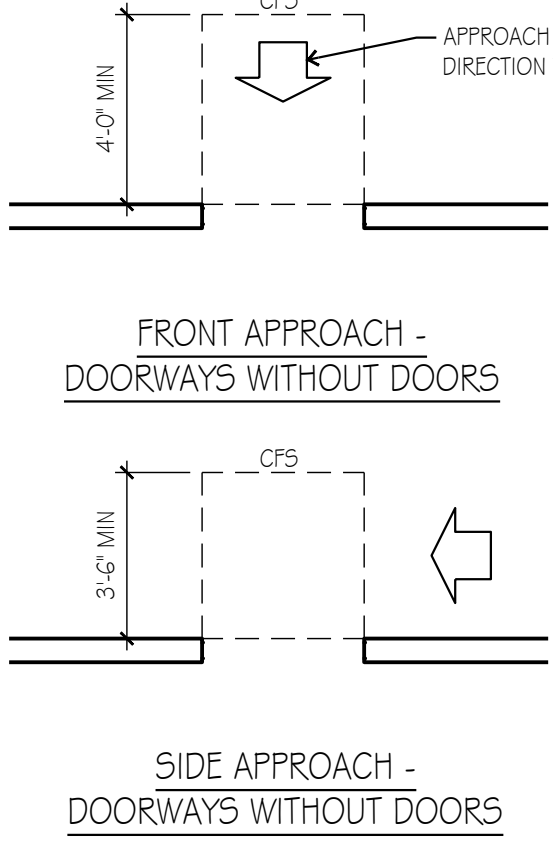
FRONT APPROACH - SWINGING DOOR OR GATE



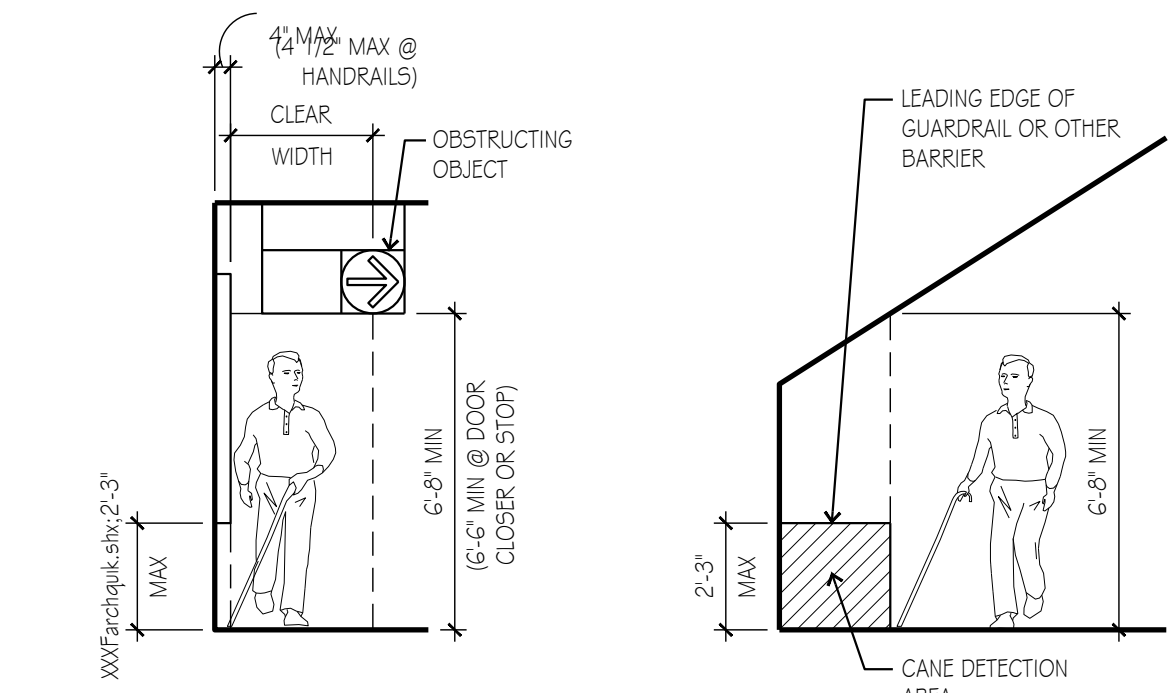
NON-LATCH SIDE APPROACH - SLIDING OR FOLDING DOORS



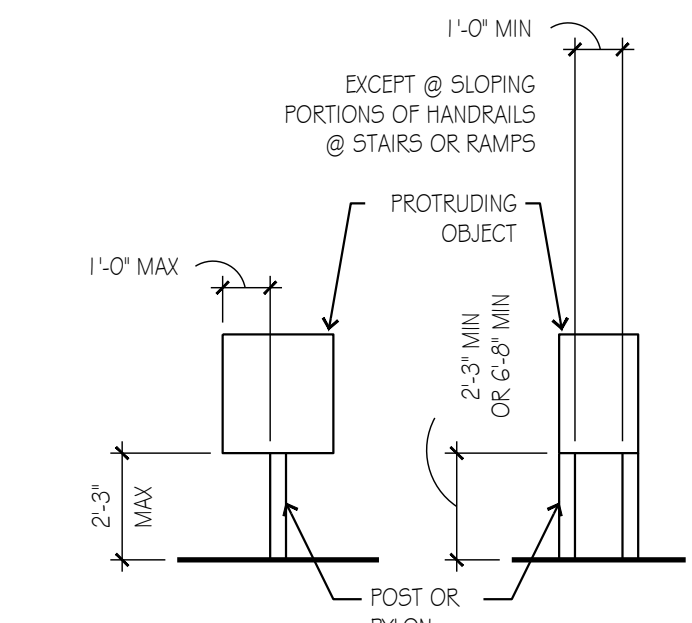
LATCH SIDE APPROACH - SLIDING OR FOLDING DOORS



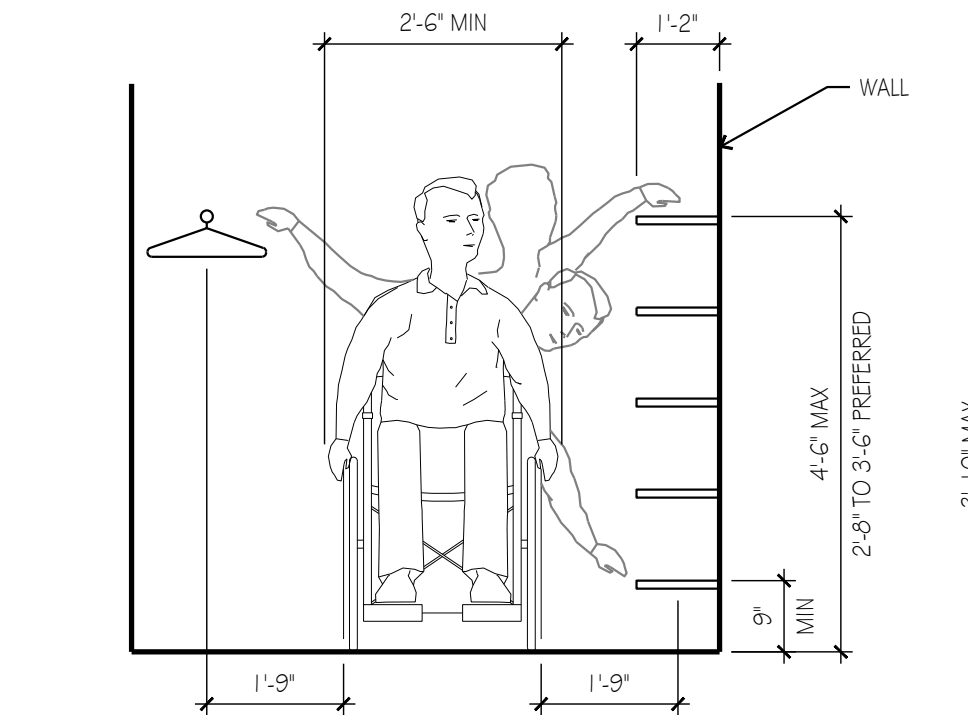
SIDE APPROACH - DOORWAYS WITHOUT DOORS



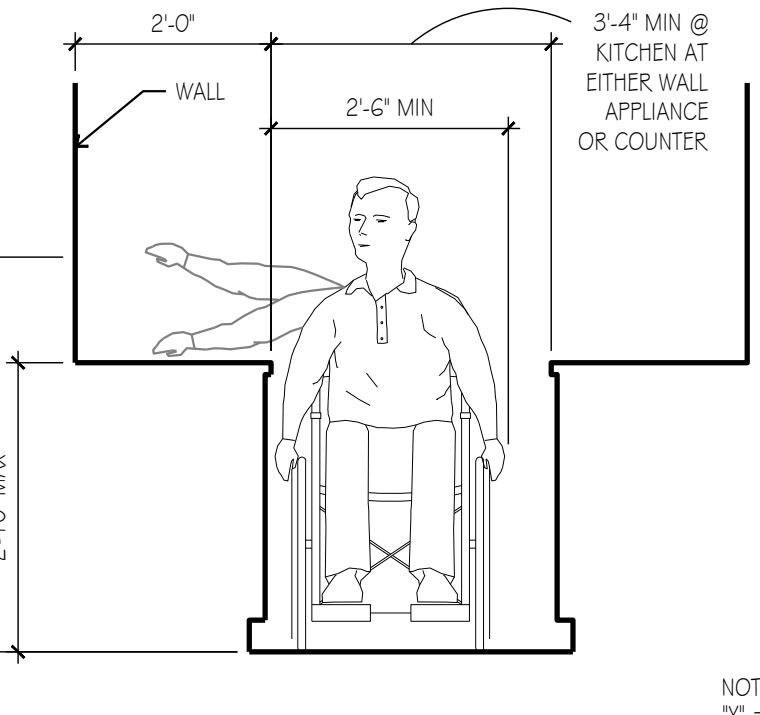
LIMIT OF PROTRUDING OBJECT



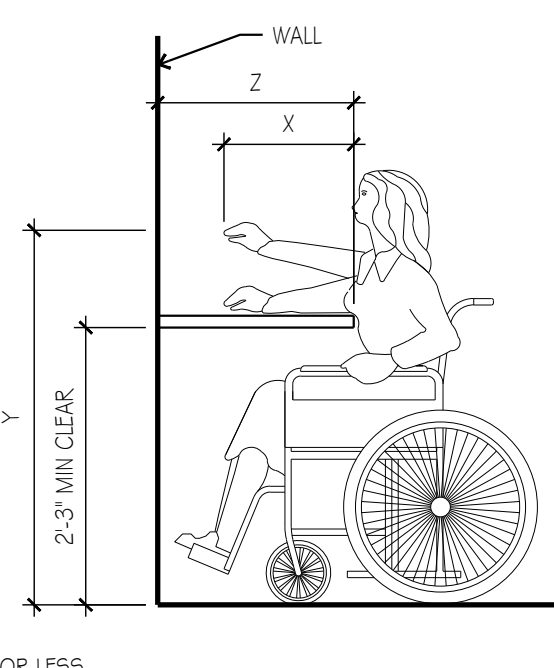
POST MOUNTED PROTRUDING OBJECTS



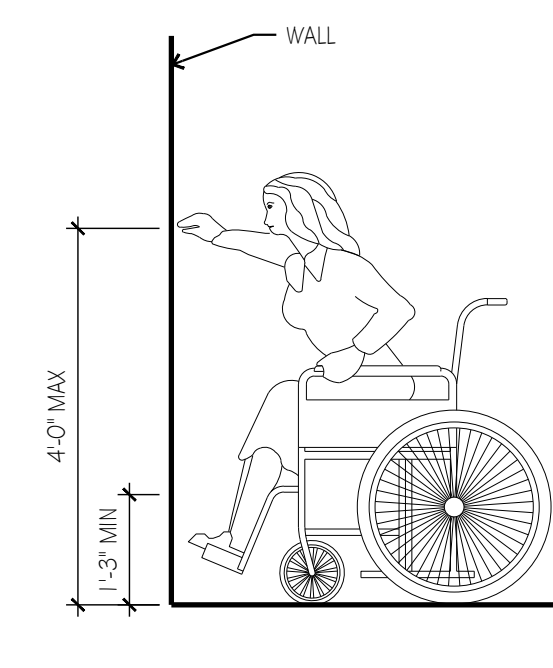
SIDE REACH



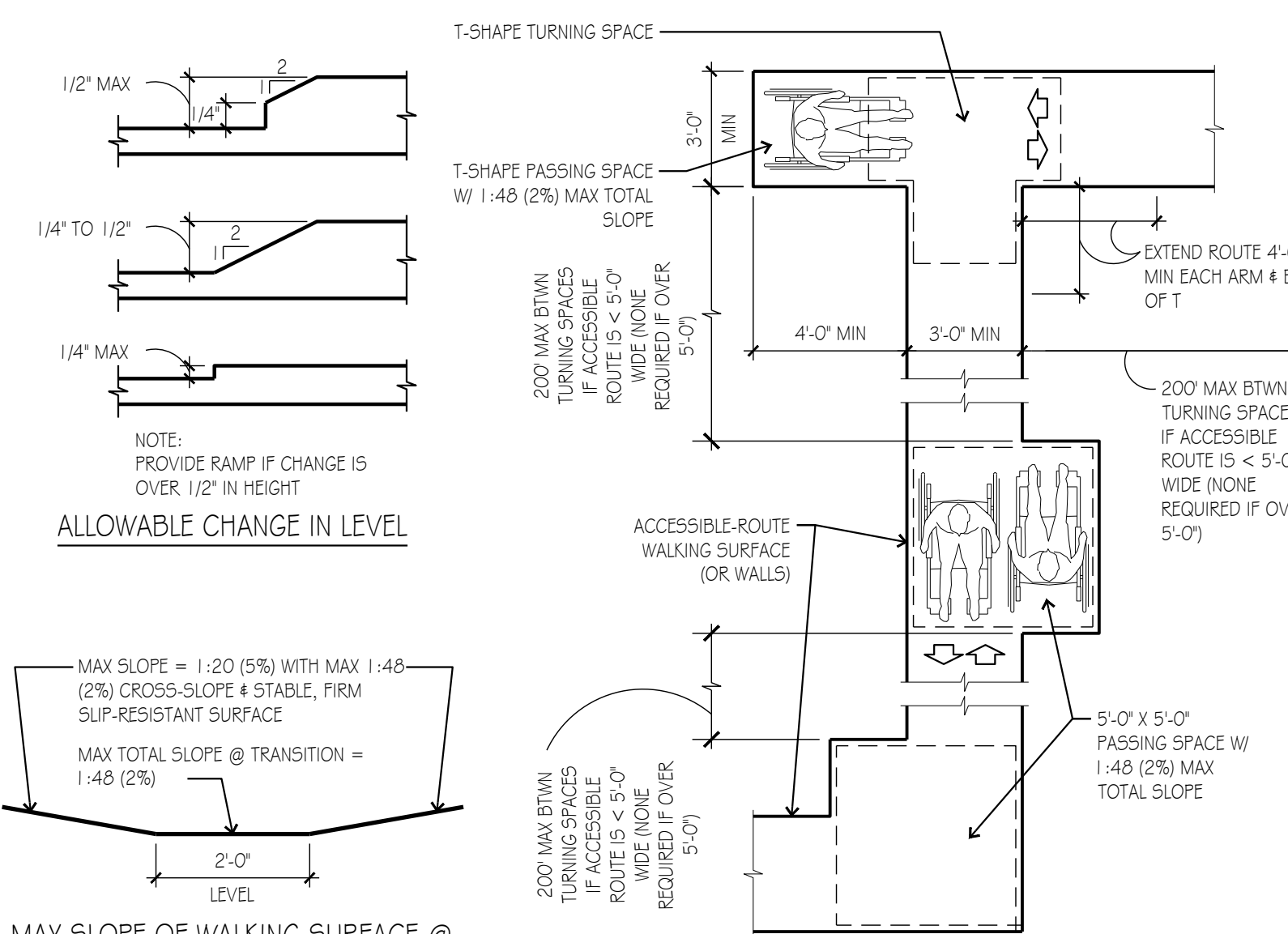
SIDE REACH OVER OBSTRUCTION



FORWARD REACH OVER OBSTRUCTION

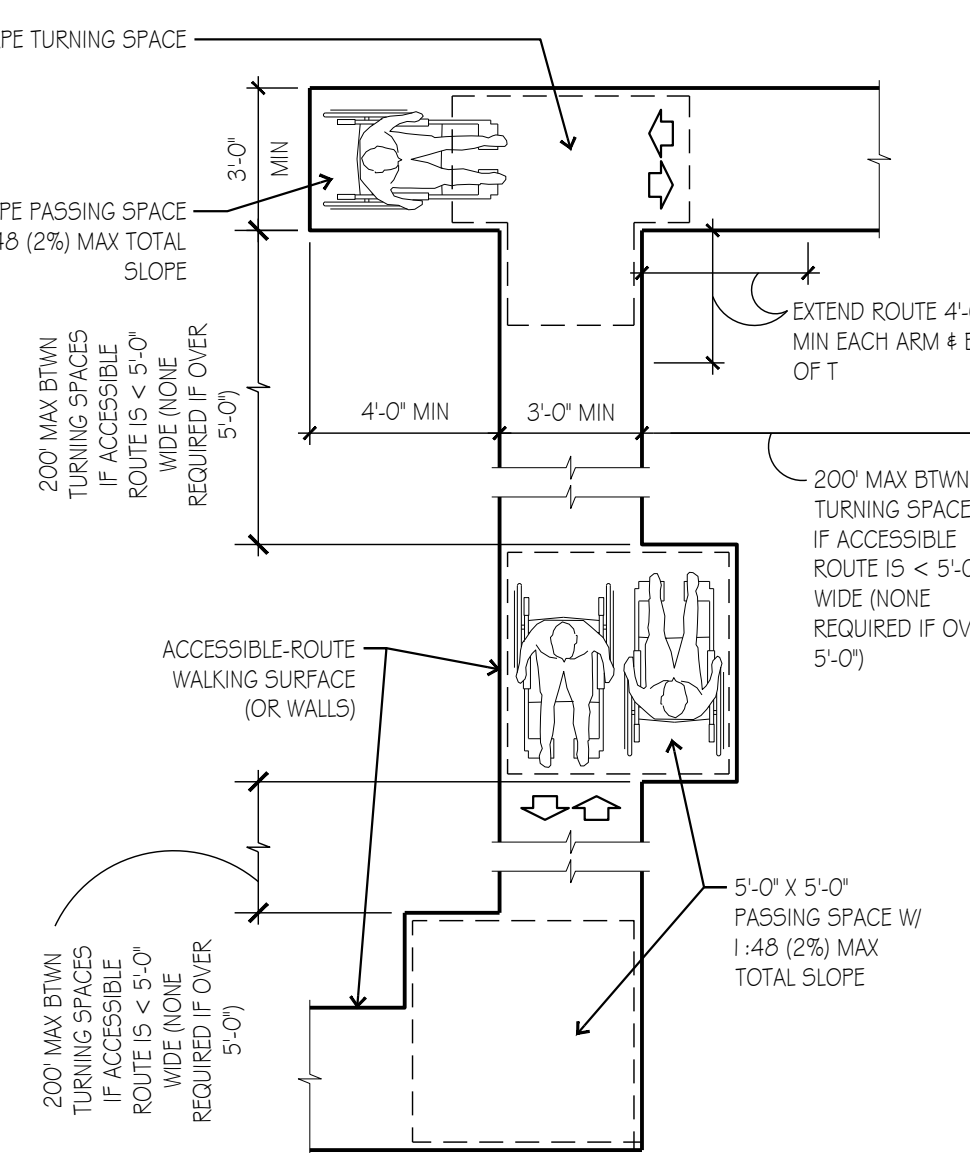


FORWARD REACH

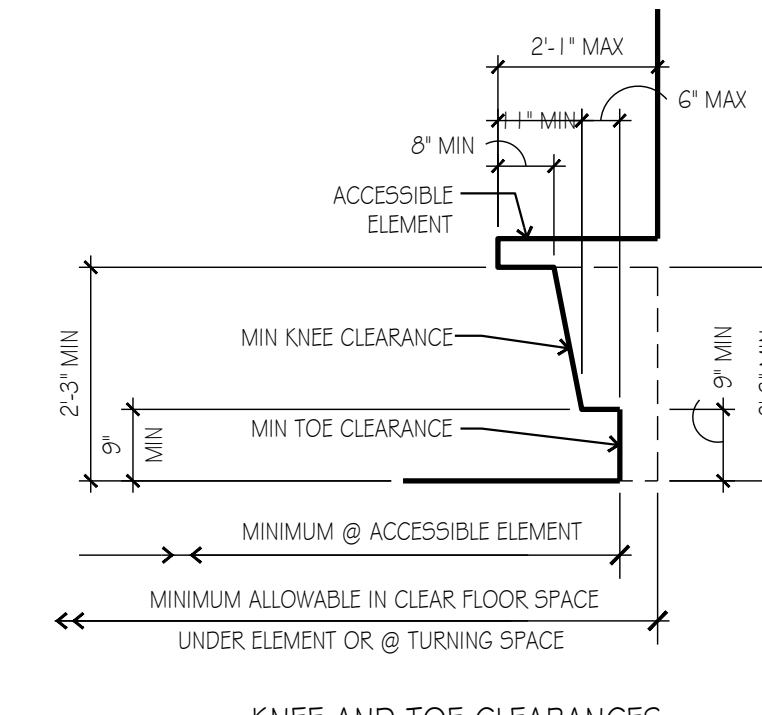


ALLOWABLE CHANGE IN LEVEL

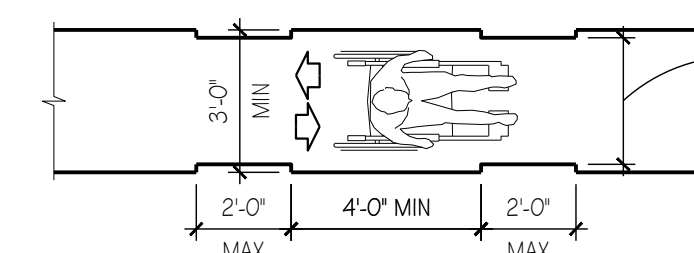
MAX SLOPE OF WALKING SURFACE @ ACCESSIBLE ROUTE



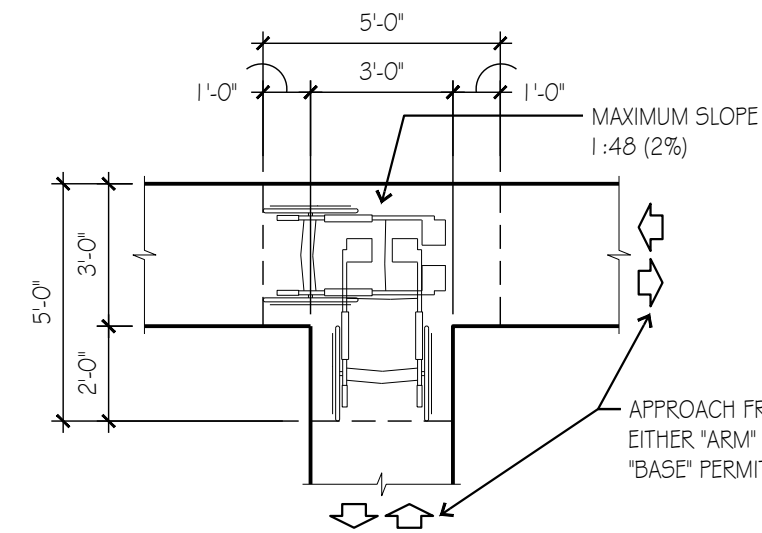
PASSING SPACES @ ACCESSIBLE-ROUTE



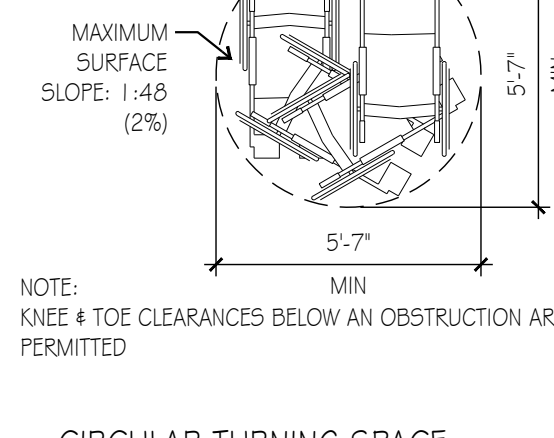
KNEE AND TOE CLEARANCES



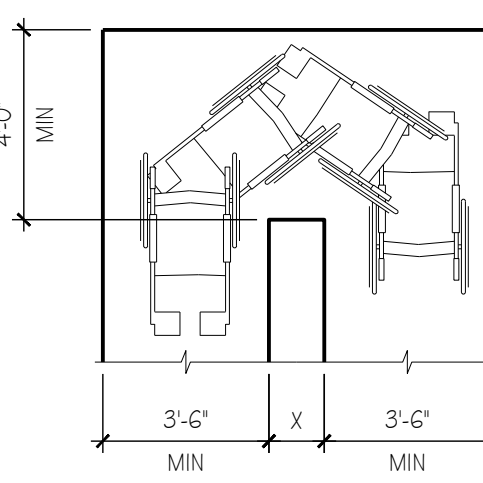
MINIMUM CLEAR WIDTH FOR SINGLE WHEELCHAIR



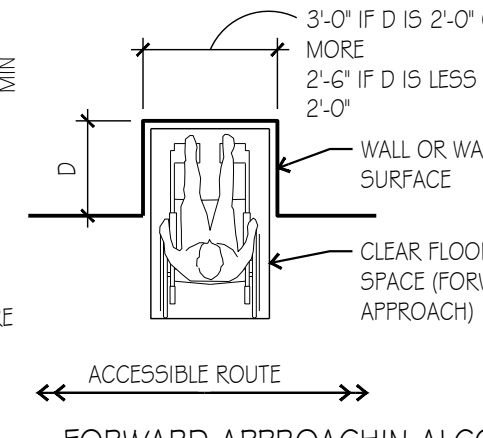
T-SHAPED TURNING SPACE



CIRCULAR TURNING SPACE

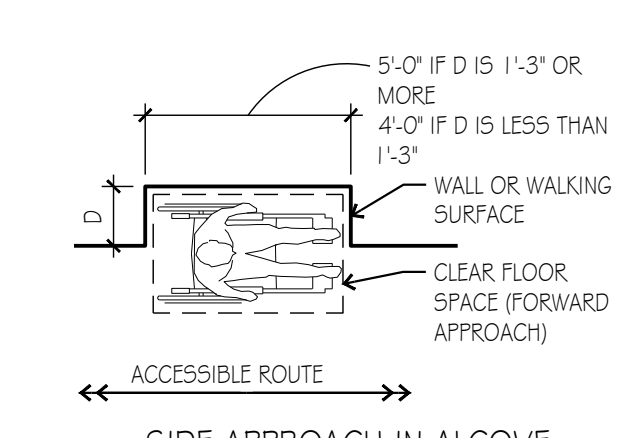


URNS AROUND AN OBSTRUCTION



FORWARD APPROACH IN ALCOVE

CLEAR FLOOR SPACE (CFS) REQUIREMENTS



SIDE APPROACH IN ALCOVE

THE INFORMATION ON THESE ACCESSIBILITY DRAWINGS IS PROVIDED AS A GUIDE TO THE CONTRACTOR AND TO ANY OTHER ENTITIES INSTALLING BUILDING EQUIPMENT OR FIXTURES. THESE DRAWINGS ARE ABBREVIATED AND DO NOT INDICATE ALL CONDITIONS THAT MAY BE ENCOUNTERED AND THEY DO NOT INCLUDE ALL REQUIREMENTS OF EITHER THE ADA OR ICC/ANSI A117.1 IN THEIR ENTIRETY.

THE AMERICANS WITH DISABILITIES ACT (ADA) IS A CIVIL-RIGHTS LAW (NOT A BUILDING CODE) AND IS THEREFORE NOT NECESSARILY ENFORCEABLE BY AUTHORITIES HAVING JURISDICTION. EXCEPT IN CERTAIN STATES WITH THEIR OWN ACCESSIBILITY REQUIREMENTS (INCLUDING BUT NOT LIMITED TO CALIFORNIA, TEXAS & ILLINOIS), THE ACCESSIBILITY REQUIREMENTS OF ICC/ANSI A117.1 ARE TYPICALLY REQUIRED THROUGH THE BUILDING CODE.

COMPLY WITH REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) EVEN IF NOT REQUIRED BY BUILDING CODES, REGULATIONS OR ORDINANCES (ADA IS A FEDERAL LAW), AND AS INDICATED ON THESE DRAWINGS:

ACCESSIBLE ROUTE:

PROVIDE AN ACCESSIBLE ROUTE CONNECTING ALL ACCESSIBLE SPACES AND ELEMENTS, INCLUDING WALKING SURFACES, RAMPS & CURB-RAMPS (EXCLUDING THE FLARED SIDES), DOORS & DOORWAYS, AND/OR ELEVATORS & PLATFORM LIFTS. AN ACCESSIBLE ROUTE MAY BE LOCATED AT EXTERIOR WALKS, AISLES, HALLS, CORRIDORS, SKYWAYS OR TUNNELS.

ACCESSIBLE WALKING SURFACES: PROVIDE STABLE, FIRM, & SLIP-RESISTANT SURFACE FINISHES W/ SURFACE OPENINGS (GRATINGS) NOT TO PERMIT PASSAGE OF A 1/2" DIAMETER SPHERE - WITH LONGEST DIMENSION PERPENDICULAR TO DIRECTION OF TRAVEL.

MINIMUM WHEELCHAIR TURNING SPACE CAN INCLUDE ALLOWABLE FIXTURE KNEE & TOE CLEARANCES UNO. DOOR SWINGS ARE PERMITTED TO OVERLAP TURNING SPACE UNO.

ACCESSIBLE BUILDING ENTRANCES:

PROVIDE 60% (MIN) OF ALL PUBLIC BUILDING ENTRANCES (EXCLUDING THOSE FOR LOADING OR SERVICE USE) ACCESSIBLE FROM: ACCESSIBLE PARKING, A PUBLIC TRANSPORTATION STOP, OR FROM A PASSENGER LOADING ZONE (AS APPLICABLE) WITHOUT STEPS OR ABRUPT CHANGES IN LEVEL.

PROVIDE ONE (1) - (MIN) ACCESSIBLE BUILDING ENTRANCE AT THE GROUND FLOOR LEVEL AND ONE (1) - (MIN) ACCESSIBLE ENTRANCE TO EACH PROPOSED TENANT SPACE IN A MULTIPLE-TENANT BUILDING.

PROVIDE ACCESSIBLE ENTRANCE AT SERVICE OR LOADING ENTRIES (NOT INTENDED FOR ENTRANCE BY THE PUBLIC) IF THAT IS THE ONLY ENTRANCE TO A SPACE OR BUILDING.

MULTI-LEVEL BUILDINGS: PROVIDE ONE (1) - (MIN) ACCESSIBLE ROUTE (INCLUDING AN ELEVATOR TO CONNECT EACH BUILDING LEVEL ABOVE OR BELOW ACCESSIBLE LEVELS INCLUDING MEZZANINES) UNLESS THE FLOOR AREA IS LESS THAN 3,000 SF AND DOES NOT INCLUDE FIVE (5) OR MORE MULTIPLE MERCANTILE (GROUP M) TENANTS, OR THE OFFICES OF HEALTH CARE PROVIDERS.

OPERABLE PARTS:

ACCESSIBLE OPERABLE PARTS INCLUDE CONTROLS AND OPERATING MECHANISMS (DOOR HARDWARE, WINDOW OPERATORS, DISPENSERS, LIGHT SWITCHES, CONVENIENCE OUTLETS, THERMOSTATS, ALARM CONTROLS, AND SIMILAR ELEMENTS).

PROVIDE AN ACCESSIBLE CLEAR-FLOOR SPACE AT ALL OPERATIONAL PARTS

OPERATION: BY USE OF ONE (1) HAND WITH A SINGLE EFFORT WITHOUT TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST - WITH FIVE (5.0) POUNDS MAXIMUM OPERATIONAL FORCE. COMPLY WITH ALLOWABLE REACH RANGES FOR HEIGHT OF OPERABLE PARTS.

ACCESSIBLE DOOR & GATE REQUIREMENTS:

REVOLVING DOORS OR GATES ARE NOT ACCESSIBLE.

SECURITY & MAINTENANCE DOORS (INCLUDING SERVICE-ACCESS DOORS) DO NOT NEED TO COMPLY WITH ACCESSIBILITY REQUIREMENTS.

DOUBLE-LEAF DOORS OR GATES: ONLY ONE LEAF (MIN) MUST COMPLY WITH ACCESSIBILITY REQUIREMENTS

RECESSED DOORS: PROVIDE FORWARD APPROACH CLEARANCE WITH ANY OBSTRUCTION WITHIN 18 INCH OF LATCH SIDE OF DOORWAY PROJECTING MORE THAN 8 INCHES BEYOND THE FACE OF DOOR MEASURED PERPENDICULAR TO FACE OF DOOR

DOOR SURFACES: PROVIDE SMOOTH SURFACE WITHIN TEN (10) INCH AFF ON PUSH-SIDE EXTENDING FULL WIDTH WITH MAX 1/16 INCH BETWEEN SURFACE PLANE AND ANY PARTS (KICKPLATE, CAP CAVITIES FORMED BY KICKPLATES EXCEPT AT SLIDING DOORS, TEMPERED GLASS DOORS WITHOUT SIDE STILES WITH A BOTTOM RAIL WITH ITS TOP EDGE SLOPED 60 DEGREES FROM HORIZONTAL OR MORE, OR AT DOORS NOT EXTENDING TO 10 INCHES AFF

SIDELITES OR VISION LITES: AT DOORS AND SIDELITES ADJACENT TO DOORS WITH ONE OR MORE GLAZING PANELS PERMITTING VIEWING, PROVIDE BOTTOM EDGE OF AT LEAST ONE PANEL ON EITHER THE DOOR OR THE ADJACENT SIDELITE AT 48 INCHES MAXIMUM AFF, EXCEPT AT VISION LITES (ONLY) WITH THE LOWEST PART MORE THAN 66 INCHES AFF.

ACCESSIBLE DOOR & GATE HARDWARE:

PROVIDE ACCESSIBLE HARDWARE WITH AN EASY-TO-GRASP SHAPE COMPLYING WITH OPERABLE PARTS REQUIREMENTS (LEVERS PUSH/PULLS, OR PANIC DEVICES ARE ACCEPTABLE), MOUNTED BETWEEN 2'-10" AND 4'-0" AFF, WITH MAX PROJECTION (INTO REQUIRED MIN CLEARANCES) OF 4 INCH BTWN 34 - 80 INCH AFF

SLIDING DOOR/GATE HARDWARE: OPERABLE PARTS MUST BE EXPOSED AND USABLE FROM BOTH SIDES WHEN DOOR IS FULLY OPEN

DOOR/GATE CLOSERS: ADJUST UNITS TO PROVIDE FIVE (5) SECOND (MIN) TIME TO MOVE DOOR/GATE FROM 90-DEGREE OPEN-POSITION TO 2-DEGREE OPEN-POSITION.

DOOR/GATE SPRING-HINGES: ADJUST TO PROVIDE 1-1/2 SECOND MINIMUM TIME TO MOVE DOOR/GATE FROM 70-DEGREE OPEN-POSITION TO CLOSED-POSITION

OPENING-FORCE OF CLOSERS OR SPRING-HINGES: 5.0 LBS MAX @ INTERIOR HINGED, SLIDING OR FOLDING DOORS OR GATES (NOT APPLICABLE TO LATCH-BOLT RETRACTION FORCE AND NOT APPLICABLE TO OPENING FORCE AT FIRE-DOORS - TO BE AS READ BY AJH)

AUTOMATIC DOORS OR GATES:

REFERENCED STANDARDS: COMPLY WITH ANSI/HFMA A156.10, AND FOR POWER-ASSIST AND LOW-ENERGY DOORS, COMPLY WITH ANSI/HFMA A156.19 (UNLESS DOORS OR GATES ARE DESIGNED TO BE OPERATED ONLY BY SECURITY PERSONNEL)

COMPLY WITH ACCESSIBLE CLEAR-FLOOR SPACE, THRESHOLD / FLOOR-SURFACE, AND DOORS-IN-SERIES REQUIREMENTS.

MANUAL CONTROLS: COMPLY WITH "OPERABLE PARTS" REQMTS WITH THE CLEAR FLOOR SPACE ADJACENT TO THE CONTROL SWITCH LOCATED BEYOND THE DOOR/GATE SWING.

ACCESSIBLE WINDOWS:

PROVIDE OPERATIONAL PARTS LOCATED PER "OPERABLE PARTS" REQMTS W/ MIN ACCESSIBLE CLEAR-FLOOR SPACE ADJACENT TO THE WINDOW.

SPECIAL ACCESS (PLATFORM) LIFTS (INTERIOR OR EXTERIOR): COMPLY WITH ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS, SECTION XX WITH ACCESSIBLE KEY-CONTROLS IF LIFT TRAVEL AREA IS NOT ENCLOSED AND AS FOLLOWS:

- MAXIMUM TRAVEL HEIGHT: 60 INCHES
- MINIMUM CAPACITY: 400 POUNDS
- MINIMUM PLATFORM SIZE: 30 X 48 INCH
- MAXIMUM SPEED: 20 FPM

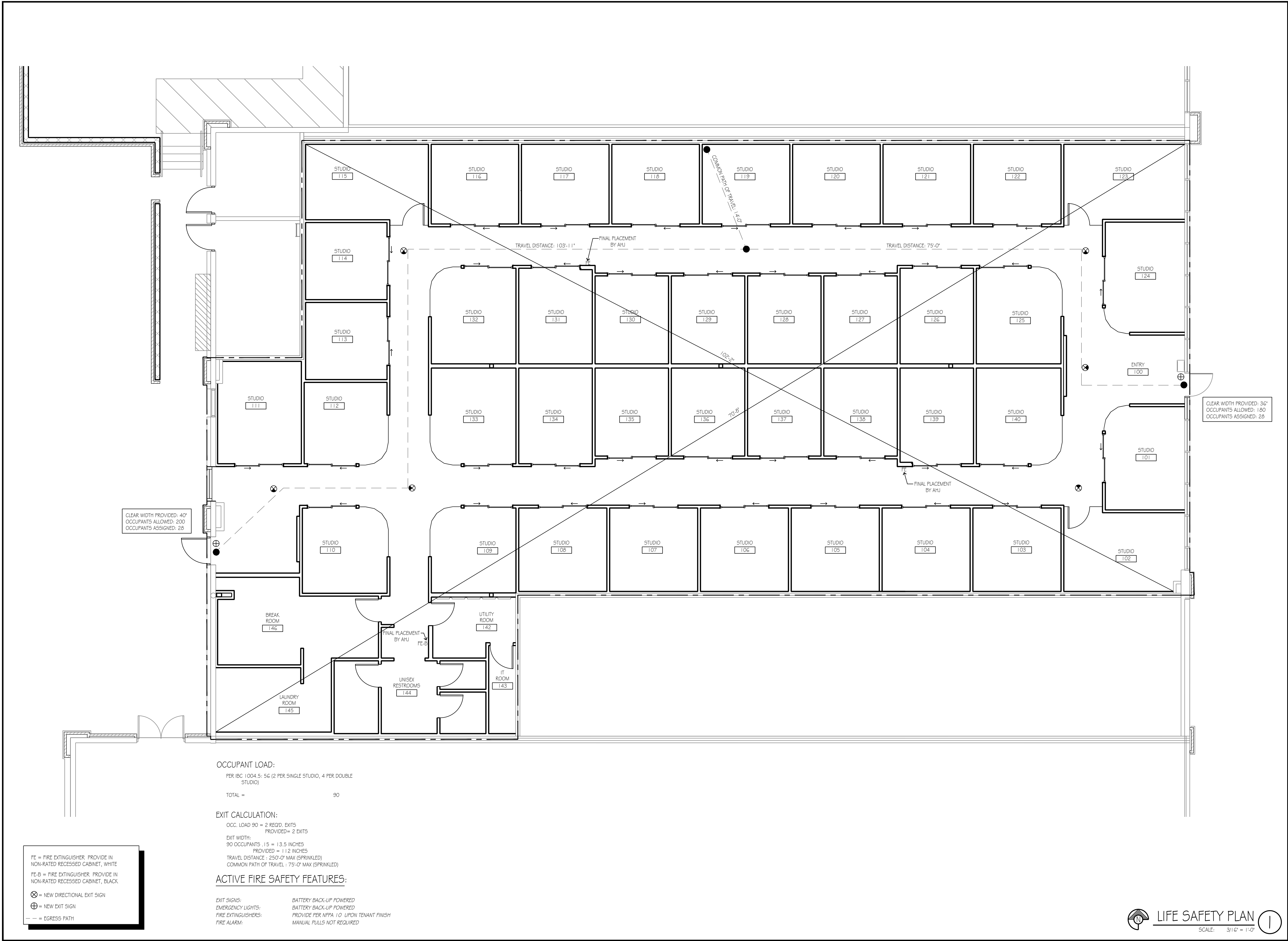















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RELATED DOCUMENTS: This Drawing is a single component of an integrated set of Construction Documents. General and Supplementary Conditions of the Contract, General Requirements, Specifications and other drawings may affect the Work described. Failure to review and integrate the entire set of the whole of the Construction Documents does not relieve the Contractor from providing a complete Project.

COMPLY WITH all laws, codes, ordinances and regulations with authority having jurisdiction and with requirements of the Landlord, if applicable. Do not start Work until all permits and required approvals are obtained.

VERIFY ACTUAL CONDITIONS and dimensions prior to construction. Commencement of work constitutes verification and acceptance of all existing conditions. Application of a material or equipment item to Work installed by others constitutes acceptance of that Work, and assumption of responsibility for satisfactory installation.

DIMENSIONS SHOWN are in finish size if a material varies otherwise indicated. INCLUDE a MEASURE dimension - TO MEET SIZE: drawings unless otherwise stated.

project title

IMAGE STUDIOS  
SUMMITFAIR  
840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number

23060.003


drawing issuance

PERMIT/BID 03.05.24

drawing revisions

No. Description: Date:

professional seal



Date Signed: MAR 20 2024

drawing title

LIFE SAFETY PLAN

drawing number

A005



SECTION 00 22 13 – SUP. INSTRUCTIONS TO BIDDERS:

AIA DOCUMENT A701–1997 "INSTRUCTIONS TO BIDDERS" is included as a part of these documents by this reference. Copies are available from The American Institute of Architects, 1735 New York Avenue N.W., Washington, D. C. 20006, or the local AIA office. Note that Paragraph 2.1.3 requires that each bidder visit the site prior to submitting a bid/proposal.

THE FOLLOWING PARAGRAPHS modify, delete from, and/or add to the above referenced Instructions to Bidders, as if originally written therein. Where any portion of the Instructions is modified, or where any Paragraph, Subparagraph or clause thereof is modified or deleted by the following Supplementary Instructions, the unaltered provisions shall remain in effect.

ADD the following paragraph to Article 1 – Definitions:

"1.1.10 STIPULATED SUM amounts shall include all costs to the Contractor for materials, labor, equipment, testing and any and all items of expense (including phone calls), fees, taxes, overhead and profit for the Contractor's full and complete performance of the Work as set forth in the Contract Documents."

REPLACE Paragraph 2.1.4 to read as follows:

"Any deviations from or exceptions to the Specifications, Drawings, Terms and Conditions and/or any other Bid Document must be clearly defined and set forth in the Bidder's Proposal. If no exceptions are shown in the proposal, none will be considered at the time of Contract Award."

REPLACE Paragraph 3.3.2 to read as follows:

"3.3.2 Substitutions proposed by a Bidder are not to be included in the Base Bid, but may be appropriately itemized on the Bid Form or as an attachment thereto as a "Contractor's Voluntary Alternate" with the corresponding add or deduct amount included."

ADD New Paragraph: 4.1.8 as follows:

"4.1.8 Bids shall remain in effect for a period of no less than THIRTY (30) days after submittal. The proposed price(s) shall include all costs to the Contractor for materials, labor, equipment, testing and any and all items of expense (including phone calls), fees, taxes, overhead and profit for the Contractor's full and complete performance of the work as set forth in the Contract Documents."

ADD New Paragraph: 4.1.9 as follows:

"4.1.9 Provide a complete line-item breakdown of all development or construction related fees included within the proposed Contract Sum, either on the Bid Form, or as a separate attachment if necessary. "

DELETE Paragraph 4.2 in its entirety – no bid security will be required.

ADD Paragraph: 5.3.3 as follows:

"5.3.3 Bidders are hereby advised that Proposals for this Work are being invited from other bidders."

DELETE subparagraph 7.1.1 and ADD the following:

"7.1.1 Costs for Performance and Labor and Material Payment Bonds shall be indicated as an alternate cost on the Bid Form, and shall not be included within the Base Bid amount. The Owner reserves the right to require such bonds to be furnished upon execution of the Contract (or subsequent to contract execution as a change order) in the amount specified on the Bid Form."

SECTION 00 73 00 – SUPPLEMENTARY CONDITIONS

GENERAL CONDITIONS: AIA Document A 201–1997 Edition; "General Conditions of the Contract for Construction" is included as a part of the Contract Documents by reference. Copies are available from the American Institute of Architects (1–800–242–3837). Participation in the Work of this Project is considered acknowledgement of the participants understanding of, and agreement with, all requirements of the Contract for Construction.

THE FOLLOWING "SUPPLEMENTARY CONDITIONS" modify the "General Conditions" as if originally written therein. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in full effect. The General Conditions, as modified or deleted elsewhere in the Contract Documents by provisions located in other Sections of the Specifications.

ARTICLE 1 – CONTRACT DOCUMENTS

ADD to paragraph 1.1, DEFINITIONS, the following:

"1.1.8 'FURNISH': Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

1.1.9 "INDICATED": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including 'shown', 'noted', 'scheduled', and 'specified' have the same meaning as 'indicated'.

1.1.10 "INSTALL": Operations at the Project Site including but not limited to unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

1.1.11 "LANDLORD" (LL): The entity possessing legal title of the Project Site, including designated management representatives including 'Developer', or 'Shopping Center Manager' or their agents legally authorized to act in their behalf.

1.1.12 "PROJECT SITE" (or SITE): The designated interior space or property upon which construction activities will be performed. The extent of the Project Site is indicated on the Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.1.13 "PROVIDE": Furnish and install, complete and ready for the intended use.

1.1.14 OWNER (and/or TENANT): The entity financially responsible for procurement of construction. If a "tenant", that entity has negotiated a "lease" of the Project Site for a limited period of time from the property owner or Landlord – but while leasing, that entity is considered to be a "Tenant" and not an "agent" of the Property Owner.

ADD to paragraph 1.2, CORRELATION AND INTENT . . . the following:

"1.2.4 Notes written in the imperative mood refer to action(s) to be performed by the Contractor, the words 'the Contractor shall' are always implied, unless otherwise noted within the Construction Documents.

1.2.5 Figure dimensions and marked data shall take precedence over scaled measurements, and details shall take precedence over smaller scale general drawings.

1.2.6 In case of conflict in or between contract requirements (General and Supplementary Conditions), General Requirements (Division–1 Specification Sections), Drawings, Specifications or manufacturer's product requirements, the Contractor will be deemed to have estimated on, and agreed to provide, the greater quantity and better quality of materials and Work."

1.2.7 If Work is required in conditions making it impossible to execute in an reasonably acceptable manner considering normal industry trade-practices, request an interpretation and clarifications from the Owner before proceeding. If no request is made, no excuses will be subsequently entertained for performance of unacceptable Work."

REPLACE Paragraph 1.5.2 with the following:

"1.5.2 Execution of the Contract for Construction by the Contractor is a representation that (1) the Contractor has carefully examined and understands the intent of the Contract Documents (including the Agreement Form, the General Conditions, the Supplementary Conditions, the Specifications and the Drawings); (2) that the Contractor has visited the project site and has reviewed the conditions under which the Work will be performed (including but not necessarily limited to labor availability, codes and regulations, hazards, procedures, construction means and methods necessary and weather conditions); (3) that the Contractor has correlated personal observations with the requirements of the Contract Documents; and (4) that the Contractor will comply with all requirements of the Construction Documents. No claims will be approved for additional time or costs resulting from the Contractor's lack of familiarity with or compliance with the requirements of the Construction Contract."

ADD to Paragraph 1.6 the following:

"1.6.2 Electronic media files are considered 'Instruments of Service' by the Architect, who retains all common law, statutory law and other rights, including the copyright. No representation is made regarding the accuracy or completeness of electronic media data. If obtained electronic media files are transferred from the Architect to the Contractor, the Contractor will not use the Electronic Media data for any purpose other than preparation of shop drawings, coordination drawings, or Record Drawings for this Project.

1.6.3 The Contractor agrees not to transfer the electronic media data to any entity not involved in the construction Work without the prior written consent of the Architect. The Contractor further agrees to waive all claims against the Owner and the Architect, resulting in any way from any use of the use of the electronic media data. Use of electronic media data does not reduce or minimize in any way the Contractor's responsibility to take field measurements, check dimensions, and to coordinate with other construction work at the Project Site.

ARTICLE 3 – CONTRACTOR

ADD to Paragraph 3.1 – GENERAL, the following:

"3.1.4 DUTY OF COOPERATION: Issuance of the Construction Documents to the Contractor implies and anticipates ongoing communication between the Contractor and the Owner. The Contractor will be responsible for repair or correction costs if Work is executed with knowledge that the Work involves an error, inconsistency or omission without prior notice being made to the Owner.

ADD to Paragraph 3.4.2 the following:

"3.4.2.1 After the Contract has been executed, the Owner will consider written requests for substitution of products in place of those specified only under the conditions set in the General Requirements (Division 1 of these Specifications).

3.4.2.2. By making requests for substitutions based on Subparagraph 3.4.3 above, the Contractor: (1) represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified, (2) represents that the Contractor will provide the same warranty for the substitution that the Contractor would have provided for the specified product, (3) certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and (4) will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects."

ADD to Paragraph 3.5 the following:

"3.5.2 CONTRACTOR'S WARRANTIES FOR SINGLE SOURCE PRODUCTS: The Contractor's usual warranties (express and implied) shall remain in full force and effect even if a material or equipment item is required by the Owner to be manufactured by a specific entity, and no other acceptable equivalent product manufactured by any other entity is acceptable."

ADD to subparagraph 3.7.1 the following:

"3.7.1.1 The Contractor shall pay for all hook-up charges, 'top-in' fees, permits and other related expenses related to the construction and full connection or hook-up of all utilities."

ADD to Paragraph 3.10 the following:

"3.10.4 In the event that the Contractor fails to adhere to the schedule, the Contractor will furnish such additional labor and/or services, or work-up sufficient overtime as may be necessary to make progress conform to the schedule. Failure to adhere to the schedule, or failure to take steps to regain the schedule, shall constitute default within the terms of the Contract."

ARTICLE 4 – ADMINISTRATION OF THE CONTRACT

OWNER ADMINISTRATION OF CONSTRUCTION CONTRACT: REVERSE Article 4 from Paragraph 4.2, through Paragraph 4.6 inclusive, by substituting the word "Owner", wherever the word "Architect" is used, as the Owner will administer the Construction Contract.

ARTICLE 5 – SUBCONTRACTORS

ADD the following new Subparagraphs:

"5.2.5 LANDLORD REQUIRED SUBCONTRACTORS: When indicated to be required by written construction requirements of the Landlord, sub-contract specific Work to entities approved, recommended or otherwise required to be used by the Landlord, to coordinate with existing building systems.

5.2.6 ROOFING SUB-CONTRACTOR: Sub-contract all roofing work, including penetrations for new HVAC units to an entity approved for use by the roofing system manufacturer, to maintain the Landlord's existing roofing warranty."

ARTICLE 7 – CHANGES IN THE WORK

ADD the following new Subparagraph:

"7.1.4 WRITTEN APPROVAL of the Owner is required for any additional construction Work prior to its execution. Work performed without the written approval of the Owner will be considered as being originally included in the required scope of Work, without any obligation or responsibility for subsequent approval or as approved change by the Owner."

ARTICLE 9 – PAYMENT AND COMPLETION

ADD to Subparagraph 9.3.1, the following:

"9.3.1.3 Unless otherwise indicated in the Owner – Contractor Agreement Form, The Owner will retain ten percent (10%) of the amount of each progress payment application until final payment.

ARTICLE 11 – INSURANCE & BONDS

ADD to Subparagraph 11.1.1 the following:

"11.1.1.4 Liability insurance shall include all major divisions of coverage and shall be on a comprehensive basis with specified limits listed below maintained specifically for this project. Coverages shall include the Landlord's obligation with Employment Exclusion deleted, Contractual, including specified provisions for Contractor's obligation under Paragraph 3.18, Owned, non-owned and hired motor vehicles, and Broad Form Property Damage coverage. Premises–Operations, Independent Contractor's Protective, Products and Completed Operations, Owners & Contractors' Protective Liability, and Independent Contractors Protective Liability;

1.6.3 The Contractor agrees not to transfer the electronic media data to any entity not involved in the construction Work without the prior written consent of the Architect. The Contractor further agrees to waive all claims against the Owner and the Architect, resulting in any way from any use of the use of the electronic media data. Use of electronic media data does not reduce or minimize in any way the Contractor's responsibility to take field measurements, check dimensions, and to coordinate with other construction work at the Project Site.

1.6.3 The Contractor agrees not to transfer the electronic media data to any entity not involved in the construction Work without the prior written consent of the Architect. The Contractor further agrees to waive all claims against the Owner and the Architect, resulting in any way from any use of the use of the electronic media data. Use of electronic media data does not reduce or minimize in any way the Contractor's responsibility to take field measurements, check dimensions, and to coordinate with other construction work at the Project Site.

1.1.1.5 Any person engaged in construction Work at the site must be covered under applicable Workmen's Compensation insurance, either through the General Contractor's own policy, or that of appropriate sub-contractors. Workmen's Compensation insurance policies must include an endorsement waiving all rights of subrogation against the Owner, the Landlord (when applicable), and the Architect."

ADD to Subparagraph 11.1.3, the following:

"11.1.3.1 All certificates of insurance required herein shall name the Owner, the Landlord (as applicable) and the Architect as additional insured."

DELETE Paragraph 11.3 – Project Management Protective Liability Insurance, in its entirety.

DELETE from Paragraph 11.4 – Property Insurance. Subparagraph 11.4.1: the word "Owner" and substitute the word "Contractor", as the Contractor is hereby responsible to provide (Builder's Risk) Property Insurance. DELETE Subparagraph 11.4.1.2 in its entirety.

DELETE Subparagraph 11.5.1 from Paragraph 11.5 – Performance Bond and Payment Bond, ADD the following:

"11.5.1 PERFORMANCE AND PAYMENT BONDS MAY BE REQUIRED by the Landlord. When applicable, review the Landlord's requirements and provide bonds complying therewith. Submit notarized bond forms to the Owner and Landlord prior to start of construction."

SECTION 01 00 00 – GENERAL REQUIREMENTS

SUMMARY OF WORK

THE WORK consists of limited demolition and new construction as indicated in the Construction Documents, and as indicated within the Responsibility Schedule on the Drawings

PROVIDE SERVICE CONNECTIONS of HVAC, plumbing, gas or electric to casework, fixtures, signage, or equipment units indicated – whether installed as a part of this Work or by the Owner's separate contractors or suppliers.

CAREFULLY STUDY AND COMPARE ALL DRAWINGS (including but not limited to Architectural, Structural, Mechanical or Electrical) and other Contract Documents with the existing conditions at the project-site. Report errors, inconsistencies or omissions discovered for correction. The Contractor will be responsible for repair or correction costs if work is executed with knowledge that it involves an error, inconsistency or omission – without the above notice.

THE INTENT OF THE CONSTRUCTION DOCUMENTS is to include all items necessary for the proper execution and completion of the Work – and to provide all products, materials, equipment or accessories required for proper operation, in accordance with their manufacturer's requirements. The Contract Documents are complementary to what is required by this project to be as binding as if required by all. While prepared with due care and diligence, perfection is not possible. Design and construction are complex – every possible condition or contingency cannot be anticipated or fully indicated.

SCHEDULE AND COORDINATE the Work of the complete Project, including Work performed by others at the project-site, to assure an efficient and orderly sequence of installation of all elements with provisions for accommodating items to be installed later. Prepare general coordination drawings, schedules as appropriate, and control site-activity, from the beginning of construction activities through project close-out. The Contractor is solely responsible for construction means, methods, techniques, sequences and procedures.

PERFORM ALL WORK required for completion of the Project, except as otherwise indicated in the Responsibility Schedule included in the Drawings.

CODES, ORDINANCES & CONTRACTOR ACTIONS: All Work in this project shall conform to applicable local, state, and national codes and ordinances and with applicable requirements of the National Fire Protection Association's "Life Safety Code" as administered by applicable authorities having jurisdiction (AHJ). Obtain all licenses (business, technical or otherwise) and permits required to perform the Work. Provide all required notices for inspections and approvals of site work by the AHJ – the most restrictive code requirements as interpreted by the AHJ will apply.

PROHIBITED ACTIVITIES IN EXISTING BUILDINGS: Do not impose any load, temporary or permanent, on any part of the Landlord's existing roof or structure without their written approval. Do not cut any hole in existing floors, walls or the roof without the Landlord's approval and compliance with requirements herein. Attachments to the roof deck are not permitted, and do not attach to plumbing or sprinkler piping, or to electrical conduit. Do not install combustible materials above finished ceilings or in any other concealed spaces. Use of common area electricity is not be permitted. All carts and dollies shall have rubber tires. Do not transport wet concrete through existing finished spaces without prior approval of the Landlord and without extensive protection of the existing floor finish.

EXISTING ROOFING COORDINATION: Use the Landlord's designated contractor for any penetrations or other modifications to the existing roof membrane. Existing roof access may be restricted to the Landlord's personnel or their designated sub-contractors only. Obtain the Landlord's written approval for other workers to be on the existing roof, if applicable. Existing public areas of the Landlord may not be used for construction personnel for lounging, eating or work-breaks.

A REFUNDABLE CONSTRUCTION DAMAGE DEPOSIT may be required of the Contractor by the Landlord prior to start of construction activities. This deposit is refundable to the Contractor upon successful completion – unless there is damage to the Landlord's facilities. The amount of the deposit will be considered an overhead expense of the Contractor, and is not considered as a cost of the Work.

OWNER'S SEPARATE CONTRACTORS OR SUPPLIERS: COORDINATE WITH the Owner's separate contractor(s) or suppliers for Work indicated as being Not-In-Contract (NIC) – cooperating with them so that their work can be performed smoothly, without interfering with or delaying the Work of this Contracting.

REVIEW SHOP DRAWINGS prepared by separate contractor(s) or suppliers for general compliance with the intent of the Construction Documents, and for service-connections and clearances if required. Verify that required rough-ins, connections and clearances will be provided, and report any discrepancies.

PROVIDE SCHEDULED DATES for delivery and installation to Separate Contractors or suppliers, and notify them when construction is ready for their delivery and installation. Provide openings, delivery access, and staging space for installation. Contact the Owner if scheduling or communication problems arise regarding separate contractor(s), and the Architect."

OWNER FURNISHED – CONTRACTOR INSTALLED (OFICI) PRODUCTS:

COORDINATE WITH AND INSTALL all Owner-Furnished products, including but not limited to providing scheduling, receiving at site, verifying receipt, handling, storage on-site, and mechanical/electrical/plumbing service connections, as applicable. The Owner will pay directly for the products and shipping and delivery to the Project Site. Provide all OFCI suppliers with an accurate address with accurate delivery directions and instructions.

AT DELIVERY, INSPECT PRODUCTS FOR DAMAGE at the Project Site. If items are damaged, defective or missing, mark the bill of lading as necessary. Contact the freight line and request a damage inspection of the items and submit a damage claim. Notify the owner within five (5) days of receipt of any missing, damaged or otherwise defective products – or replace/repair items at no cost to the Owner.

PROTECT PRODUCTS from damage, including damage from exposure to the elements. Replace or repair items damaged as a result of Construction operations. Damage resulting from inappropriate storage or handling, including but not limited to environmental conditions, will be the responsibility of the Contractor. No claim for additional costs due to damage to stored products or equipment will be considered. Repair damage to Owner-furnished products caused by construction operations to the Owner's satisfaction.

CONTRACTOR'S USE OF PREMISES:

ADJACENT EXISTING FACILITIES MAY BE OCCUPIED or in use by the Landlord or separate Tenants during the entire period of construction of this Work. Perform the Work so that it will not interfere with adjacent facilities or operations, and to facilitate ongoing use and existing occupancy, as applicable. Coordinate this Work of the Project with other contractors at separate construction projects within the same development, so that this construction Work will not interfere with or delay their construction operations.

USE OF EXISTING BUILDING: Limit construction activities to occur within the Project Site, or within other areas designated or approved for use by the Owner or Landlord. If not within the project site, make connections to existing utilities in the most expeditious manner possible, with minimal disturbance of existing construction elements.

MAINTAIN THE EXISTING CONSTRUCTION in a safe and weather tight condition throughout the construction period. Access to existing public areas is subject to control by the Landlord for purposes of protecting the existing finishes from damage and for security. Maintain public areas such as hallways, stairs, and existing toilet rooms free from accumulation of waste material, rubbish or construction debris. Take all precautions necessary to protect the building and its occupants during the construction period. Maintain existing means of egress and exits during construction per requirements of the AHJ. Repair all damage to the existing building caused by construction operations.

MAINTAIN EXISTING SERVICES, including electrical, phone, water, and HVAC, and existing water, gas, and control systems in full and unrestricted operation to the greatest extent feasible. Make all disconnects of existing services only during non-business hours and only with the Landlord's approval.

PROHIBITED ACTIVITIES IN EXISTING BUILDINGS: Do not impose any load, temporary or permanent, on any part of the Landlord's existing roof or structure without their written approval. Do not cut any hole in existing floors, walls or the roof without the Landlord's approval and compliance with requirements herein. Attachments to the roof deck are not permitted, and do not attach to plumbing or sprinkler piping, or to electrical conduit. Do not install combustible materials above finished ceilings or in any other concealed spaces. Use of common area electricity is not be permitted. All carts and dollies shall have rubber tires. Do not transport wet concrete through existing finished spaces without prior approval of the Landlord and without extensive protection of the existing floor finish.

EXISTING ROOFING COORDINATION: Use the Landlord's designated contractor for any penetrations or other modifications to the existing roof membrane. Existing roof access may be restricted to the Landlord's personnel or their designated sub-contractors only. Obtain the Landlord's written approval for other workers to be on the existing roof, if applicable. Existing public areas of the Landlord may not be used for construction personnel for lounging, eating or work-breaks.

A REFUNDABLE CONSTRUCTION DAMAGE DEPOSIT may be required of the Contractor by the Landlord prior to start of construction activities. This deposit is refundable to the Contractor upon successful completion – unless there is damage to the Landlord's facilities. The amount of the deposit will be considered an overhead expense of the Contractor, and is not considered as a cost of the Work.

OWNER'S SEPARATE CONTRACTORS OR SUPPLIERS: COORDINATE WITH the Owner's separate contractor(s) or suppliers for Work indicated as being Not-In-Contract (NIC) – cooperating with them so that their work can be performed smoothly, without interfering with or delaying the Work of this Contracting.

REVIEW SHOP DRAWINGS prepared by separate contractor(s) or suppliers for general compliance with the intent of the Construction Documents, and for service-connections and clearances if required. Verify that required rough-ins, connections and clearances will be provided, and report any discrepancies.

PROVIDE SCHEDULED DATES for delivery and installation to Separate Contractors or suppliers, and notify them when construction is ready for their delivery and installation. Provide openings, delivery access, and staging space for installation. Contact the Owner if scheduling or communication problems arise regarding separate contractor(s), and the Architect."

OWNER FURNISHED – CONTRACTOR INSTALLED (OFICI) PRODUCTS:

COORDINATE WITH AND INSTALL all Owner-Furnished products, including but not limited to providing scheduling, receiving at site, verifying receipt, handling, storage on-site, and mechanical/electrical/plumbing service connections, as applicable. The Owner will pay directly for the products and shipping and delivery to the Project Site. Provide all OFCI suppliers with an accurate address with accurate delivery directions and instructions.

AT DELIVERY, INSPECT PRODUCTS FOR DAMAGE at the Project Site. If items are damaged, defective or missing, mark the bill of lading as necessary. Contact the freight line and request a damage inspection of the items and submit a damage claim. Notify the owner within five (5) days of receipt of any missing, damaged or otherwise defective products – or replace/repair items at no cost to the Owner.

MAINTAIN A RECORD–SET of Construction Documents indicating differences between Construction Documents and the actual installed Work. Mark revisions made during construction with colored pencil – do not conceal any Work before revisions have been recorded. Note actual routing of under-slab plumbing and utility lines, if different from design drawings. In addition, maintain copies of the following related drawings or documents prepared by others: Construction Requirements of the Landlord Casework shop drawings prepared by the Casework fabricator

Signage shop drawings prepared by the Signage Contractor, and Sprinkler shop drawings Do NOT construct or install any portion of the Work related to these drawings at any time without such drawings being available at the site.

TEMPORARY FACILITIES & CONTROLS

PROVIDE ALL TEMPORARY utilities, temporary facilities and temporary controls required for completion of the construction Work. Provide protection of construction materials from loss, damage, fire or theft. Connect to existing systems at the project site to provide for temporary water, electrical power, lighting and heat for construction operations, unless otherwise indicated.

PROVIDE TEMPORARY ELECTRICAL POWER including a grounded power distribution system with overload protection. Size system to accommodate use of power tools, electrical heating, lighting, and start-up testing of permanent electric-powered equipment prior to its permanent connection. Locate multi-outlets (minimum of 4-gang) spaced so that the construction area can be reached by power tools on a single extension cord of 50' maximum length.

PROVIDE TEMPORARY LIGHTING fixtures in areas where ceilings and existing fixtures are removed. Use existing lighting fixtures where possible and suspend from the existing structure. Remove temporary lighting fixtures when permanent fixtures are operational.

PROVIDE SANITARY FACILITIES including temporary phone, water, and rest facilities, along with water dispensers for the use of all workers. Existing public toilet facilities cannot be used by construction personnel. Provide separate facilities for male and female personnel when both sexes are working. Comply with all applicable codes and regulations and health department requirements for the type, number, location, operation and maintenance of fixtures and facilities. Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility.

PROVIDE TEMPORARY HEAT AND VENTILATION to maintain adequate environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation and proper curing of materials, to protect materials and finishes from damage due to temperature or humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases. Once new systems are operational, they may be used for temporary heating and cooling only if: (1) all registers diffusers and filters are cleaned before substantial completion, and (2) warranty periods remain unchanged, starting from the date of Substantial Completion.

PROVIDE TEMPORARY FIRE–PREVENTION MEASURES and procedures, including Type ABC fire-extinguishers at locations reasonably effective in extinguishing fires and as acceptable to the local AHJ. Comply with NFPA No. 10. Post warning and quick-instructions at each extinguisher, and instruct personnel on proper use. Post fire department call number on each telephone at project site.

PROVIDE TEMPORARY COMMUNICATION SERVICE including local phone service (wired or wireless – 1 line minimum) with a phone handset. Provide either a separate "fax" phone line with fax machine or broadband internet service with a computer configured for internet communications. Allow use of communications equipment for the Owner, Architect and for sub-contractors, with long-distance costs to be paid for by the party making the calls.

PROVIDE TEMPORARY BARRIERS, fences and other controls required to prevent public entry to construction areas and to protect construction workers and the public from the hazards of construction operations. Provide secure, temporary enclosures between work areas and existing occupied spaces to limit any objectionable noise, vibration, odors or dust, that could cause affect use of facilities or loss of the Landlord's or their existing tenant's business.

PROVIDE TEMPORARY ENCLOSURE SCREEN (when applicable) separating the leased space from "Mail" or other common-use areas, in compliance with Landlord requirements. The enclosure screen is to completely enclose the store opening from the mall floor to the ceiling, allow construction work to proceed without interfering adjacent operations, and to act as a dust and noise barrier. Do not install more than four (4) feet into the mall from the existing lease line, or from the new lease line of a "pop-out" store, unless written approval is obtained from the Landlord. No signs or graphics are allowed other than that indicated within the Drawings and as approved by the Landlord.

RELOCATE temporary enclosure screen as required to facilitate construction operations. Completely remove screen at completion of the Work and arrange for legal disposal.

PROTECT EXISTING CONSTRUCTION and adjacent properties from damage by construction operations, and repair any existing work that is damaged by construction operations. Where wet concrete or other large equipment or materials will pass through existing finished spaces, protect existing walls and floor surfaces with a minimum of 6 mil poly and all floors with 1/2" plywood or particle board panels. SCAFFOLDING: Provide all scaffolding and construction aids required, including guard rails, lights and platforms necessary for the completion of the Work, and for the protection of the workmen and the public.

ACCESS TO WORK: Utilize the existing service facilities for access to the project site, when possible. Repair all damage to existing property, corridors, roads and parking areas by job related vehicles or personnel at no cost to the Owner. Limit parking for construction personnel to existing spaces approved for and/or designated for use by the Landlord.

PROGRESS CLEANING: At all times, keep the project site free from accumulation of waste materials or rubbish caused by construction operations. Provide suitable waste receptacles for trash and construction debris, and arrange for transportation and legal disposal of materials off site.

PROVIDE DUMPSTERS AND COLLECT WASTE from construction operations daily. Comply with Landlord requirements for size and location of waste receptacle. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containing properly. Dispose of material in a lawful manner. Do not use the Landlord's or other tenant's waste receptacles.

FIELD OFFICE: Maintain an area within the leased space for the management of the Work. Provide space to review project drawings, for project meetings, and storage of documents.

FIELD ENGINEERING

SURVEY THE EXISTING BUILDING prior to the start of construction, to document any existing conditions such as cracks, sags, loose materials or other defects of the existing construction. This record shall serve as a basis for determination of subsequent damage resulting from the Contractor's operations at the site.

FIELD-VERIFIED EXISTING DIMENSIONS of the Project Site after selective demolition is completed, and forward a drawing with verified dimensions to the Owner. Note size and locations of columns, chases, pipes, conduits, doors and storefront or window openings and other features that affect layout of the Work. Report inconsistencies to the Owner for resolution before commencing Work.

WORK LAYOUT: Establish and maintain chalk-lines and other markers necessary to locate all elements of the project, including partitions, casework, electrical and plumbing connections and "fixed" casework or fixtures. Calculate and measure required dimensions.

CASEWORK FIXTURE TEMPLATES of each type of unit will be furnished by the manufacturer to the Project Site. Layout and permanently mark with spray-paint the floor layout of Work prior to the start of construction operations.

ESTABLISH & MAINTAIN new benchmarks and other markers to set lines and levels for the Work as needed to properly locate all elements of the Project. Calculate and measure required dimensions by instrumentation or other appropriate means. Do not scale the drawings to determine dimensions, unless directed by the Owner.

TAKE FIELD MEASUREMENTS as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

GENERAL PRODUCT REQUIREMENTS

NO SUBSTITUTIONS are allowed when products or equipment items are indicated by manufacturer, unless approved in advance by the Owner.

PRODUCTS IN QUANTITIES shall be alike and interchangeable. Where additional amounts of a product are likely to be needed by the Owner at a later date for maintenance and repair, provide standard, domestically produced products which are likely to be available to the Owner at such later date.

SUPPLY PRODUCTS COMPLETE with all standard devices, trim finish, and all accessories indicated in the latest edition of the manufacturer's catalog or brochure published at the date of the award of the Contract. Furnish such items complete with component parts necessary for the obvious and intended use and installation, whether or not descriptions or catalog numbers contain all supplemental information and/or numbers of such components.

EQUIPMENT NAMEPLATES: Provide permanent nameplates on each item of service connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, serial rating, and similar essential identifying data. Locate nameplates on an easily accessible surface.

LABELS: Locate required labels and stamps on an accessible surface which, in occupied spaces, is not conspicuous.

MANUFACTURER'S INSTRUCTIONS: Whenever products are required to be installed and/or perform in accordance with a specified manufacturer's instruction or procedure, procure, distribute and maintain at the site copies of such information. No allowance or consideration will be made for claimed ignorance as to what a cited standard contains, as each tradesman is considered to be experienced and familiar with the published standards of quality and workmanship for his own trade.

STORE PRODUCTS in accordance with manufacturer's instructions, maintaining sensitive materials within temperatures and humidity ranges required by the manufacturer. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering, with ventilation to avoid condensation. Arrange storage to provide access for inspection.

EXTRA STOCK: After completion of the Work, furnish extra stock of materials (finished parts) of at least 5% of the quantity installed of each type, color and material provided, exclusive of accessory components. Deliver extra stock to Owner's designated space, properly packaged (paper wrapped) and identified.

GENERAL EXECUTION REQUIREMENTS

INSTALLERS' INSPECTION OF SUBSTRATE CONDITIONS: Before installation, inspect substrate material and the conditions under which the Work will be performed. Do not proceed with installation until unsatisfactory conditions have been corrected.

Application of a material or equipment item to work installed by others constitutes acceptance of that Work and assumption of responsibility for satisfactory installation. Inspect each item of material or equipment immediately prior to installation. Reject damaged and defective items.

PERFORM INSTALLATION WORK by persons qualified to produce workmanship of specified quality, in accordance with manufacturer's printed installation recommendations and requirements. Install Work during conditions of temperature, humidity, exposure, forecasted weather, and status of the project completion which will ensure the best possible results for each unit of work.

PROVIDE ATTACHMENT AND CONNECTION devices and methods for securing the work properly as it is installed, true to line and level. Isolate each unit of work from non-compatible work, as required to prevent deterioration. Make allowance for expansion, contraction, and building movements. Coordinate closing-in of work with required inspections and tests, so as to minimize the necessity of uncovering completed work.

BRACE PARTITIONS, suspend ceilings or soffits, and brace platforms, suspended items or similar construction only to structural elements – even if not specifically noted. Do not brace elements to the roof deck, plumbing / sprinkler pipes, ductwork, electrical conduit or similar elements.

AT PROJECTIONS OF FINISHED SURFACES, including pilasters or thickened walls, return all exposed surface finishes back to the primary surface even if not specifically noted.


ALIGN SURFACES of new finishes with existing finishes and match existing finish–surface conditions except as otherwise indicated. Patch existing surfaces and refinish to match adjacent existing surfaces, as applicable.







SECTION 09 65 00 – RESILIENT FLOORING AND BASE	PROVIDE vinyl composition tile flooring and resilient base, where noted on the drawings and as specified herein.
	FIRE PERFORMANCE CHARACTERISTICS: Provide resilient flooring materials meeting the following requirements as tested by UL or other testing agency acceptable to authorities having jurisdiction, in accordance with the following ASTM requirements: CRITICAL RADIANT FLUX: 0.45 watts per square CM or more per ASTM E 648. SMOKE DENSITY: less than 450 per ASTM E 662.
	MAINTENANCE INSTRUCTIONS: Submit manufacturer's recommended maintenance practices for each type of resilient flooring and accessory required.
	EXTRA STOCK: Deliver minimum of one (1) carton of resilient tile and twelve (12) linear feet of base material, of each type and color of material installed.
	VINYL COMPOSITION FLOOR TILE: 12" x 12" x 1/8" thick products complying with ASTM F 1066, Composition 1 (non-asbestos formulated). Manufacturer(s) and product type as indicated on the Drawings.
	RESILIENT BASE: 4" high rubber, with integral coves, topset, type as required for compatibility with flooring material. If not indicated, base color will be selected by the Owner from manufacturer's standard color range, as manufactured by one of the following manufacturers: Burke Flooring Products Division, Flexco Division, Textile Rubber Co. Johnson Rubber Co., Inc. R. C. Musson Rubber Co., Inc. Roppe Rubber Corp.
	CONCRETE SLAB PRIMER: Nonstaining type as recommended by flooring manufacturer.
	TROWELABLE UNDERLAYMENTS AND PATCHING COMPOUNDS: Latex modified, portland cement based formulation provided or approved by tile manufacturer for applications indicated.
	ADHESIVES (Cements): Latex water resistant type recommended by tile manufacturer to suit resilient floor tile products and substrate conditions indicated.
	METAL EDGE STRIPS: Extruded aluminum with mill finish, of height required to protect exposed edge of tiles, and in maximum available lengths to minimize running joints
	INSTALLATION: EXAMINE AREAS where installation of tiles will occur, with installer present, to verify that substrates and conditions are satisfactory for tile installation and comply with tile manufacturer's requirements and those specified in this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.
	PREPARATION: Level and patch subfloor using compounds recommended by flooring manufacturer. Remove coatings from subfloor surfaces that would prevent adhesive bond, including curing compounds, adhesives, paint, oils, waxes and sealers. Broom clean or vacuum subfloor surfaces and apply primer, if recommended by flooring manufacturer, prior to application of adhesive.
	DO NOT DRY SCRAPE OR SAND existing flooring materials, and do not dry scrape or dry sweep residual backing or felt lining materials. Such materials may contain asbestos fibers that are not readily identifiable.
	VERIFY that concrete slabs comply with ASTM F 710 and that slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials whose presence would interfere with bonding of adhesive. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by tile manufacturer. Verify that subfloors are free of cracks, ridges, depressions, scale, and foreign deposits of any kind.
	GENERAL INSTALLATION: Comply with manufacturer's printed installation instructions, and as specified herein. Extend resilient flooring into toe spaces, door reveals, and into closets and similar openings. Scribe, cut and fit resilient flooring to permanent fixtures, built in furniture and cabinets, pipes, outlets and permanent columns, walls and partitions.
	ADHESIVE: Adhere flooring to substrates using full spread of waterproof, stabilized, mastic recommended for use by flooring manufacturer to suit material and substrate conditions.
	INSTALLATION OF TILE FLOORS: Lay tile from center marks established with principal walls, discounting minor offsets, so that tile at opposite edges of room area of equal width. Adjust as necessary to avoid use of cut widths less than 1/2 tile at room perimeters. Lay tile square to room axis, unless otherwise shown. Match tiles for color and pattern by using tile from cartons in same sequence as manufactured and packaged if so numbered. Cut tile neatly around all fixtures. Broken, cracked, chipped, or deformed tiles are not acceptable.
	ADHERE tiles to flooring substrates without producing open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections in completed tile installation. Hand roll tiles where required.
	INSTALLATION OF ACCESSORIES: Apply wall base to walls, columns, pilasters, casework and other permanent fixtures in rooms or areas where base is required. Install base in lengths as long as practicable, with preformed corner units, or fabricated from base materials with mitered or coped inside corners. Tightly bond base to substrate throughout length of each piece.
	INITIAL CLEANING: Immediately after completing tile installation remove visible adhesive and other surface blemishes using cleaner recommended by tile manufacturers. Sweep or vacuum floor thoroughly. Do not wash floor until time period recommended by resilient flooring manufacturer has elapsed to allow resilient flooring to become well sealed in adhesive. Damp mop floor being careful to remove black marks and excessive soil. Remove any excess adhesive or other surface blemishes, using appropriate cleaner recommended by resilient flooring manufacturers.
	STRIP EXISTING FACTORY FLOOR FINISH by scrubbing with a single disk automatic scrubbing machine and by washing with a commercial stripping solution and warm water. Do not flood floor with z e stripping solution or rinse water. Remove stripping solution by mopping. Rinse with clean water and wet vacuum or mop dry.
	SECTION 09 91 00 – PAINTING
	WORK INCLUDES surface preparation and painting or finishing of surfaces exposed to view, throughout the Project and in accordance with requirements herein. Except where a natural finish or a material is specifically noted as a surface not to be painted, paint or finish oil exposed surfaces whether or not painting is designated in the Drawings. Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas.
	PAINTING NOT REQUIRED: Unless otherwise indicated, painting is not required on plastic laminate, prefinished sheet metal, plumbing fixtures, electrical equipment (excluding exposed distribution cabinet(s) or electrical devices. Painting is not required on surfaces such as walls or ceilings in concealed or inaccessible areas. Metal surfaces of anodized aluminum, stainless steel, chromium plate and similar finished materials will not require finish painting, except as otherwise indicated in the finish hardware schedule. Do not paint over code-required labels or equipment identification labels.
	PROVIDE PRIMERS and undercoat paints produced by the same manufacturer as the finish coats. Use only thinners approved by paint manufacturer, and use only within recommended limits.
	PREPARE surfaces and apply coatings in strict accordance with the coating manufacturer's recommendations.
	USE ONLY SKILLED painters for mixing and applying paint. Quality workmanship is required. In the acceptance or rejection of finish painting, no allowance will be made for the painters' lack of skill or in adequate lighting during painting operations.
	DELIVER MATERIALS to job site in original, new and unopened packages and containers bearing manufacturer's name and label. Store materials not in actual use in tightly covered containers. Maintain containers used in storage of paint in a clean condition, free of foreign materials and residue. Keep storage area neat and orderly. Remove rags and water daily. Take all precautions to ensure that workmen and Work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of paints.
	JOB CONDITIONS: Apply paints only when temperature of surfaces to be painted and surrounding air temperatures are within recommended range permitted by the paint manufacturer's printed instructions. Do not apply paint when relative humidity exceeds 85%, or to damp or wet surfaces.
	MATERIAL QUALITY: Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturers identification as a standard, best-grade product will not be acceptable.
	SURFACE PREPARATION: Clean surfaces of dirt, rust, scale, grease, moisture, or other conditions otherwise detrimental to formation of a durable paint film. Perform preparation and cleaning procedures in accordance with paint manufacturer's printed instructions for each particular substrate condition.
	REMOVE hardware, accessories, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for complete painting of items and adjacent surfaces. Following completion of painting of each space or area, reinstall removed items.
	CLEAN WOOD SURFACES of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before application of primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
	PRIME, STAIN, OR SEAL WOOD to be painted immediately upon delivery. Prime edges, ends, faces, undersides, and backsides of wood, including cabinets, counters, cases, and paneling. When transparent finish is required, backprime with spar varnish. Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on backside. Seal tops, bottoms, and caluats of unpainted wood doors with a heavy coat of varnish or sealer immediately upon delivery or after installation, if unit is cut in the field.
	CLEAN NONGALVANIZED FERROUS-METAL SURFACES that have not been shop coated, remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council.
	TOUCH UP SHOP-APPLIED PRIME COATS that have been damaged. Wire-brush, clean with solvents recommended by the paint manufacturer, and touch up with the same primer as the shop coat.
	MATERIALS PREPARATION: Carefully mix and prepare paint materials in accordance with manufacturer's directions. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using. Use only thinners approved by the paint manufacturer, and only within recommended limits.
	APPLICATION: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied. Use applicators and techniques best suited for substrate and type of material being applied. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
	SCHEDULING: Apply first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
	APPLY PAINT to completely cover previously painted surfaces, to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, lap marks, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.
	THE NUMBER OF COATS and film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce an even smooth surface in accordance with the manufacturer's directions.
	APPLY ADDITIONAL PAINT coats when undercoats, stains or other coatings show through final coat of paint, until paint film is of uniform finish, color and appearance. Give special attention to insure that surfaces, including edges, corners, crevices, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
	PAINT INTERIOR SURFACES of ducts, where visible through registers or grilles with a flat, nonspecular black paint. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
	MINIMUM COATING THICKNESS: Apply materials at not less than the manufacturer's recommended spreading rate. Provide a total dry film thickness of the entire system as recommended by the manufacturer.
	PRIME COATS: Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to material that is required to be painted or finished and has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.
	FIELD QUALITY CONTROL: The Owner reserves the right to engage the services of an independent testing laboratory to sample the paint material being used. Samples of material delivered to the project may be taken, identified, sealed, and certified in the presence of the Contractor. The testing laboratory will perform appropriate tests as required by the Owner. If test results show material being used does not comply with specified requirements, the Contractor may be directed to stop painting, remove noncomplying paint, pay for testing, repaint surfaces coated with rejected paint, and remove rejected paint from previously painted surfaces if, upon repainting with specified paint, the two coatings are noncompatible.
	CLEAN-UP: During the progress of the Work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day. Upon completion of painting Work, clean window glass and other point-spattered surfaces. Remove spattered paint or otherwise damage finish surfaces. Touchup and restore oil damaged or defaced painted surfaces after completion of Work of other trades.
	PROTECT work of other trades, whether to be painted or not, against damage by painting. Correct damage by painting, repairing or replacing, and repainting, as acceptable to Owner. Provide "wet paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.
	PAINT MATERIALS SCHEDULE: (RE: www.paintinfo.com for MPI's "Approved Product List")
	INTERIOR DRYWALL: SATIN LATEX ENAMEL (Class A: 5-5-0) Primer Coat: MPI # 50 – Interior Latex Primer Sealer 2 Finish Coats: MPI # 52 – Interior Latex "Eggshell-like" sheen Apply finish coats with roller, unless otherwise indicated
	INTERIOR METAL: SATIN ALKYD ENAMEL (Class A: 5-5-0) First Coat: MPI # 79 – Alkyd Anti-Corrosive Metal Primer Note: Primer not required to be applied in field on pre-primed items 2nd & 3rd Coats: MPI # 51 – Interior Alkyd, Eggshell Brush apply finish coats unless otherwise indicated
	INTERIOR PAINTED WOOD & MDF: SATIN ALKYD (Class A: 5-5-0) Prime Coat: MPI # 45 – Interior Alkyd Primer Sealer 2nd & 3rd Coats: MPI # 51 – Interior Alkyd, Eggshell Brush apply finish coats unless otherwise indicated
	SECTION 10 00 00 – MISC. SPECIALTIES
	PROVIDE the following specialties where noted on the Drawings and as specified herein. Install specialty items furnished by others, as indicated on the drawings.
	TOILET ACCESSORIES (where required): Provide units as indicated in the Drawings.
	FIRE EXTINGUISHERS (FE): Provide manufacturer's standard 10 lb, 4A-60BC rated units at location(s) indicated on the Drawings, and as approved or as otherwise directed by authorities having jurisdiction.
	COORDINATION: Coordinate with other Sections to assure that the locations of miscellaneous specialties does not conflict with other related items. Examine and inspect installation of floor or wall finishes, and other conditions that affect installation of miscellaneous specialties. Do not proceed until unsatisfactory conditions have been corrected.
	INSTALL the work of this Section according to manufacturers' instructions, using fasteners appropriate to substrate as recommended by unit manufacturer. Install units plumb and level, firmly anchored in locations and at heights indicated.
	SET EACH ITEM securely in place, leveled and adjusted to the correct working height. Anchor to supporting substrate where indicted and where required for sustained operation and use without shifting or dislocation. Conceal anchorages where possible.
	SECURE MIRRORS to walls in concealed, tamperproof manner with special hangers, toggle bolts, or screws. Set units plumb, level, and square at locations indicated, according to manufacturer's instructions for type of substrate involved.
	INSTALL GRAB BARS to withstand a downward load of at least 250 lbf, complying with ASTM F 446.
	ADJUST units for proper operation and verify that mechanisms function smoothly. Replace damaged or defective items. Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary labels and protective coatings.
	SECTION 10 14 00 – SIGNAGE
	PROVIDE signage indicated herein as required for a complete and proper installation.
	SEPARATE CONTRACT: The Owner will arrange for other signage to be provided by a separate contractor. Coordinate with that entity regarding field dimensions, shop drawings, site access, scheduling, power requirements, and other items necessary for timely installation of all project signs.
	ADA SIGNAGE: 8 x 8 x 1/8 inch minimum radius cornered Pictorial Symbol Signs, with 1/32" raised pictogram symbols, 1/32" x 5/8" high upper case raised letter text, and with 1/32" Grade II Braille text. Text and pictogram to be white on dark colored sign panel with matte finish. Provide double sided 1/32" thick Scotchmount tape for attaching at 60" above floor to center of sign on the wall adjacent to the latch side of a door: 1 each RESTROOM (at Employee Restroom) 1 ea: MEN or WOMEN (as applicable at multiple toilet rooms)
	PRESSURE SENSITIVE VINYL (PSV): "220 Scotchcl" by 3M or equal 2 mil minimum thickness, opaque, non-reflecting, cast PVC film with pressure sensitive adhesive backing, suitable for exterior as well as interior applications, colors as noted in material-color schedule. Die-cut copy characters from PSV, and mount on paper backing sheet.
	BUILDING NUMBERS: 8" high white reverse-mount to interior side of glass facing main street (comply with local code and regulations)
	REAR SERVICE ENTRANCE DOOR: Provide PSV signage indicating Company Name, Suite/Space Number, and receiving hours (verily exact text with Owner's representative. Coordinate Service Entrance Door signage with Landlord requirements, when applicable.
	INSTALL signage in accordance with the approved shop drawings, to be level, plumb, and at height indicated, free from distortion or other defects of appearance. Remove and reinstall signage materials that do not comply with these requirements.
	MOUNT plastic laminate signs directly to face of door. Use double-sided foam tape to mount to smooth non-porous surfaces. Install ADA signs centered at 60 inches above finished floor on strike side of door frame.
	CLEAN soiled sign surfaces and protect units from damage until acceptance by the Owner.
	SECTION 12 32 00 – MANUFACTURED CASEWORK
	PROVIDE prefinished, manufactured casework and countertops where indicated on the Drawings, as specified herein, and as necessary for complete installation. The intent of this Section is to provide readily available "stock" prefinished units from local retail home-supply stores, or through the Contractors other normal sources.
	COMPLY WITH the Kitchen Cabinet Manufacturing Association (KCMA) Quality Standard A161.1 for cabinets, and KCMA A161.2 for plastic-laminate countertops.
	COORDINATE layout and installation of blocking and reinforcement in partitions for support of casework.
	CASEWORK MATERIALS: Do not use adhesives or other materials that contain urea formaldehyde, and as follows: PARTICLEBOARD: ANSI A208.1, Grade M-2-Exterior Glue MEDIUM-DENSITY FIBERBOARD: ANSI A208.2, Grade MD HARDBOARD: AHA A135.4, Class 1 Tempered PLASTIC LAMINATE: High-pressure decorative laminate complying with NEMA LD-3 Post-formed Grade HGP – in medium blue color with a decorative pattern to obscure staining. THERMOSET DECORATIVE PANELS: Particleboard or medium-density fiberboard finished both sides with thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1 – in "white" color typically
	EDGE BANDING: PVC or polyester edge banding complying with LMA EDG-1 – color to match exposed panels.
	CABINET HARDWARE: Provide Manufacturer's standard units complying with BHMA A156.9, including back-mounted decorative wire pulls or plastic knobs, and decorative semi-concealed (wraparound) butt hinges or pivot (knife) hinges (at Contractor's option). Provide epoxy-coated-metal, self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers.
	CABINET FABRICATION: REVEAL OVERLAY DESIGN (door and drawer faces partially covering cabinet fronts), of either face-frame or frameless style (at Contractor's option), and as follows: DOOR AND DRAWER FRONTS: 1/2-inch-thick thermoset decorative panels CABINET ENDS: 5/8-inch thick Thermoset decorative panels
	BACK, TOP, AND BOTTOM RAILS: 3/4-by-2-1/2-inch solid wood, interlocking with end panels and rabbeted to receive top and bottom panels. Back rails secured under pressure with glue and with mechanical fasteners.
	WALL-HUNG-UNIT BACK PANELS: 3/16-inch-thick plywood fastened to rear edge of end panels and to top and bottom rails.
	DRAWERS: Fabricate with exposed fronts fastened to subfrant with mounting screws from interior of body, with 1/2 inch thick thermoset decorative panel subfronts, backs and sides, and 1/4-inch-thick prefinished hardboard drawer bottoms.
	SHELVES: 5/8-inch thick thermoset decorative panel
	PLASTIC-LAMINATE COUNTERTOPS: Rolled, self-edged or raised marine edge with rolled front (Contractor's option) on 3/4-inch thick particleboard substrate with integral one-piece curved-top post-formed back-splash. Cover exposed edge of backsplash with plastic-laminate finish.
	INSTALL CABINETS with no variations in flushness of adjoining surfaces; use concealed shims. Install without distortion so doors and drawers fit openings and are aligned. Install cabinets and countertop level and plumb to a tolerance of 1/8 inch in 8 feet. Fasten cabinets to adjacent units and to backing. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches OC with No. 10 wufer-head screws sized for 1-inch penetration into wood framing, blocking, or hanging strips. Fasten plastic-laminate countertops by screwing through corner blocks of base units into underside of countertop.
	ADJUST CABINETS AND HARDWARE so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.
	CLEAN CASEWORK on exposed and semisexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.



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OWNER WITH all fees, costs, expenses and regulations with authorities having jurisdiction and with requirements of the Landlord, if applicable, to not start Work until all permits and required approvals are obtained.

VERIFY ACTUAL CONDITIONS and dimensions prior to construction. Commencement of work constitutes verification and acceptance of all existing conditions. Application of a material or equipment item to Work without the express approval of the Architect is deemed an assumption of responsibility for satisfactory installation.

DRAWINGS SHOWN as a finish but as a reference when otherwise indicated. Omitting a measure dimension - TO NOT SCALE drawings when otherwise indicated.

project title

IMAGE STUDIOS  
SUMMIT-FAIR

840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number

23060.003

drawing issuance

PERMIT/BD 03.05.24

drawing revisions

No.	Description:	Date:
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professional seal



Date Signed **MAR 20 2024**

drawing title

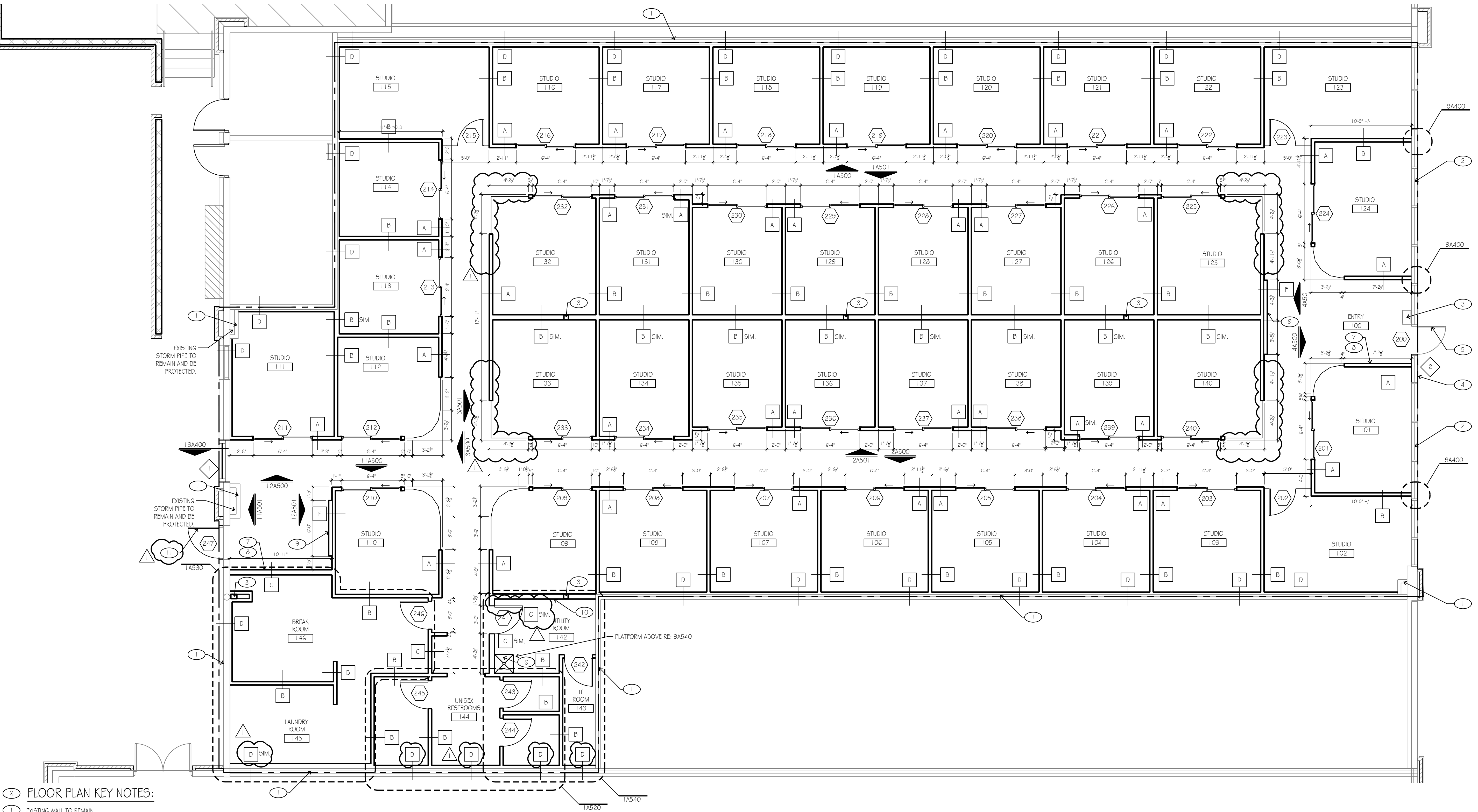
SPECIFICATIONS

drawing number

**SP102**



GENERAL NOTES:  
1. ALL DIMENSIONS ARE TO FACE OF GYPSUM BOARD.  
2. RE: AG 1.0 FOR WALL TYPES



- FLOOR PLAN KEY NOTES:**
- 1. EXISTING WALL TO REMAIN.
  - 2. EXISTING STOREFRONT TO REMAIN AND BE PROTECTED.
  - 3. EXISTING COLUMN TO REMAIN & BE PROTECTED.
  - 4. EXISTING STOREFRONT DOOR TO BE REPLACED WITH STOREFRONT GLAZING TO MATCH ADJACENT GLAZING.
  - 5. NEW STOREFRONT DOOR FOR STOREFRONT MODIFICATIONS.
  - 6. MOP SINK, RE: MEP, PROVIDE FRP 4'-0" UP AT EACH SIDE WALL.
  - 7. G.C. TO PROVIDE BLOCKING FOR SCENT MACHINE AS NEEDED @ 36" A.F.F. TO BE PROVIDED BY VENDOR AND INSTALLED BY G.C.
  - 8. G.C. TO PROVIDE BLOCKING FOR STUDIO DIRECTORY SIGN AS NEEDED. TO BE PROVIDED BY OWNER AND INSTALLED BY VENDOR.
  - 9. G.C. TO PROVIDE BLOCKING FOR IMAGE INTERIOR SIGN AS NEEDED @ 72" A.F.F. TO BE PROVIDED BY OWNER AND INSTALLED BY VENDOR.
  - 10. ELECTRICAL PANELS RE: ELECTRICAL.
  - 11. NEW HM BACK DOOR WITH GLASS LITE AND PANIC HARDWARE.

**FLOOR PLAN**  
SCALE: 3/16" = 1'-0"

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OWNER: With all laws, codes, ordinances and regulations with authority having jurisdiction and with requirements of the Employer, it is applicable to not start Work until all permits and required approvals are obtained.

VERIFY ACTUAL CONDITIONS and dimensions prior to construction. Commencement of work constitutes verification and acceptance of all existing conditions. Application of a material or equipment item to Work without the express written approval of the Architect constitutes acceptance of the Work and assumption of responsibility for satisfactory installation.

UNLESS SHOWN ON A FIELD LOG AS A REMEDIAL ACTION, ALL DIMENSIONS SHALL BE MEASURED AS SHOWN. DIMENSIONS SHALL BE MEASURED AS SHOWN UNLESS OTHERWISE NOTED.

project title

**IMAGE STUDIOS**  
SUMMITFAIR  
840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

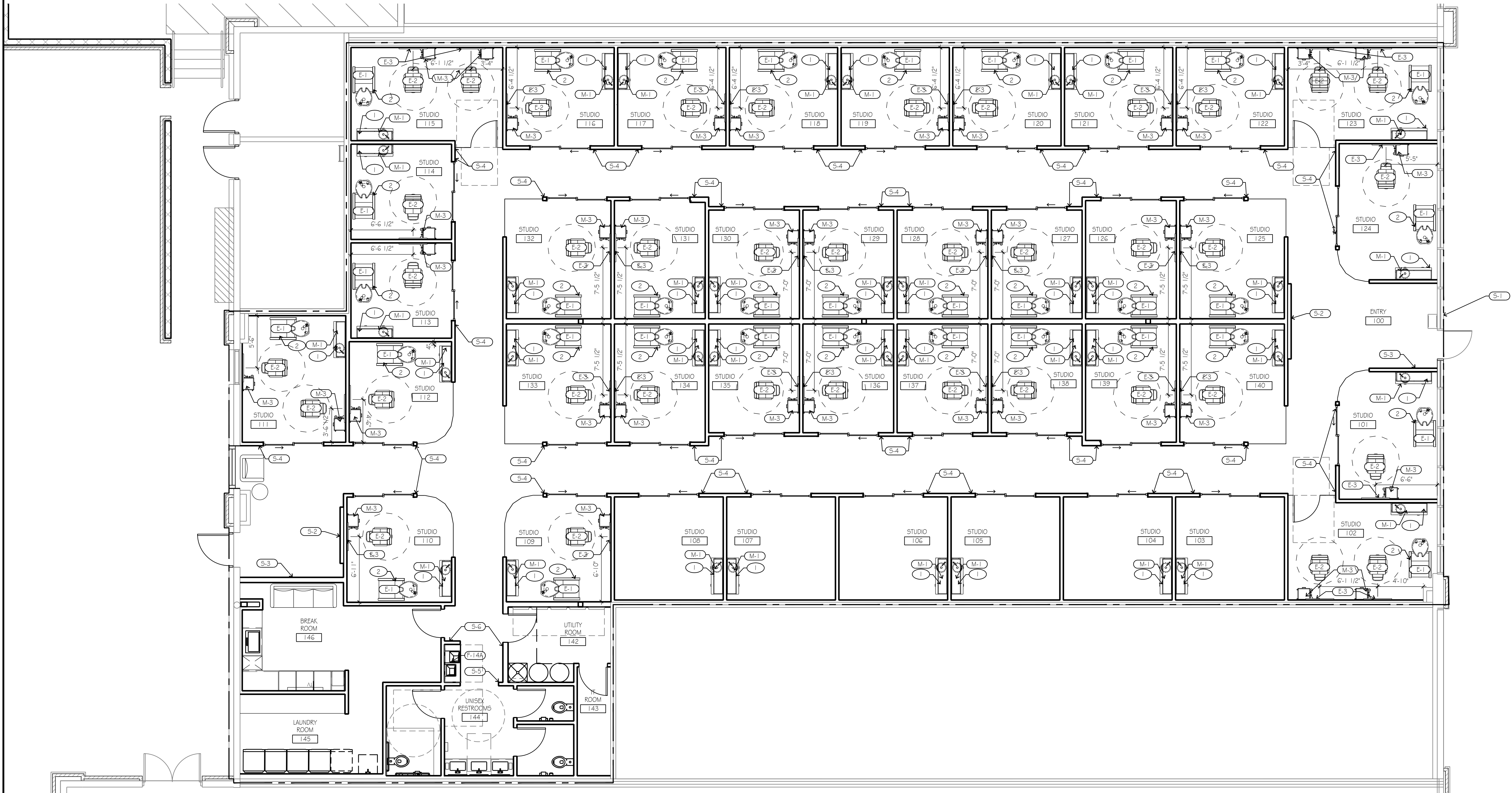
project number  
23060.003  
drawing issuance  
PERMIT/BD 03.05.24  
drawing revisions  
No. Description: Date:  
CITY/OWNER COMMENTS 04.16.24

professional seal

STATE OF MISSOURI  
HENRY C. KLOVER  
NOV 13 2023  
ARCHITECT  
Date Signed APR 18 2024

drawing title  
FLOOR PLAN  
drawing number  
**A100**





KEY NOTES:

- MILLWORK, SINK & FAUCET PROVIDED AND INSTALLED BY VENDOR. HOLD CABINET 6" FROM ADJACENT WALL UNLESS OTHERWISE NOTED. GC TO CONNECT PLUMBING LINES.
- SHAMPOO SHUTTLES ARE INSTALLED BY VENDOR. GC TO CONNECT PLUMBING LINES.
- SHAMPOO SHUTTLES ARE FOR FUTURE USE IN FLEX STUDIOS. GC TO CAP & COVER PLUMBING LINES.

NOTE: SEE SHEET A600 FOR EQUIPMENT SCHEDULE.

SIGNAGE & ART LEGEND	
S-1	EXTERIOR ENTRY BUILDING SIGN
S-2	INTERIOR ENTRY SIGN
S-3	DIRECTORY SIGN
S-4	INDIVIDUAL STUDIO SIGNS
S-5	RESTROOM SIGNAGE
S-6	MISC. ROOM SIGNS
A-1	ART



FIXTURE, FURNITURE, & MILLWORK PLAN

SCALE: 3/16" = 1'-0"

1



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COMPLY WITH all laws, codes, ordinances and regulations with authority having jurisdiction and with requirements of the Licensee. It is applicable to not start Work until all permits and required approvals are obtained. Commencement of work constitutes verification and acceptance of all existing conditions. Application of a material or equipment item to Work without the express written approval of the Architect is an assumption of responsibility for satisfactory installation.

DIMENSIONS SHOWN are in feet; less of a noted when otherwise indicated. INCLUDE & MEASURE dimensions - 10 NET SIZE; always shown otherwise stated.

project title

IMAGE STUDIOS  
SUMMITFAIR  
840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number  
23060.003

drawing issuance  
PERMIT/BID 03.05.24

drawing revisions  
No. Description: Date:

CITY/OWNER COMMENTS 04.16.24

professional seal



drawing title  
FIXTURE, FURNITURE, &  
MILLWORK PLAN

drawing number

A110

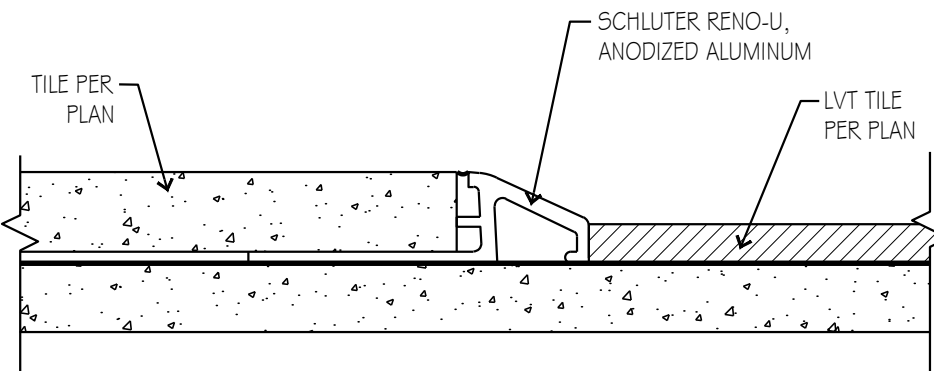


NOTE:  
1. SEE SHEET A600 FOR FINISH SCHEDULE.  
2. OUTLETS AND FACE PLATES TO MATCH ADJACENT WALL COLOR.

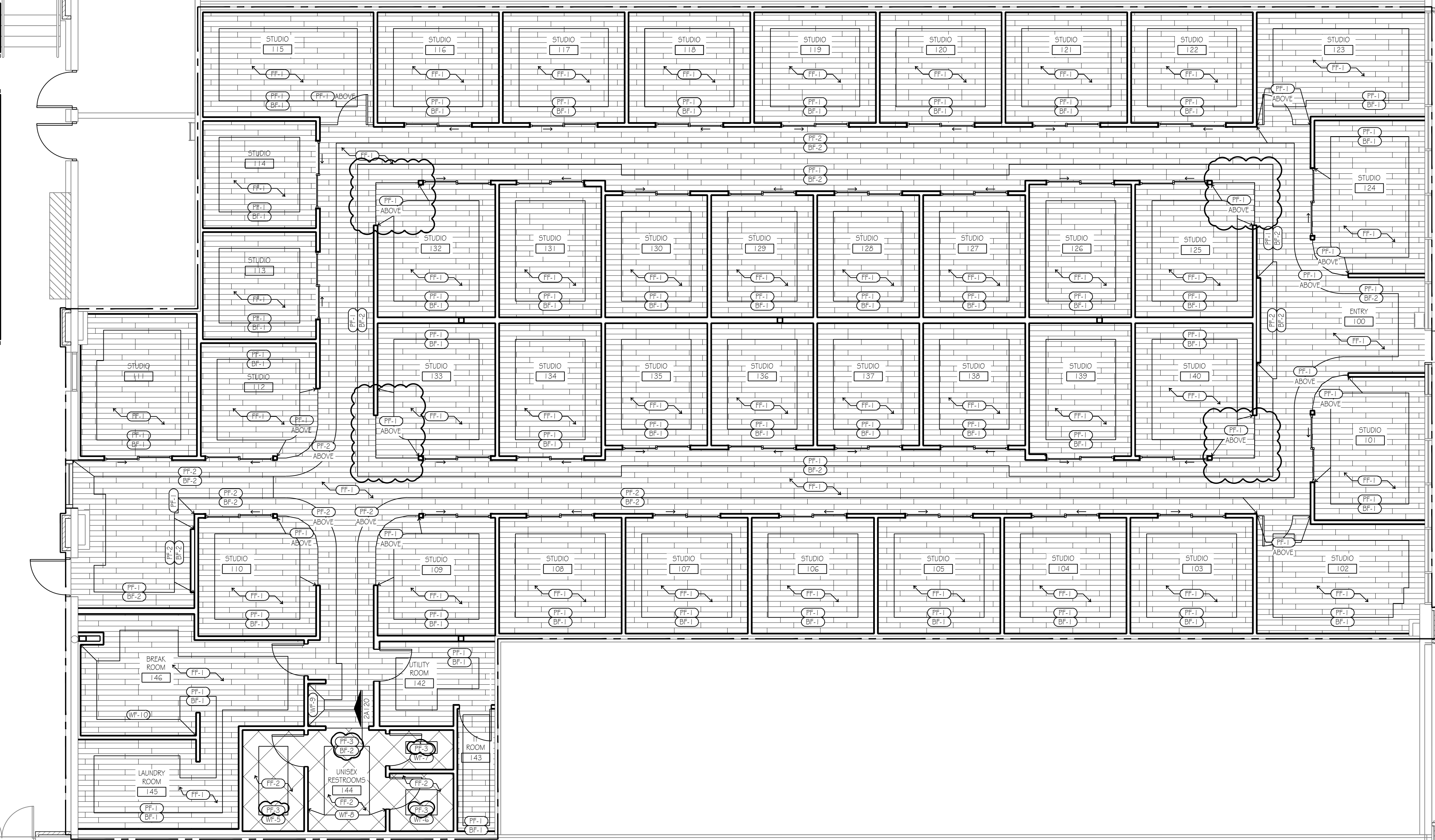
NOT USED ⑤  
SCALE: NTS

NOT USED ④  
SCALE: NTS

NOT USED ③  
SCALE: NTS



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



FINISH PLAN ①  
SCALE: 3/16" = 1'-0"

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DIMENSIONS SHOWN are in finish line and a related unless otherwise indicated. INCLUDE & MEASURE dimensions - 10 ME SIZE drawings unless otherwise directed.

project title

IMAGE STUDIOS  
SUMMITFAR  
840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number 23040.003  
drawing issuance PERMIT/BD 03.05.24  
drawing revisions No. Description: Date:  
CITY/OWNER COMMENTS 04.16.24

professional seal

STATE OF MISSOURI  
HENRY C. KLOVER  
NO. 132  
ARCHITECT  
Date Signed APR 18 2024

drawing title

FINISH FLOOR PLAN  
drawing number

A120

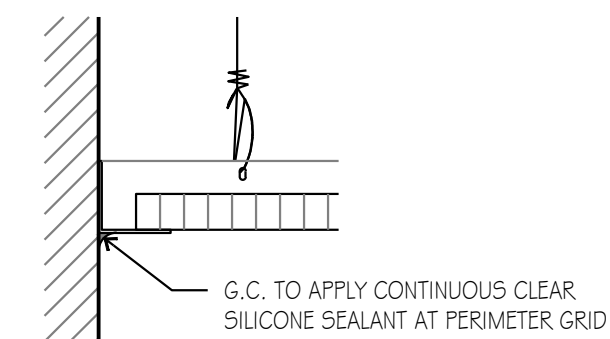


LIGHTING FIXTURE SCHEDULE						LIGHTING FIXTURE SCHEDULE CONT.						LIGHTING FIXTURE SCHEDULE CONT.					
ITEM	SYMBOL	QTY.	MFR., ITEM NO. & STYLE	LOCATION	REMARK	ITEM	SYMBOL	QTY.	MFR., ITEM NO. & STYLE	LOCATION	REMARK	ITEM	SYMBOL	QTY.	MFR., ITEM NO. & STYLE	LOCATION	REMARK
L-1		77	METALUX, 2X4, 24 CGT5-L3C3, 3500K	STANDARD STUDIOS		L-7		1	PUVALE MODERN CRYSTAL TREE BRANCH MOUNT AT 8'-0" A.F.F.	BREAK ROOM					RE: MEP	HALLWAYS	
L-2		41	CREE LIGHTING, CRBT-825L-35K-12-E26GU24, 5CG HOUSING	RESTROOMS, BREAK ROOM, ESTHETIC STUDIOS	ALL ESTHETIC STUDIOS TO HAVE DIMMABLE FIXTURES	L-8		1	LIGHTNING LION RING CHANDELIER, LED, DIA 21.5X20H, GOLD	RESTROOM VESTIBULE					RE: MEP	STUDIOS, RESTROOMS, LAUNDRY ROOM	
L-4		14	SAYLITE, L3-P-SF-9G-LT, 2800 LUMENS, DMV-BK-35K, HCG I 2BK	COMMON AREAS	SIMILAR PRODUCT ALLOWED WITH APPROVAL	L-9		4	FARMHOUSE LIGHT, MINIMALIST BLACK LED WALL SCONCE	SELFIE AND MURAL WALL			42	ALASKA, 5A-398 MASTER-REMOTE, 2X2		STUDIOS	
L-5		2	ROYAL PEARL, LED, POWER COATED GOLD, 6000K	COMMON AREAS		L11		3	LUTHONIA LIGHTING, ZL1D L48 3000LM FST M/VOLT 35K 80CRI	UTILITY ROOM, IT ROOM							
L-6		7	MODERN BUBBLE LIGHT G-CLEAR GLOBE GLASS SPUTNIK PENDANT	HALLWAYS	SIMILAR PRODUCT ALLOWED WITH APPROVAL												

- GENERAL NOTES:
1. LIGHTS ARE DIMENSIONED TO CENTER OF LIGHT.
  2. ALL LIGHTS SUSPENDED FROM STRUCTURE ARE 9'-0" A.F.F. TO BOTTOM OF LIGHT UNLESS NOTED OTHERWISE.
  3. CEILING STRUCTURE, MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS AT EXPOSED CEILING AREAS TO BE PAINTED EGGSHELL, EXTRA WHITE SW7006, RE: MATERIAL 4 COLOR SCHEDULE, REF: E2 FOR EMERGENCY LIGHT LOCATIONS.
  5. ESTHETIC STUDIOS TO HAVE UNFACED R13 SOUND BATT INSULATION ON TOP OF CEILING

NOT USED  
SCALE: NTS

4



CEILING GRID DETAIL  
SCALE: 3" = 1'-0"

3

NOT USED  
SCALE: NTS

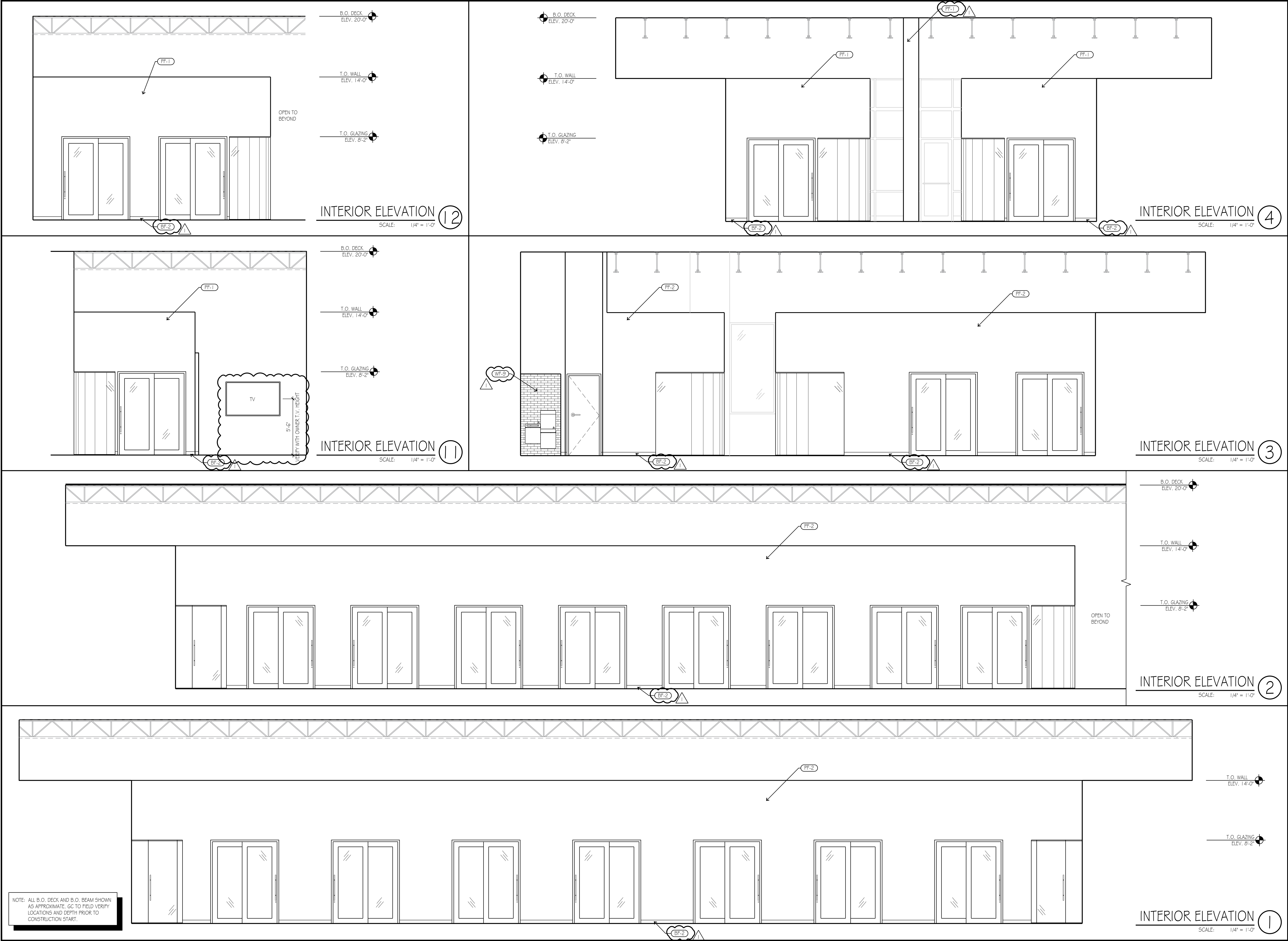
2














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DIMENSIONS SHOWN are in fresh feet and a material unless otherwise indicated. INCLUDE a MEASURE dimension - 10 ME SIZE drawing when otherwise dictated.

project title

project number

23060.003


drawing issuance

PERMIT/BID 03.05.24

drawing revisions

No.	Description:	Date:
1	CITY/OWNER COMMENTS	04.16.24

professional seal



Date Signed APR 18 2024

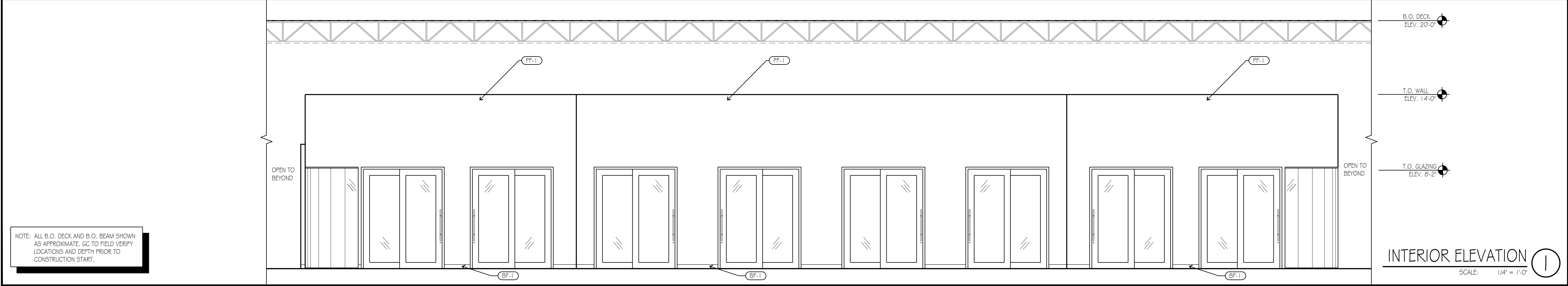
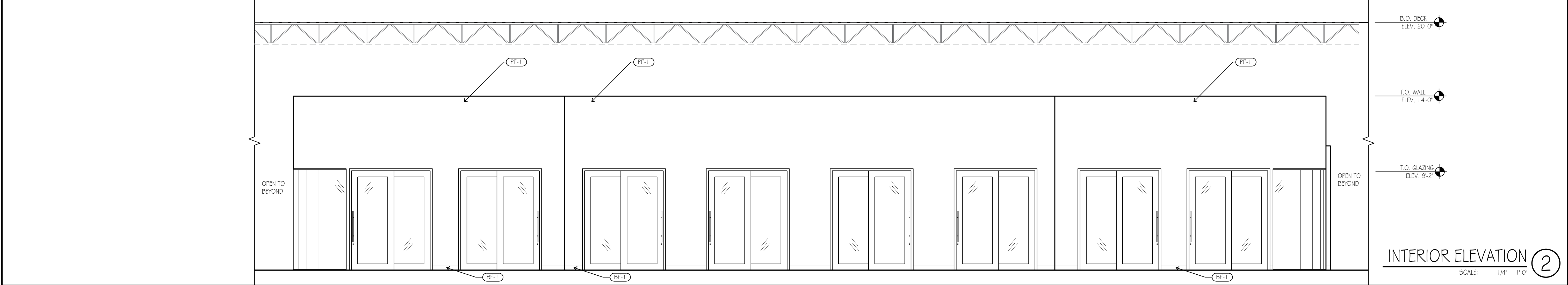
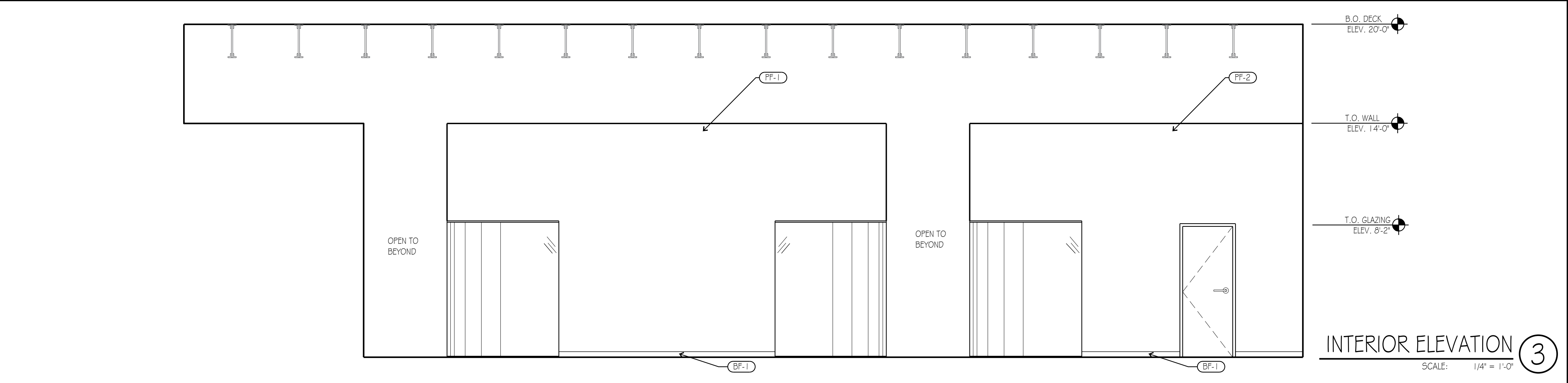
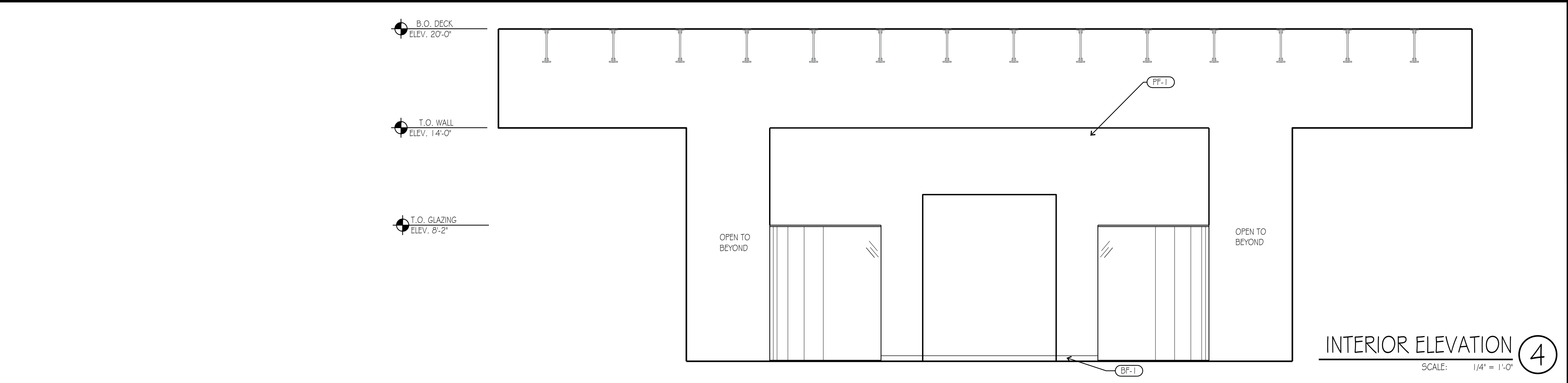
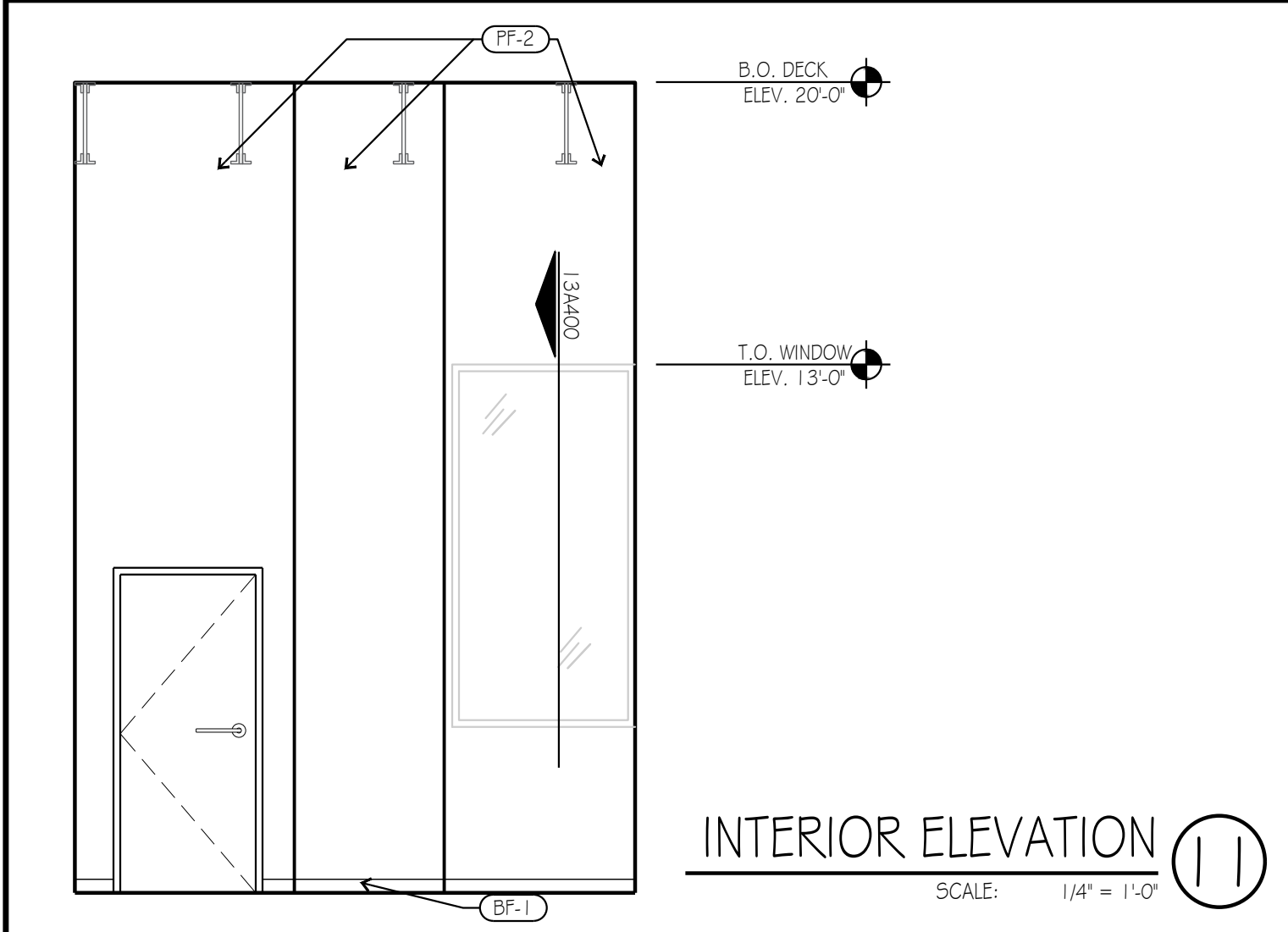
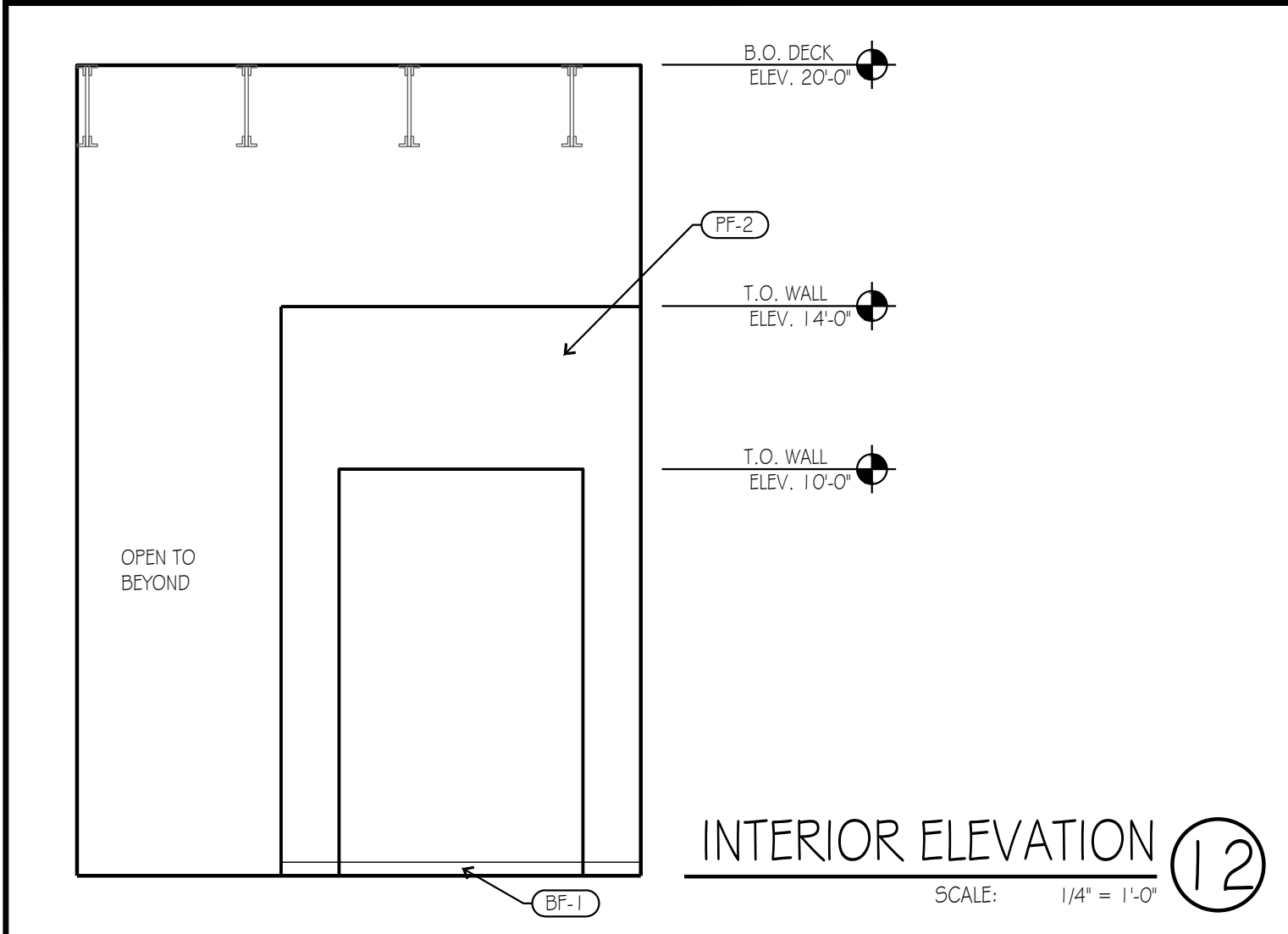
drawing title

INTERIOR ELEVATIONS

drawing number

A500





NOTE: ALL B.O. DECK AND B.O. BEAM SHOWN AS APPROXIMATE. GC TO FIELD VERIFY LOCATIONS AND DEPTH PRIOR TO CONSTRUCTION START.

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project title

**IMAGE STUDIOS**  
SUMMITFAIR  
840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number  
23060.003

drawing issuance  
PERMIT/BID 03.05.24

drawing revisions  
No. Description: Date:

professional seal

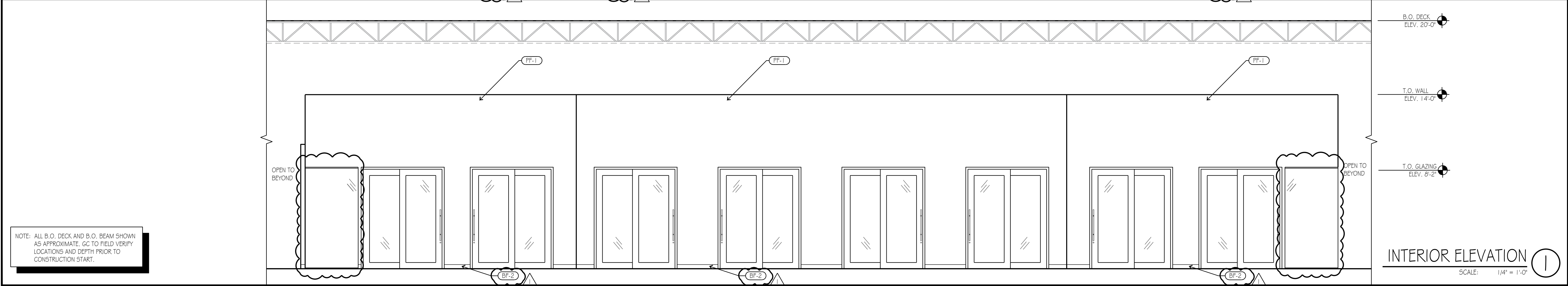
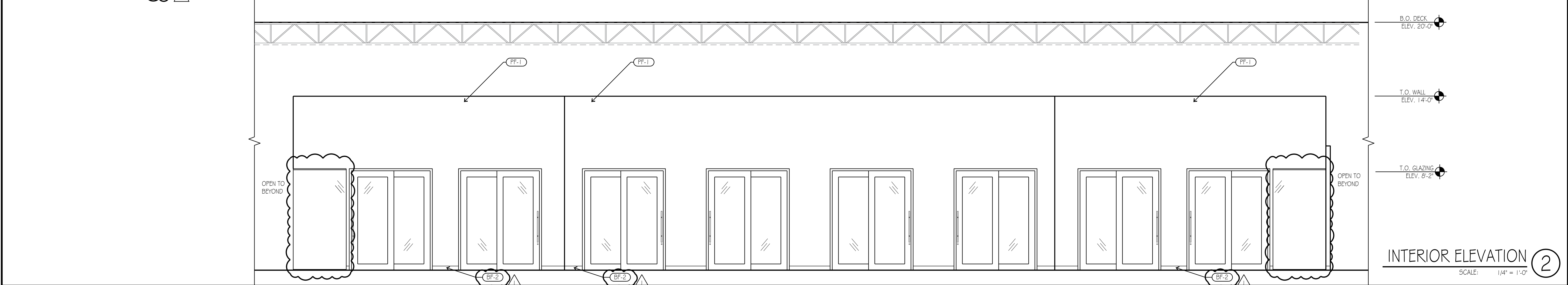
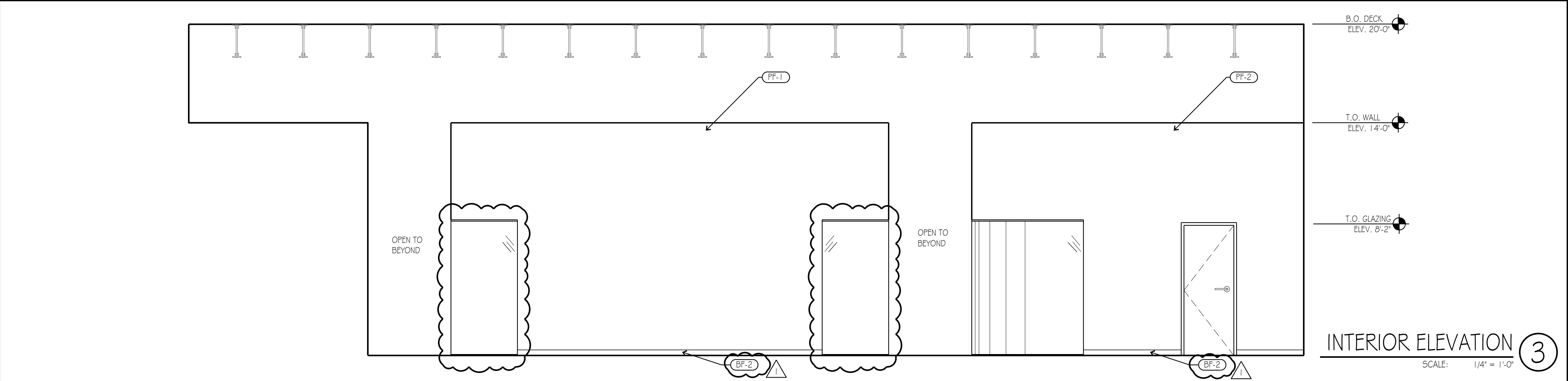
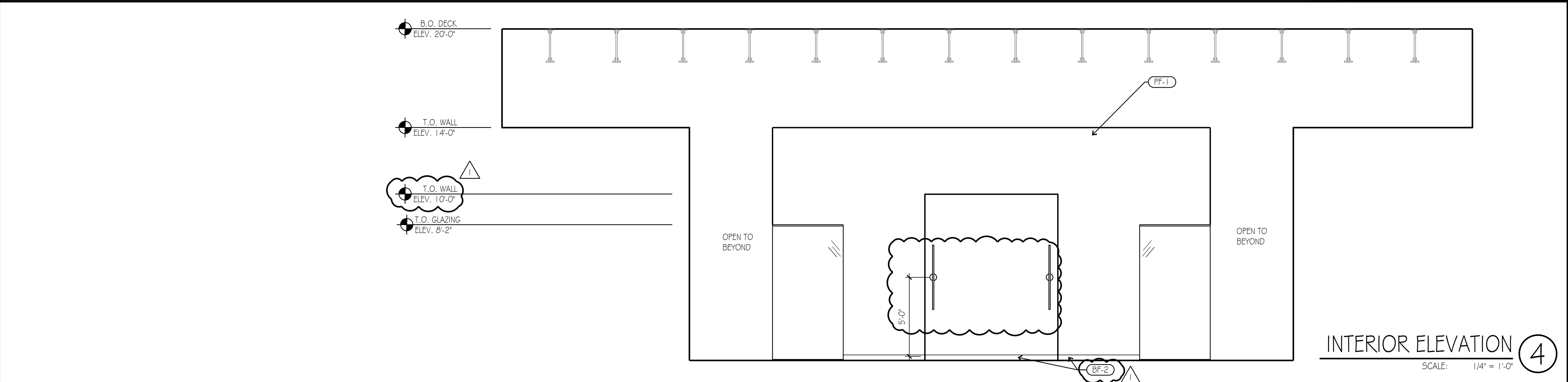
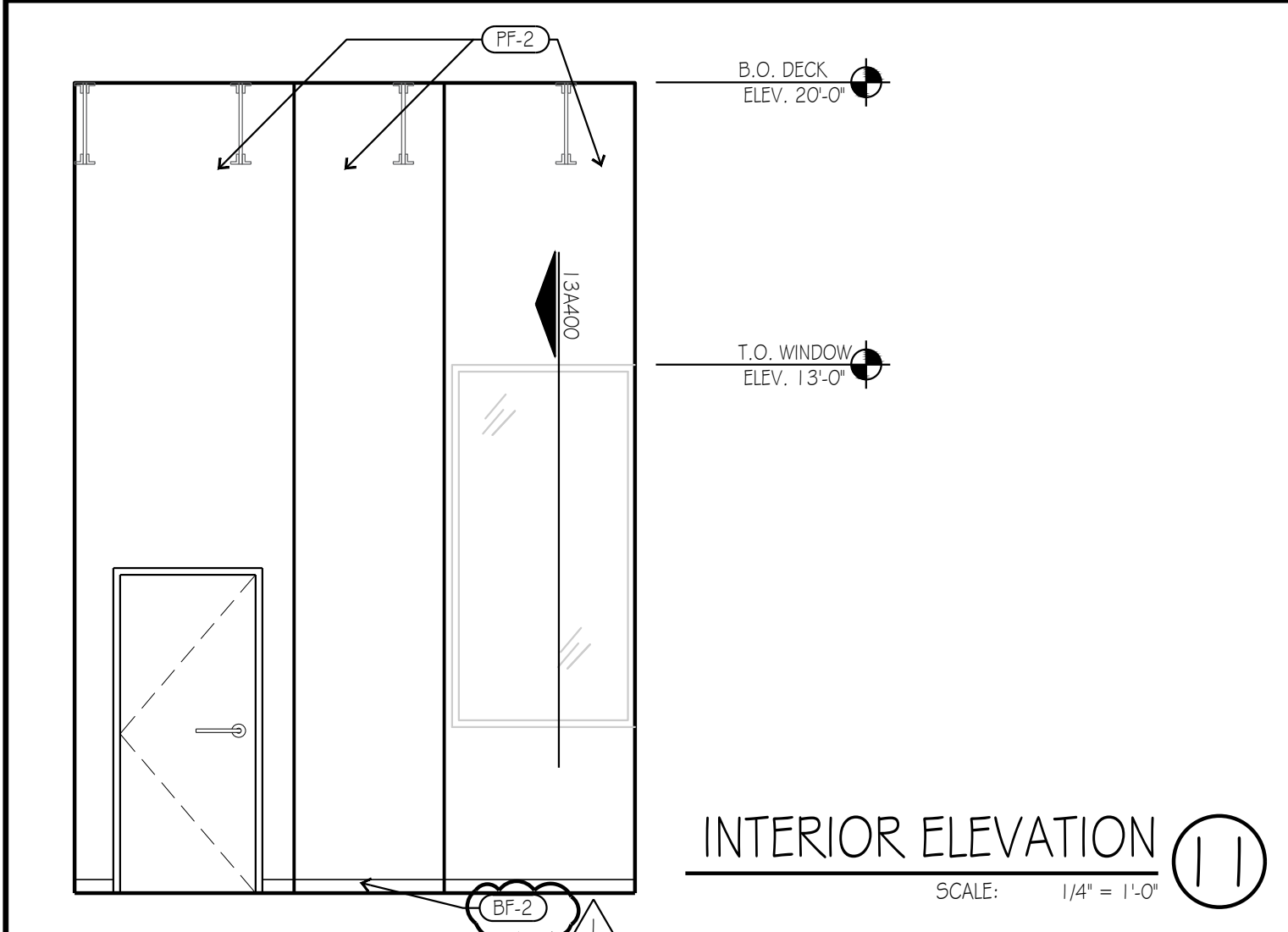
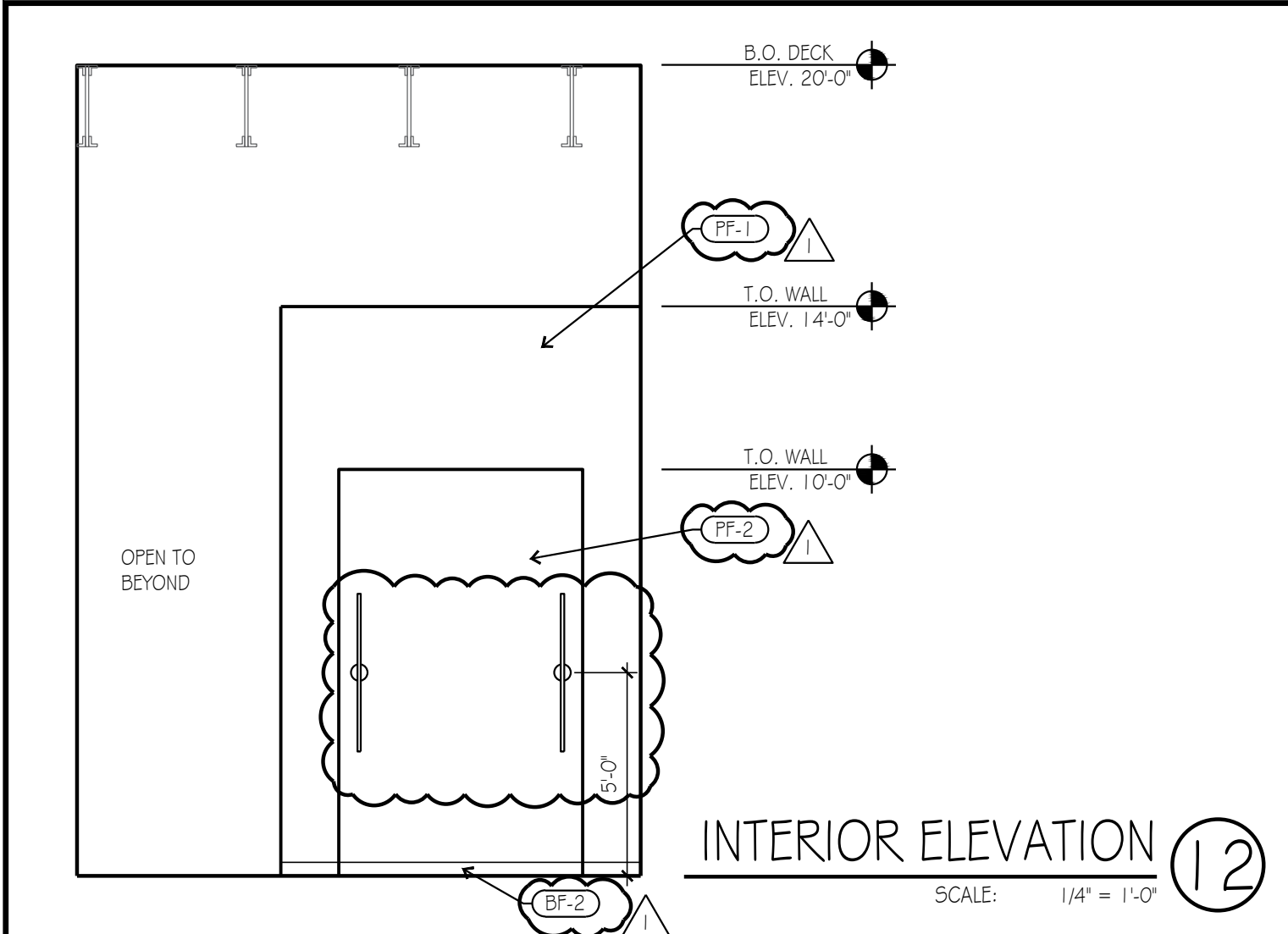
**HENRY C. KLOVER**  
REGISTERED ARCHITECT  
A-5232

Date Signed **MAR 20 2024**

drawing title  
INTERIOR ELEVATIONS

drawing number  
**A501**





NOTE: ALL B.O. DECK AND B.O. BEAM SHOWN AS APPROXIMATE. GC TO FIELD VERIFY LOCATIONS AND DEPTH PRIOR TO CONSTRUCTION START.



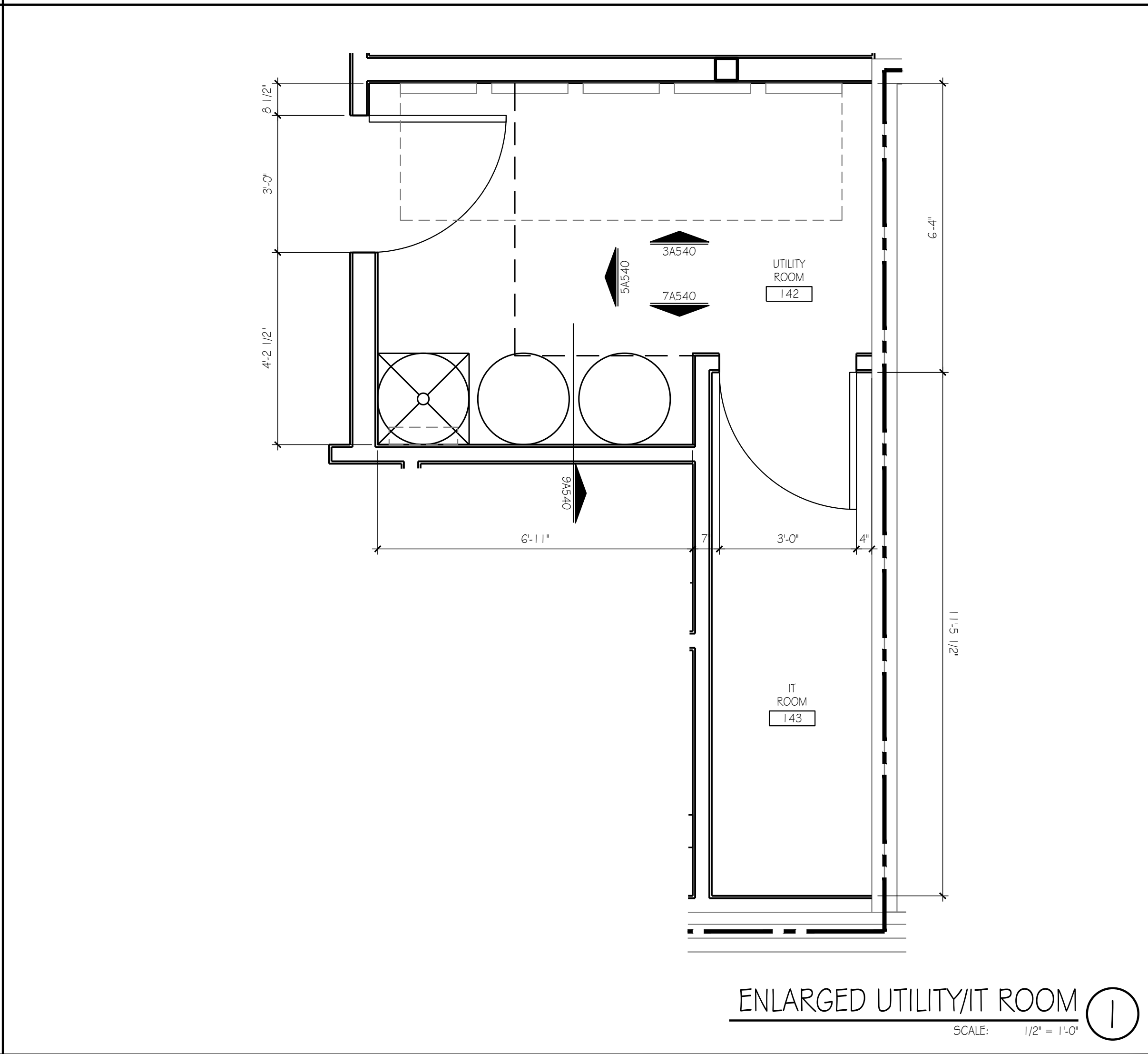
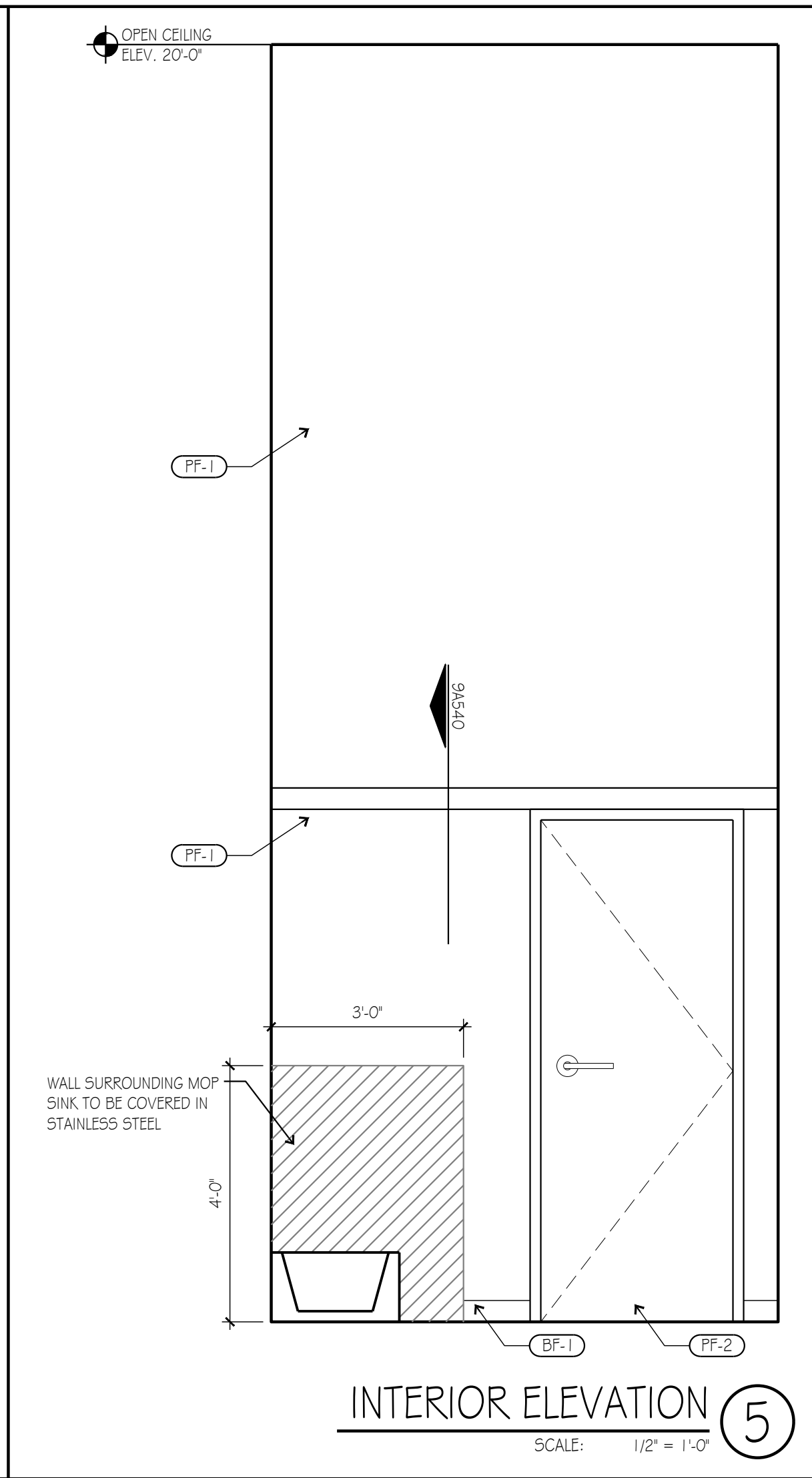
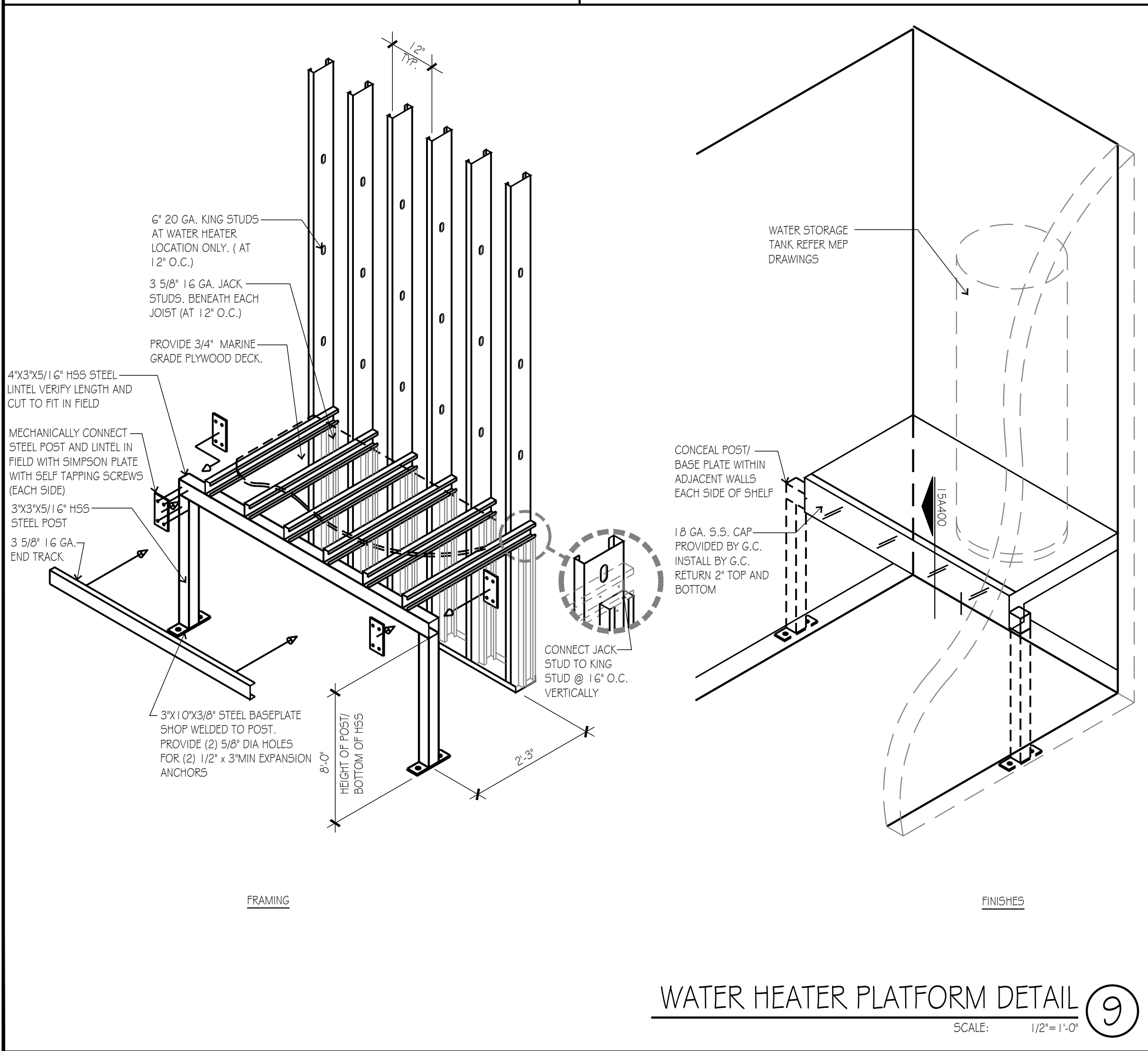
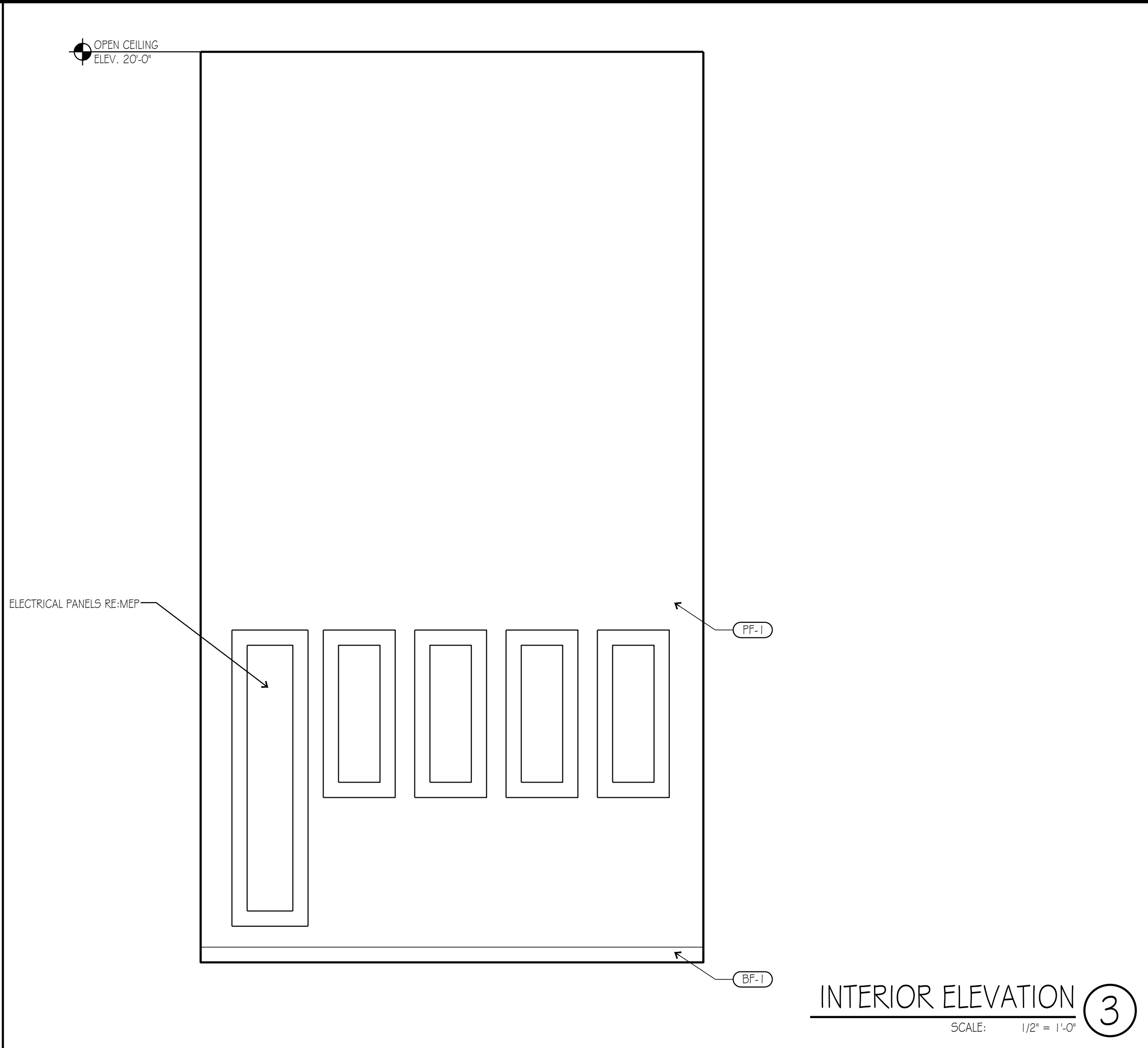
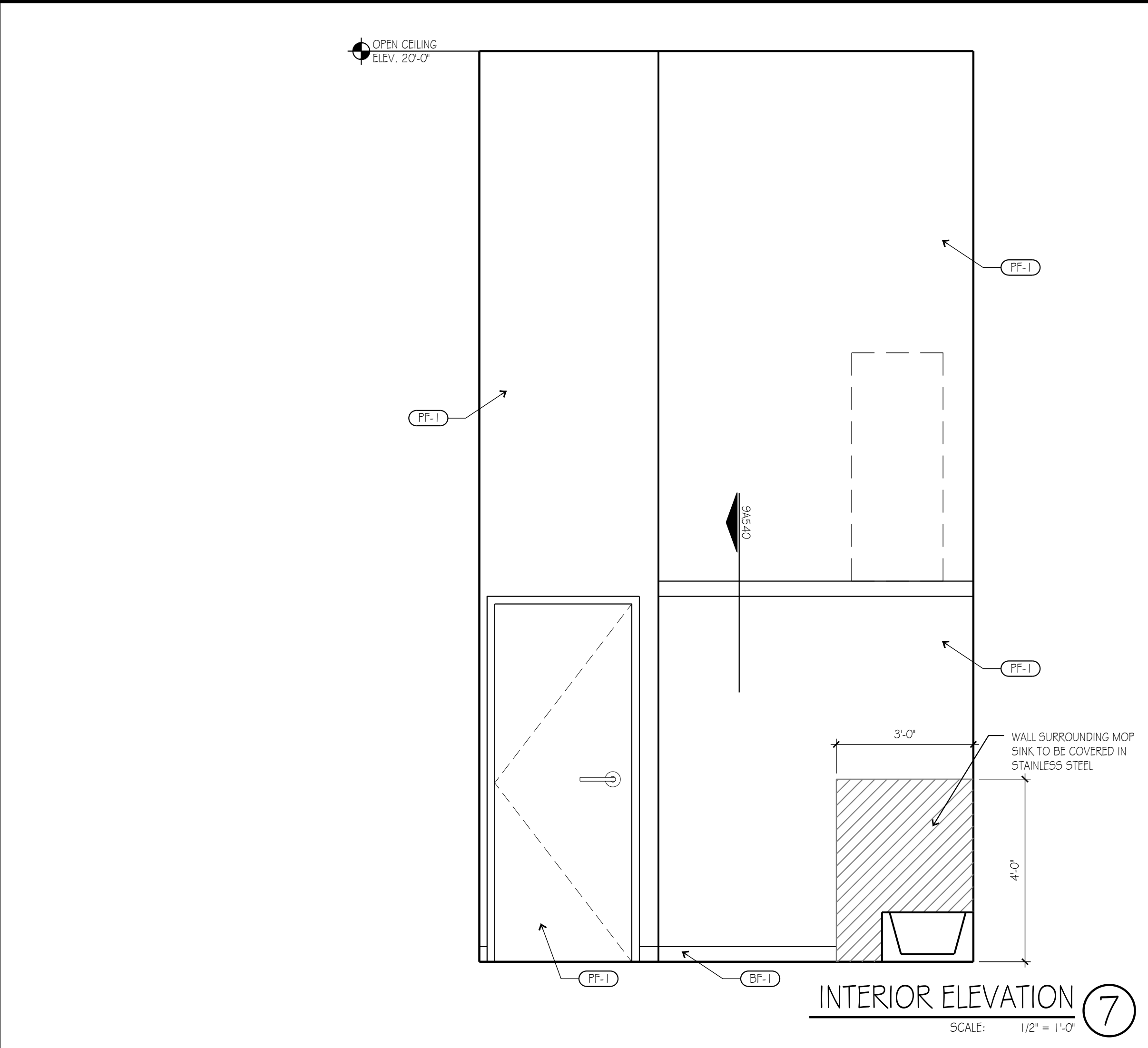
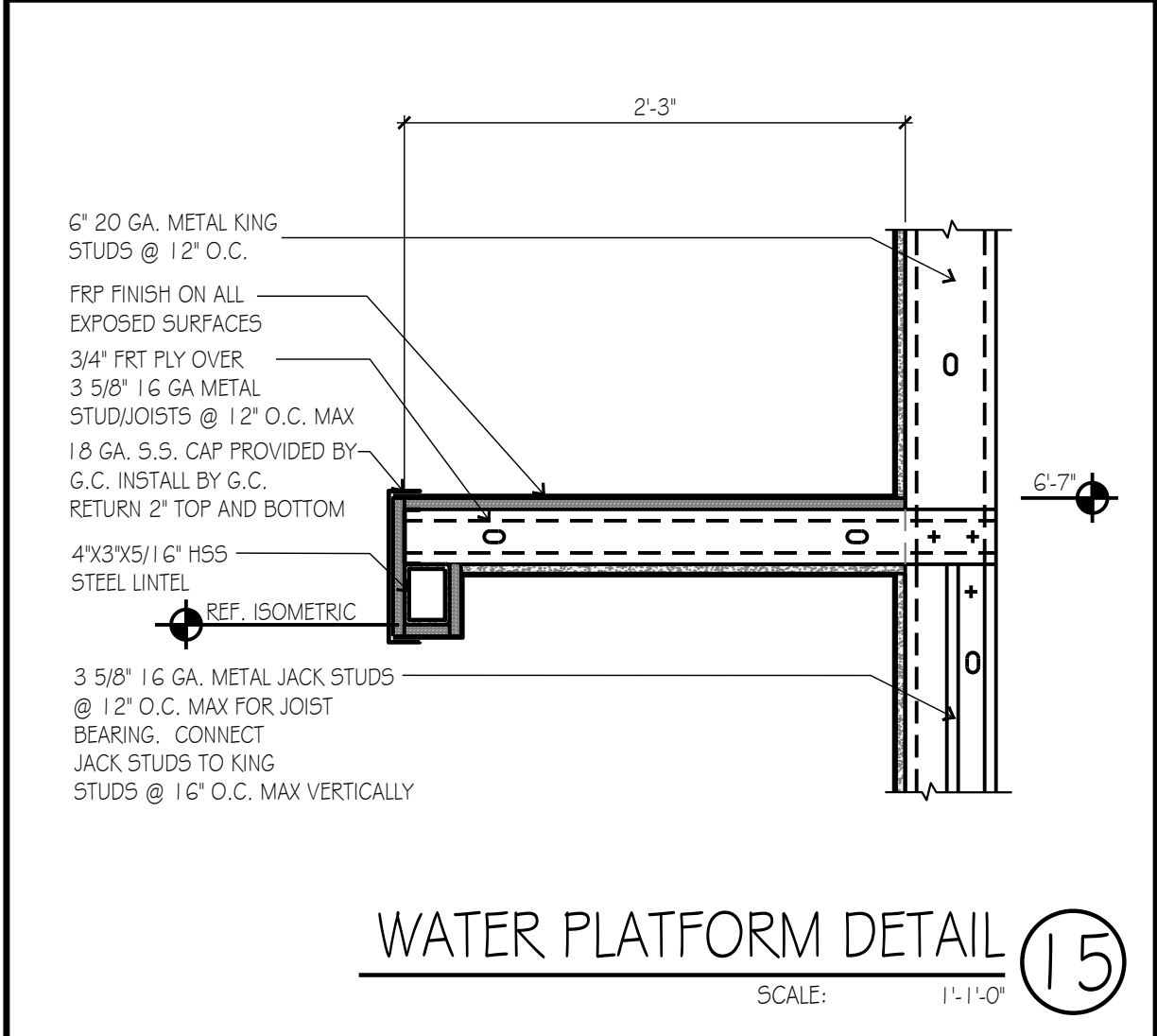








NOT USED 16



**kloverarchitects**  
incorporated

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DIMENSIONS SHOWN are in finish line and if a material varies otherwise indicated, DIMINUE & REASURE dimensions - DO NOT SCALE drawings unless otherwise directed.

project title

project number  
23060.003

drawing issuance  
PERMIT/BID 03.05.24

drawing revisions  
No. Description: Date:

professional seal

STATE OF MISSOURI  
HENRY C. KLOVER  
NUMBER A-5232  
Date Signed MAR 20 2024

drawing title  
ENLARGED UTILITY/IT ROOM PLAN

drawing number  
A540







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project title

IMAGE STUDIOS  
SUMMITFAIR

840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number  
23060.003

drawing issuance  
PERMIT/BD 03.05.24

drawing revisions  
No. Description: Date:

CITY/OWNER COMMENTS 04.16.24

professional seal

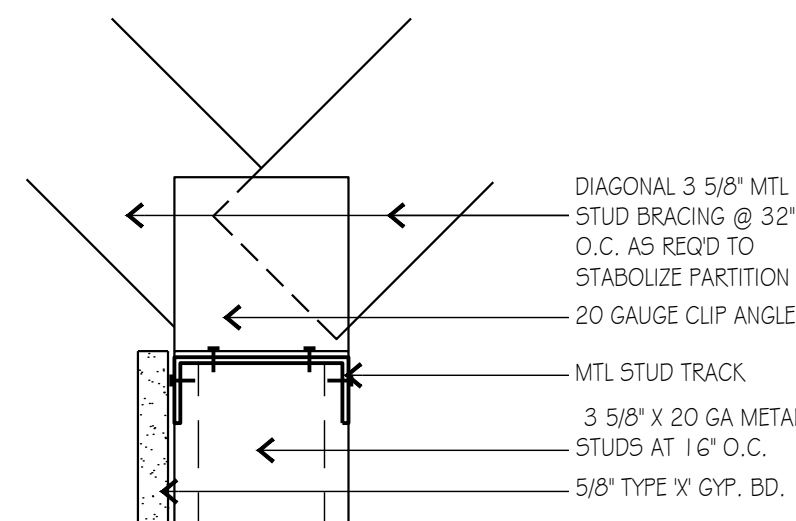


Date Signed APR 18 2024

drawing title  
WALL TYPES & DETAILS

drawing number

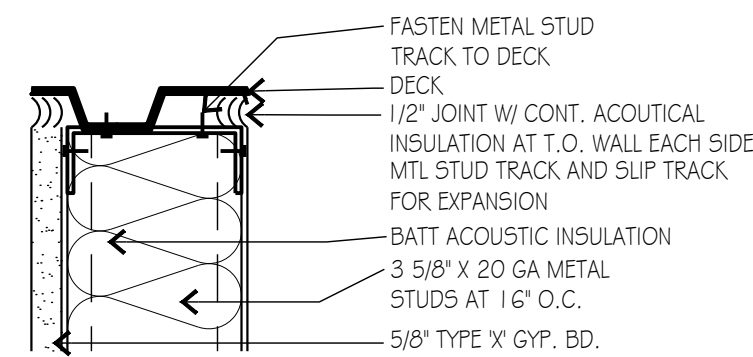
**A610**



NEW WALL TO KICKERS

SCALE: 1" = 1'-0"

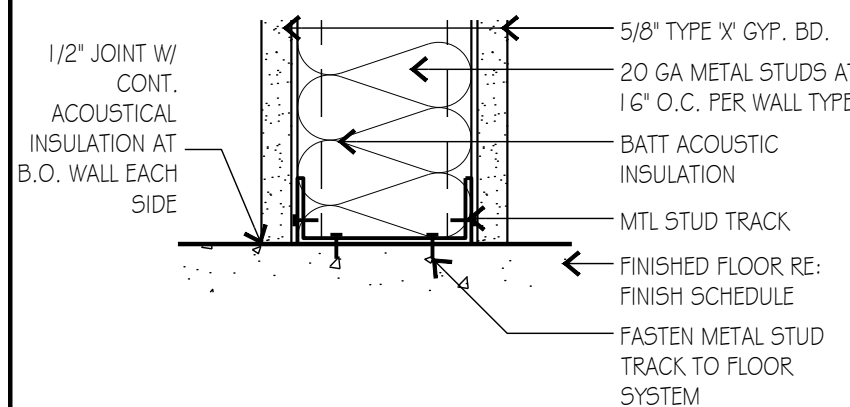
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NEW WALL TO DECK

SCALE: 1" = 1'-0"

4



AT SIM LOCATION, GYP BOARD ON ONLY ONE SIDE.

NEW WALL TO FLOOR

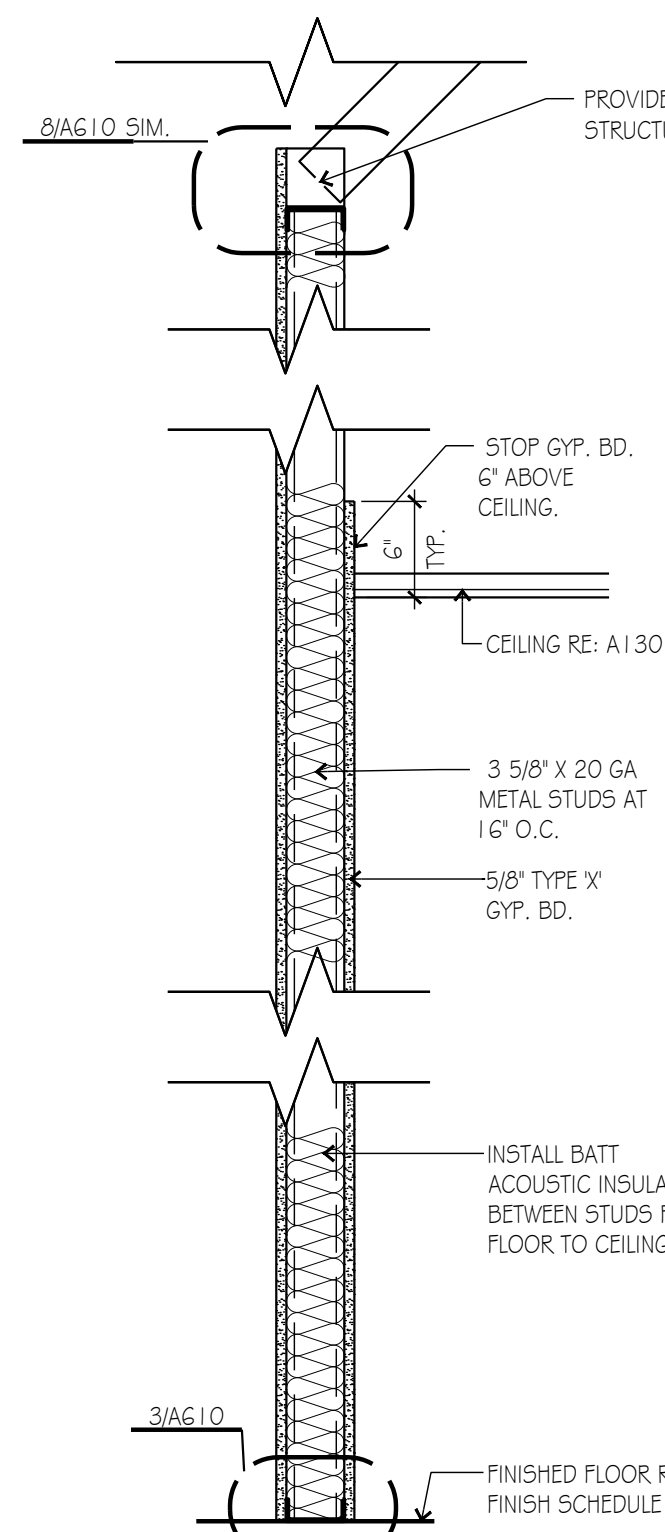
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3

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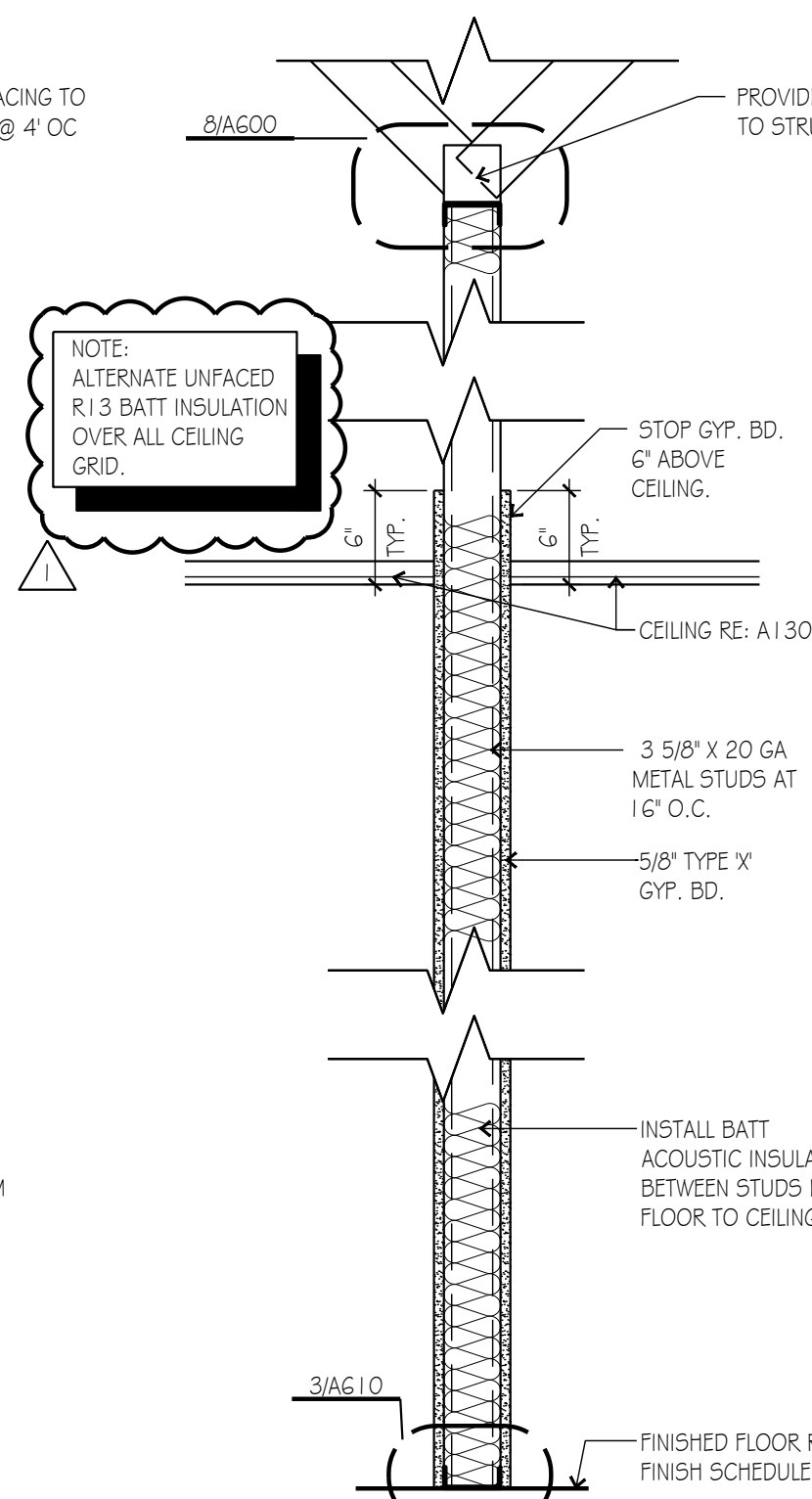
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7



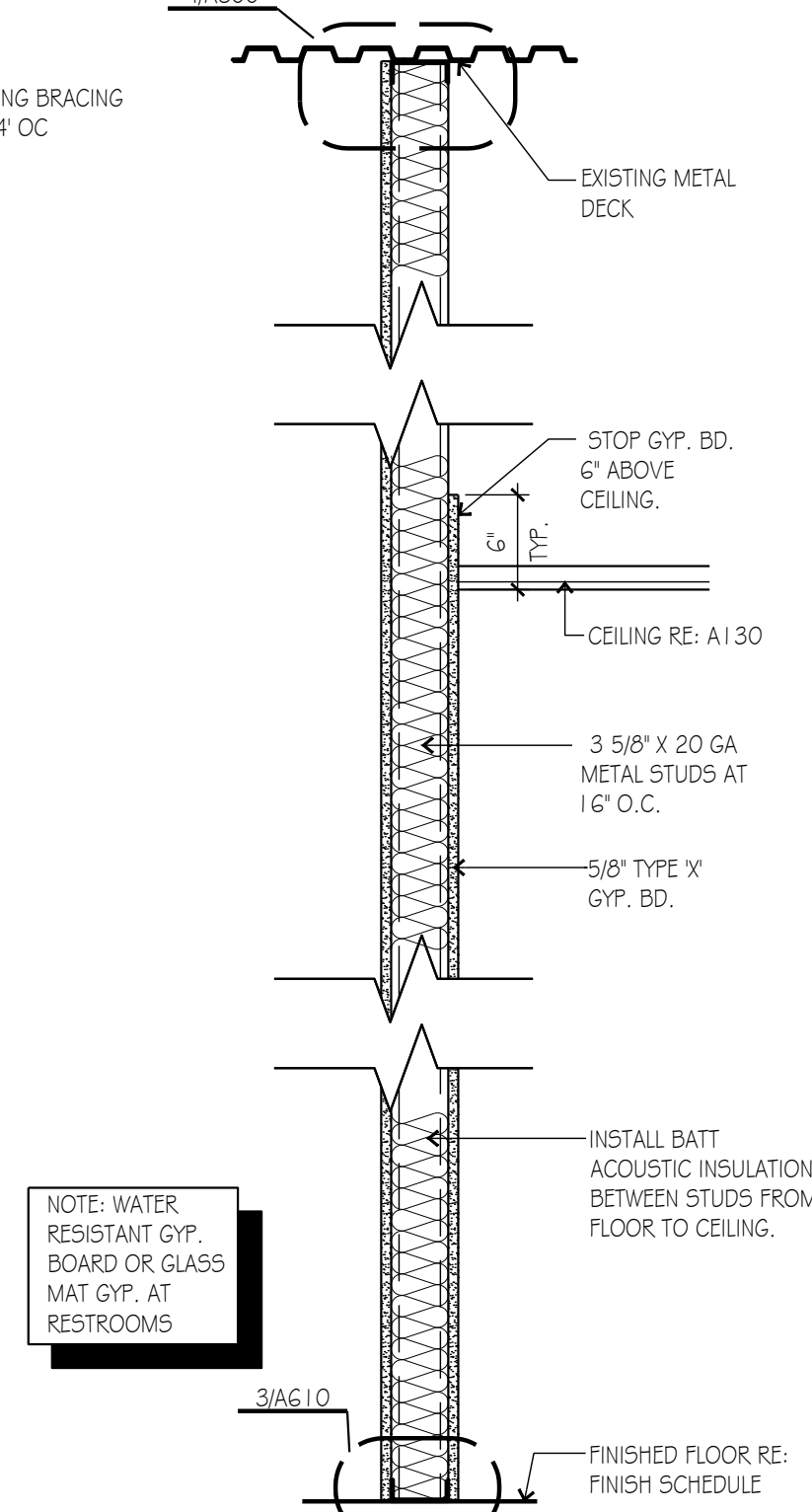
NEW NON-RATED 3 5/8" METAL STUD WALL ASSEMBLY W/ INSULATION W/ KICKERS

6" METAL STUD AT SIM. CONDITION



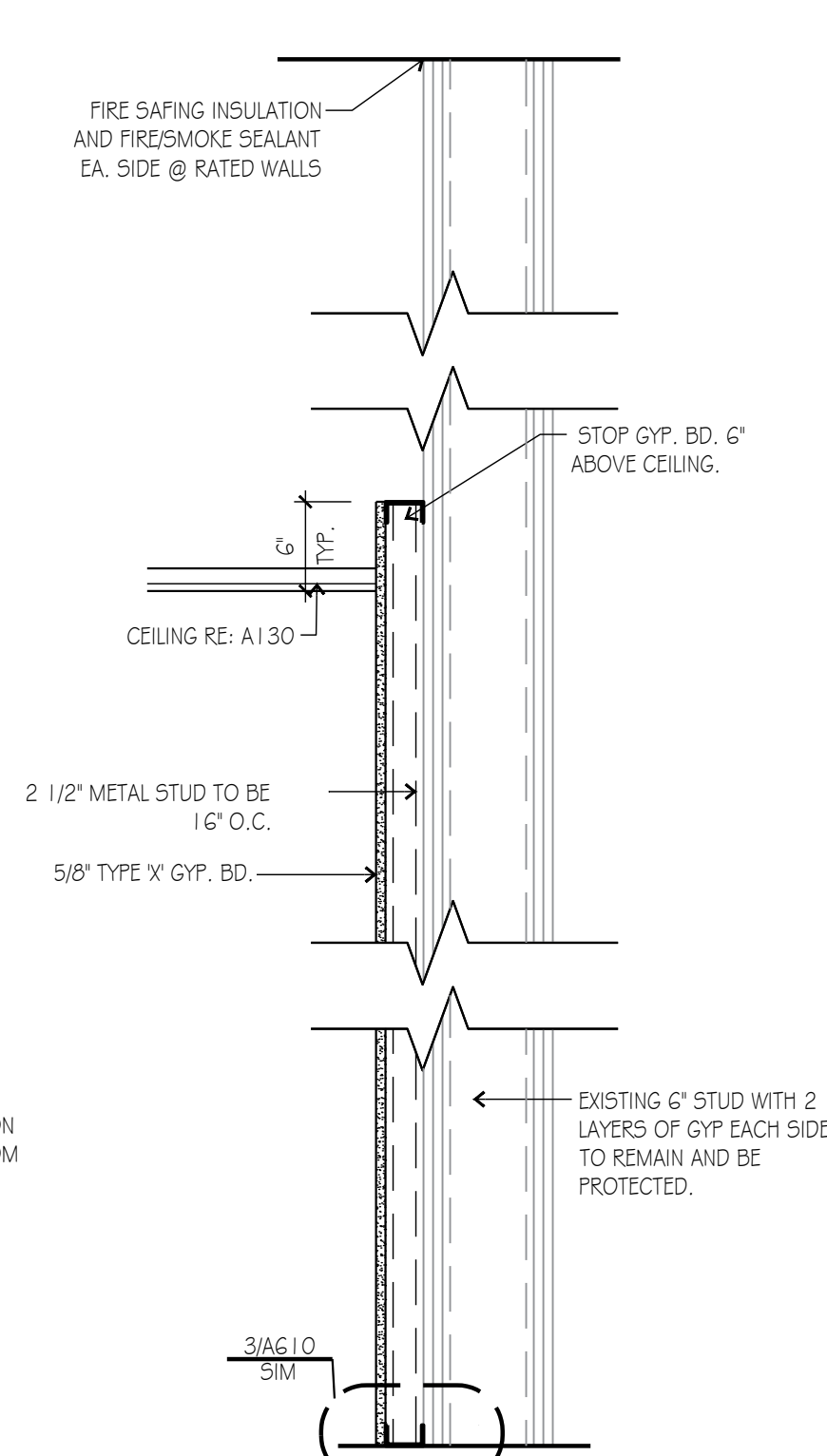
NEW NON-RATED 3 5/8" METAL STUD WALL ASSEMBLY W/ INSULATION W/ KICKERS

6" METAL STUD AT SIM. CONDITION



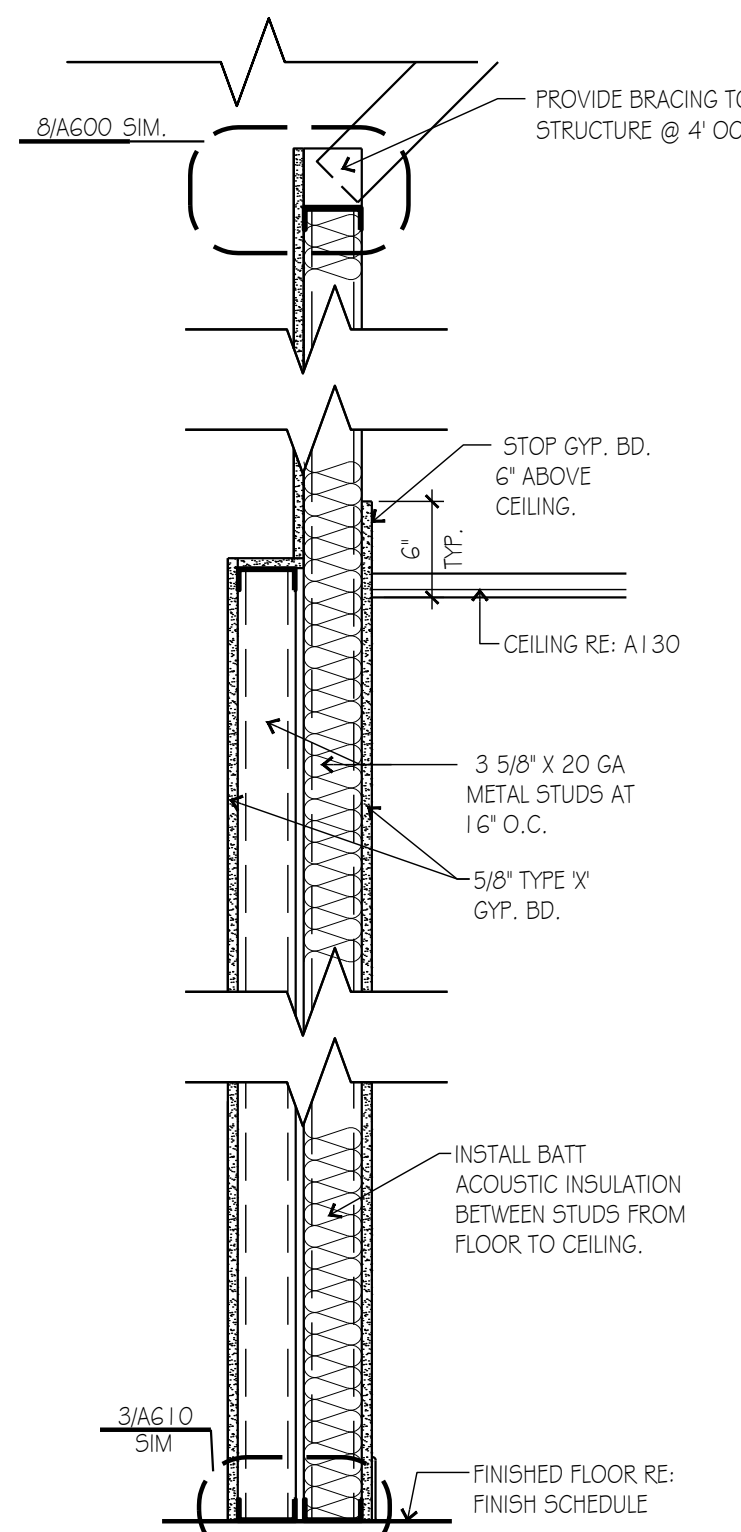
NEW NON-RATED 3 5/8" METAL STUD WALL ASSEMBLY W/ INSULATION TO DECK

6" METAL STUD AT SIM. CONDITION



2 1/2" METAL STUD WALL ON EXISTING WALL ASSEMBLY

6" METAL STUD AT SIM. CONDITION



NEW NON-RATED 3 5/8" METAL STUD WALL ASSEMBLY W/ INSULATION W/ KICKERS

6" METAL STUD AT SIM. CONDITION

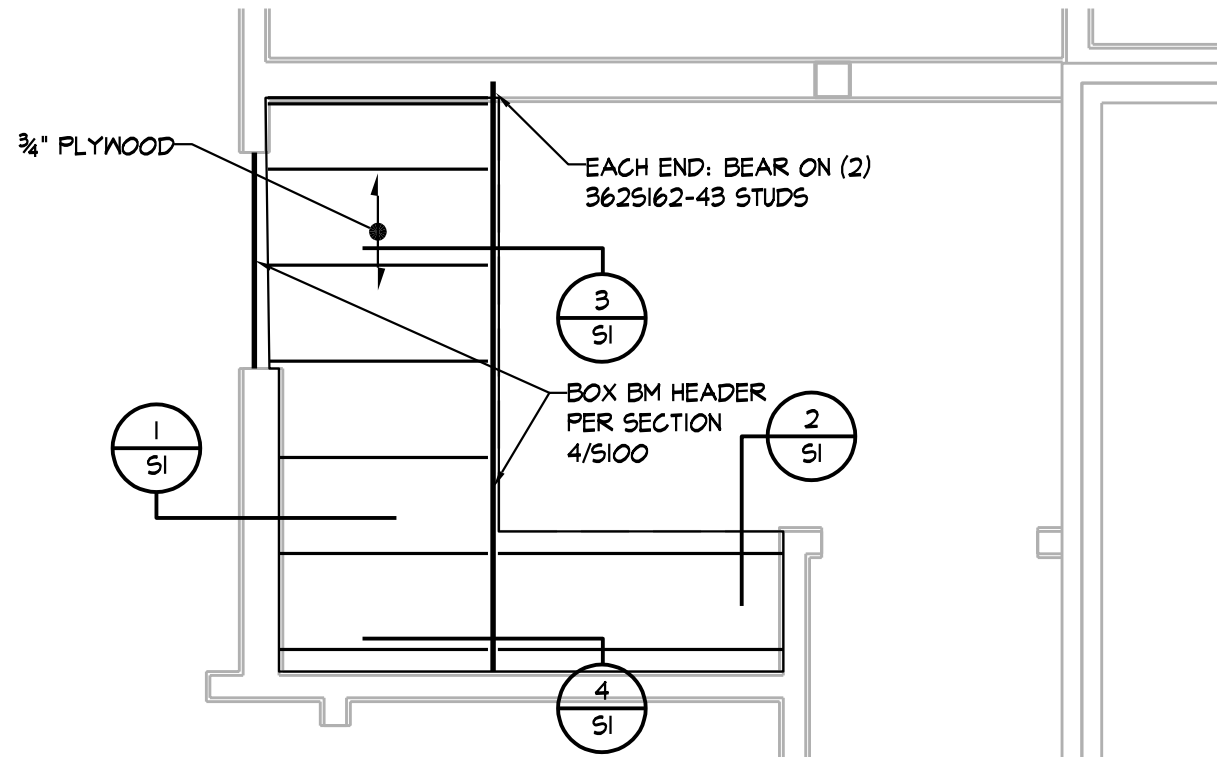
WALL TYPES

SCALE: 1" = 1'-0"

1

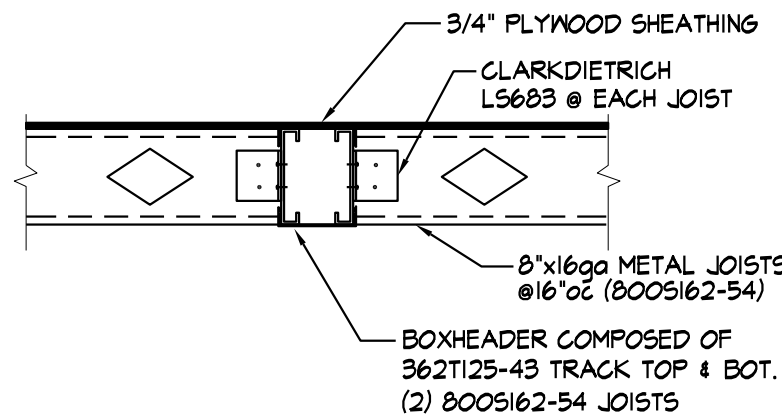


- GENERAL NOTES - STRUCTURAL
- The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.
  - The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. All conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding.
  - All design and construction work for this project shall conform to the requirements of the 2018 International Building Code, as amended by the City of Lee's Summit, Missouri.
  - These drawings are for this specific project and no other use is authorized.
  - Structural Design Load Criteria:
    - Dead Load= 10 psf
    - Live Load= 125 psf
    - Lateral Loads:
      - Seismic:  $S_e = 0.1$ ,  $S_1 = 0.068$ ,  $I_e = 1.0$   
Site Classification D (assumed);  $S_{ds}=0.108$ ;  $S_{d1}=0.104$   
Seismic Design Category B.  
Basic Seismic Force-Resisting System:  
Light Framed Walls with Shear Panels of All Other Materials  
 $R=2.0$ ,  $\Omega=2.5$ ;  $C_d = 1.15$ ,  $V=0.094$ W
  - This project is designed to resist the most critical effects resulting from the load combinations of section 1605.3 of the 2018 International Building Code.
6. Light Gage Metal Structural Framing
- All load bearing, light gage structural studs, track, and bridging shall be of the type, size, gage, and spacing as shown on the plans, minimum.
  - All materials shall be 55,000 psi minimum yield except studs of 16 gage or heavier shall have a minimum yield of 50,000 psi.
  - All properties, fabrication, and erection shall be in accordance with latest editions of the AISI "Specifications for the Design of Cold-Formed Structural Members."
  - All framing components shall be cut squarely or at an angle to fit squarely against abutting members. Splicing of axially loaded members is not permitted. Members shall be held firmly in place until properly fastened. Attachments of similar components shall be by welding, screw attachment, or bolting. Wire tying of components is not permitted.
  - Tracks shall be securely anchored to floor and overhead members. Special anchorage requirements required for wind bracing shall be as shown on the plans.
  - Prior to fabrication and/or erection, the contractor shall submit shop drawings complete with detail of erection, fabrication, attachments, anchorages, insets, etc. for review by the architect/engineer.
7. Copyright and Disclaimer:
- All drawings in the structural set (S-series drawings) are the copyrighted work of Bob D. Campbell and Company, Inc. These drawings may not be photographed, traced, or copies in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed for distribution to the owner, architect, and general contractor for coordination, bidding, and construction. Subcontractors may not reproduce these drawings for any purpose or in any manner.
  - Clark A. Basinger, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.

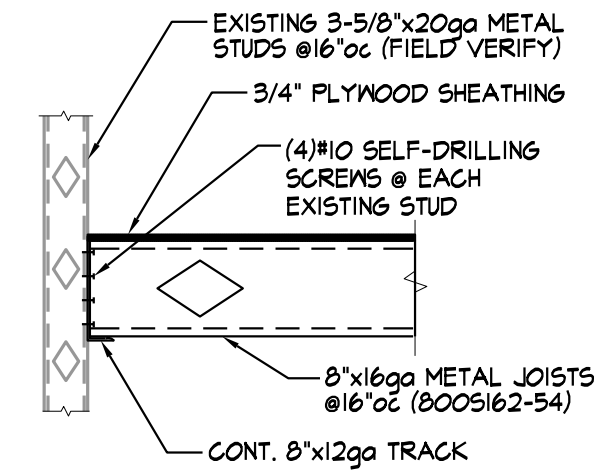


## MEZZANINE FRAMING PLAN

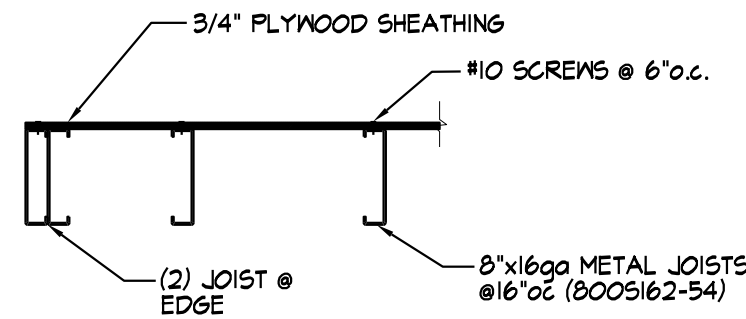
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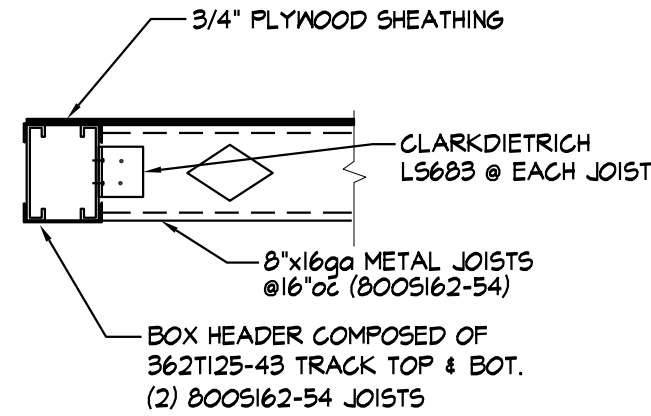
SECTION 4  
3/4" = 1'-0"



SECTION 1  
3/4" = 1'-0"



SECTION 2  
3/4" = 1'-0"



SECTION 3  
3/4" = 1'-0"

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project title

IMAGE STUDIOS  
SUMMIT FAIR

840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number

23060.003

drawing issuance

PERMIT/BD

03.05.24

drawing revisions

No.	Description	Date
-----	-------------	------

CITY/OWNER COMMENTS 04.16.24

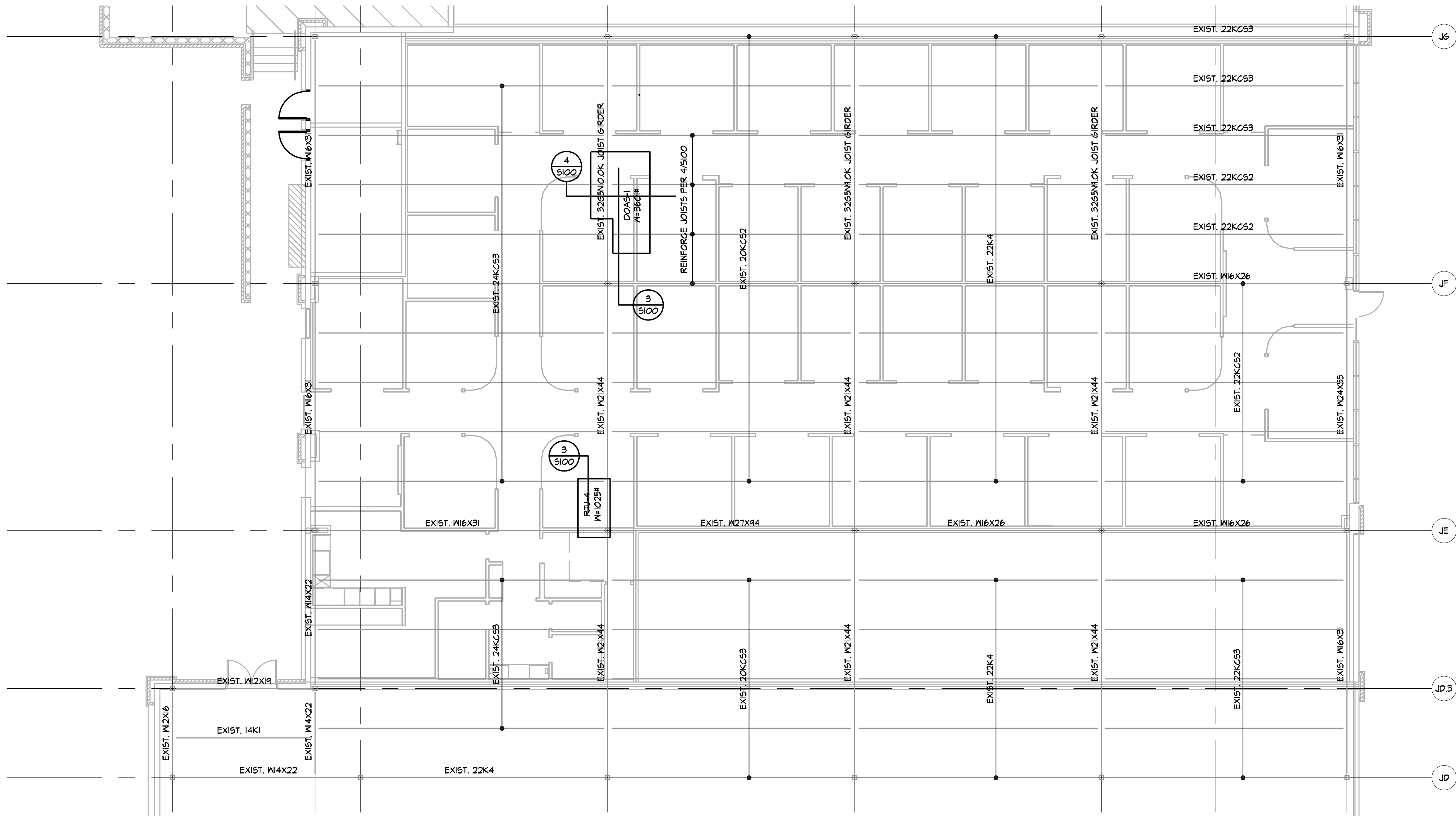
professional seal



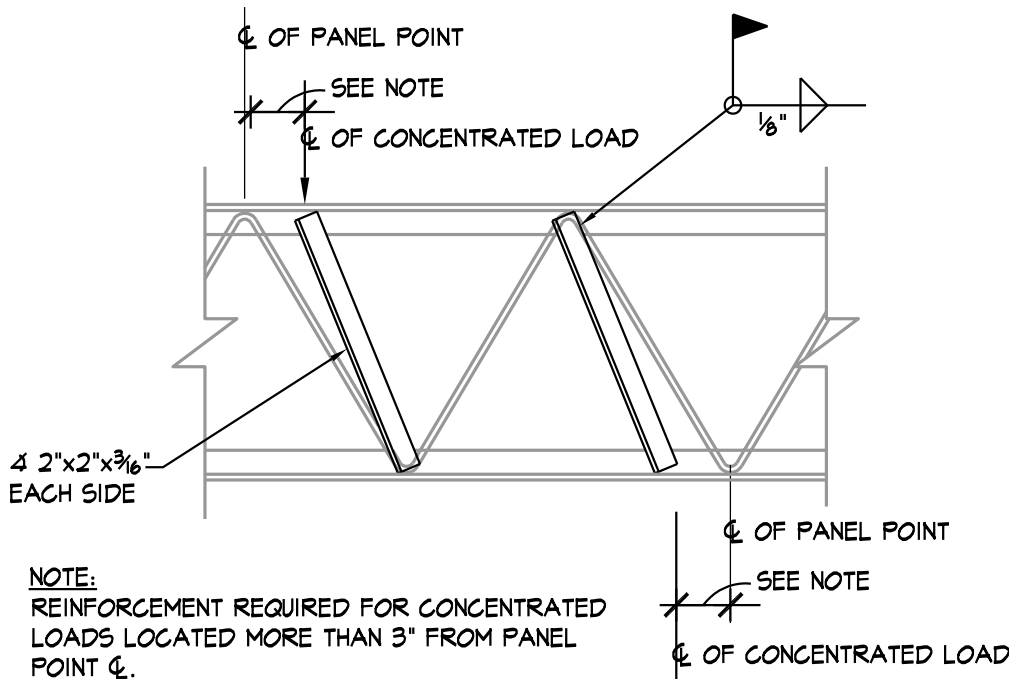
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GENERAL NOTES & MEZZANINE  
FRAMING PLAN  
drawing number

S001

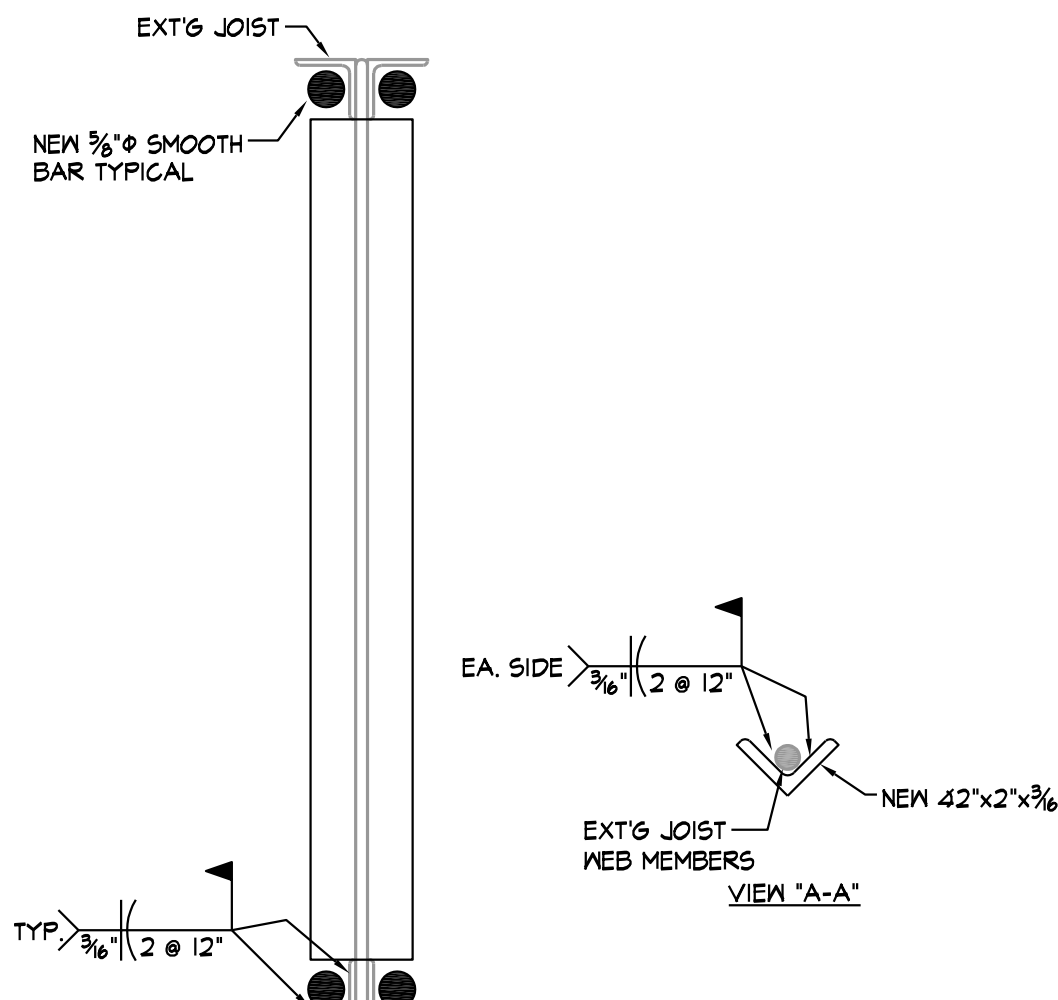




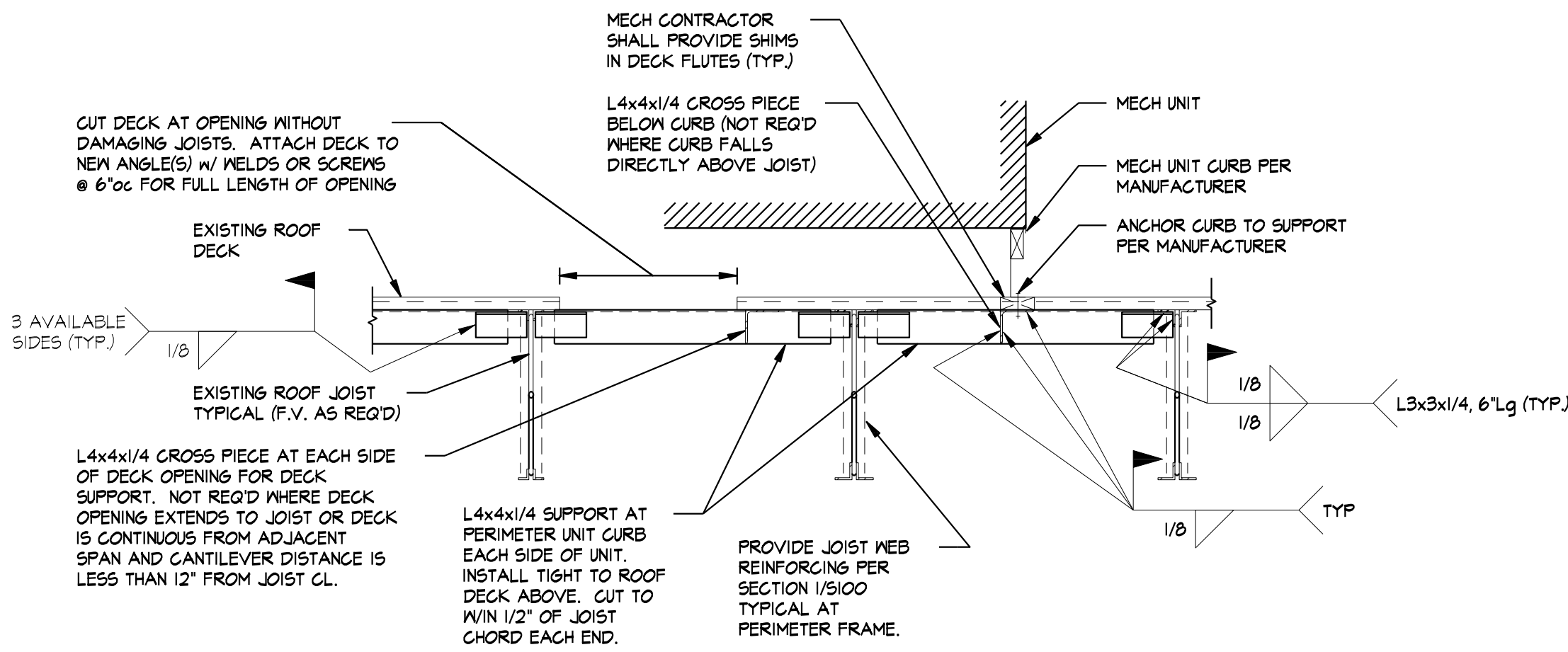
ROOF FRAMING PLAN  
1/8" = 1'-0"



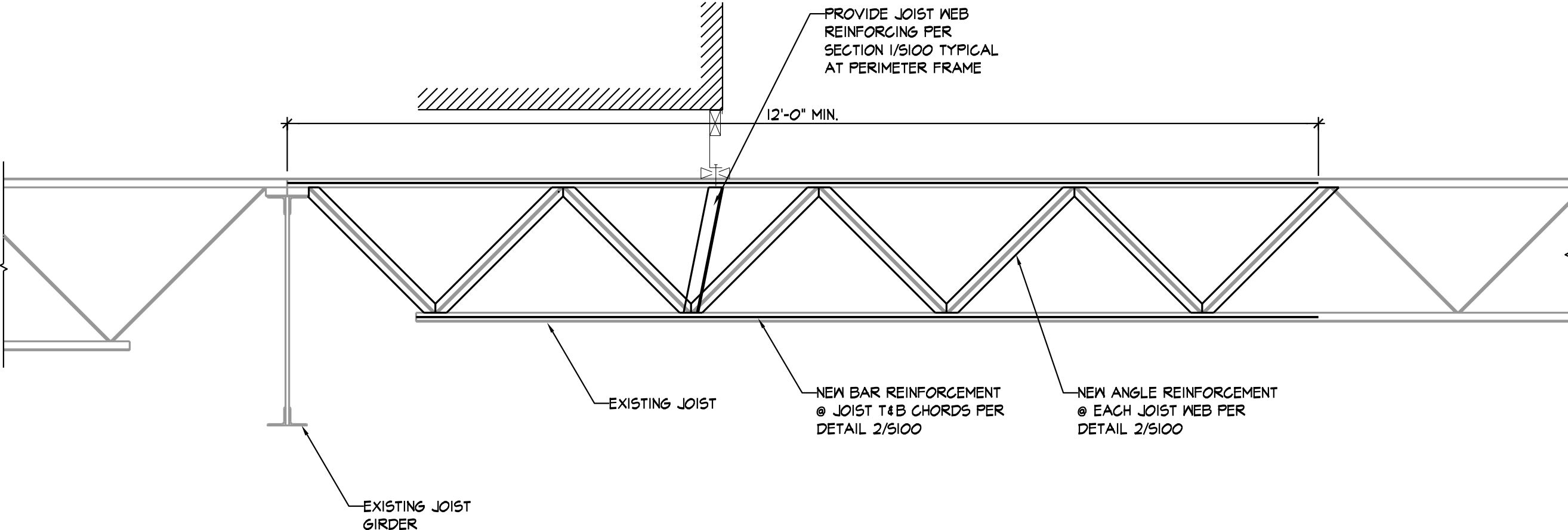
TYP. JOIST POINT LOAD  
REINFORCING DETAIL  
3/4" = 1'-0"



SECTION 2  
3/4" = 1'-0"



SECTION 3  
3/4" = 1'-0"

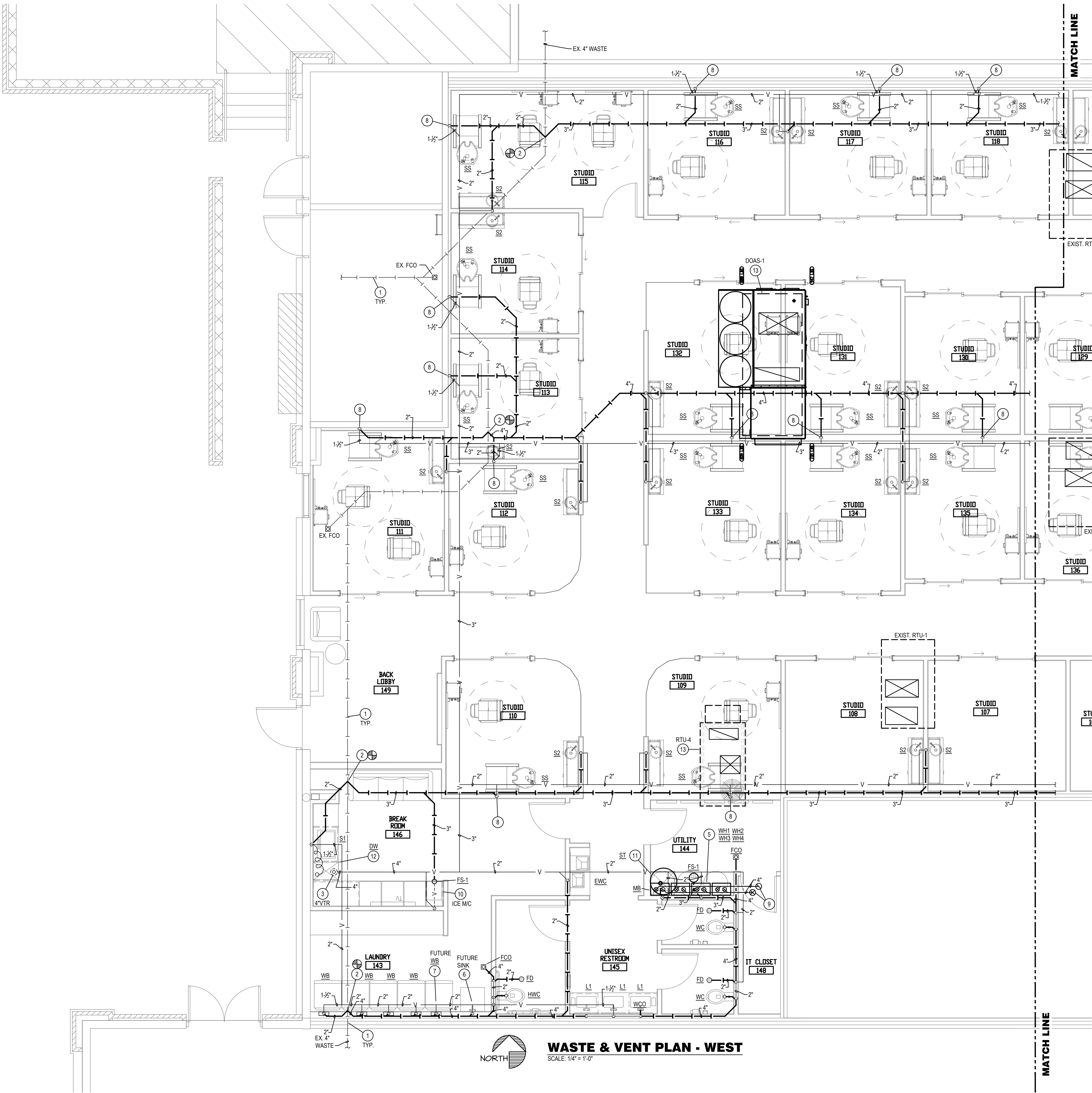


SECTION 4  
3/4" = 1'-0"





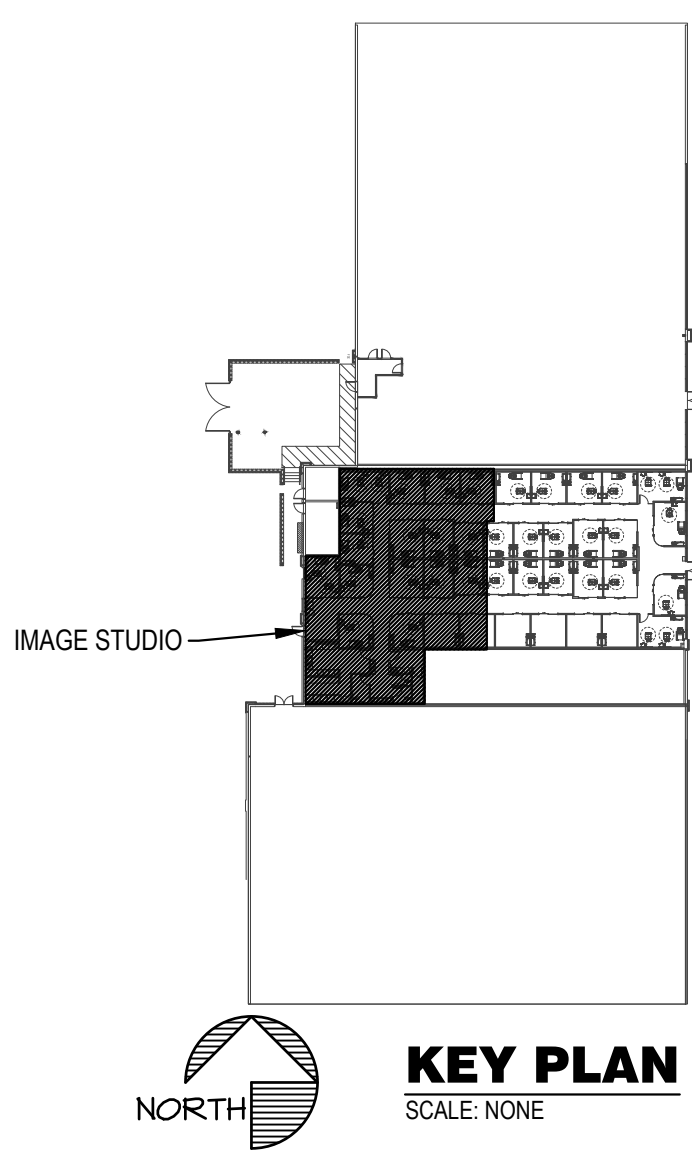




**WASTE & VENT PLAN - WEST**  
SCALE: 1/4" = 1'-0"

**PLUMBING PLAN NOTES:** (NOT ALL NOTES MAY APPLY TO THIS SHEET)

- EXISTING SANITARY WASTE WASTE TO REMAIN. VERIFY EXACT LOCATION OF EXISTING SANITARY WASTE WASTE PRIOR TO BEGINNING OF NEW WORK.
- CONNECT NEW SANITARY LINE TO EXISTING SANITARY LINE AS SHOWN ON THE PLAN AND AS REQUIRED. PLUMBING CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF EXISTING SANITARY LINE IN FIELD PRIOR TO INSTALLATION OF NEW PIPING.
- LOCATION OF 4" VTR. CONNECT TO NEW VENT LINE TO EXISTING 3" VTR LOCATION AS REQUIRED. VERIFY EXACT LOCATION OF EXISTING VTR IN FIELD. VERIFY 10' CLEARANCE FROM ALL OUTDOOR AIR INTAKES. SEAL PENETRATION WEATHERTIGHT.
- ROUTE WATER HEATER T & P DRAIN PIPE DOWN AND DISCHARGE TO MOP SINK WITH AIR GAP.
- PROVIDE PROVISION FOR WASTE & VENT AND CAP FOR CONNECTION TO FUTURE SINK.
- PROVIDE PROVISION FOR WASTE & VENT AND CAP FOR CONNECTION TO FUTURE CLOTHES WASHER.
- PROVIDE WASTE CONNECTION FOR SHAMPOO BOWL. REFER TO THE SHAMPOO SINK INSTALLATION DETAIL ON SHEET P202 FOR MORE INFORMATION.
- PROVIDE 2" PVC INTAKE AND FLUE PIPING FROM EACH WATER HEATER AND MANIFOLD TO 4" COMMON VENTS. ROUTE PIPING UP TO THE MANUFACTURERS RECOMMENDED TERMINATION AT THE ROOF. SEAL PENETRATION WEATHER TIGHT.
- CONNECT DRAIN FROM ICE MACHINE TO FLOOR SINK WITH AIR GAP PER MANUFACTURER'S INSTRUCTION.
- INSTALL HOT WATER STORAGE TANK ON PLATFORM PROVIDED BY OTHERS AT APPROXIMATELY 7' AFF. ROUTE PIPING FROM T&P VALVE AND TANK DRAIN TO MOP SINK WITH AIR GAP.
- PROVIDE FLEXIBLE DRAIN HOSE AND ROUTE FROM DISHWASHER DRAIN TO SINK TAILPIECE WITH AIR GAP FITTING AS REQUIRED BY MANUFACTURER'S INSTRUCTION.
- CONNECT CONDENSATE TO RTU AS REQUIRED AND AS DETAILED.



BC PROJECT #: 23615  
MISSOURI PE COA #2009003629  
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**BC ENGINEERS**  
INCORPORATED

5720 Reeder Shawnee, KS 66203 (913)262-1772



project title

**IMAGE STUDIOS**  
SUMMIT FAIR  
840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number  
23060.003  
drawing issuance  
PERMIT/BID 03.15.24  
drawing revisions  
No. Description Date:  
CITY/OWNER COMMENTS 04.16.24

professional seal

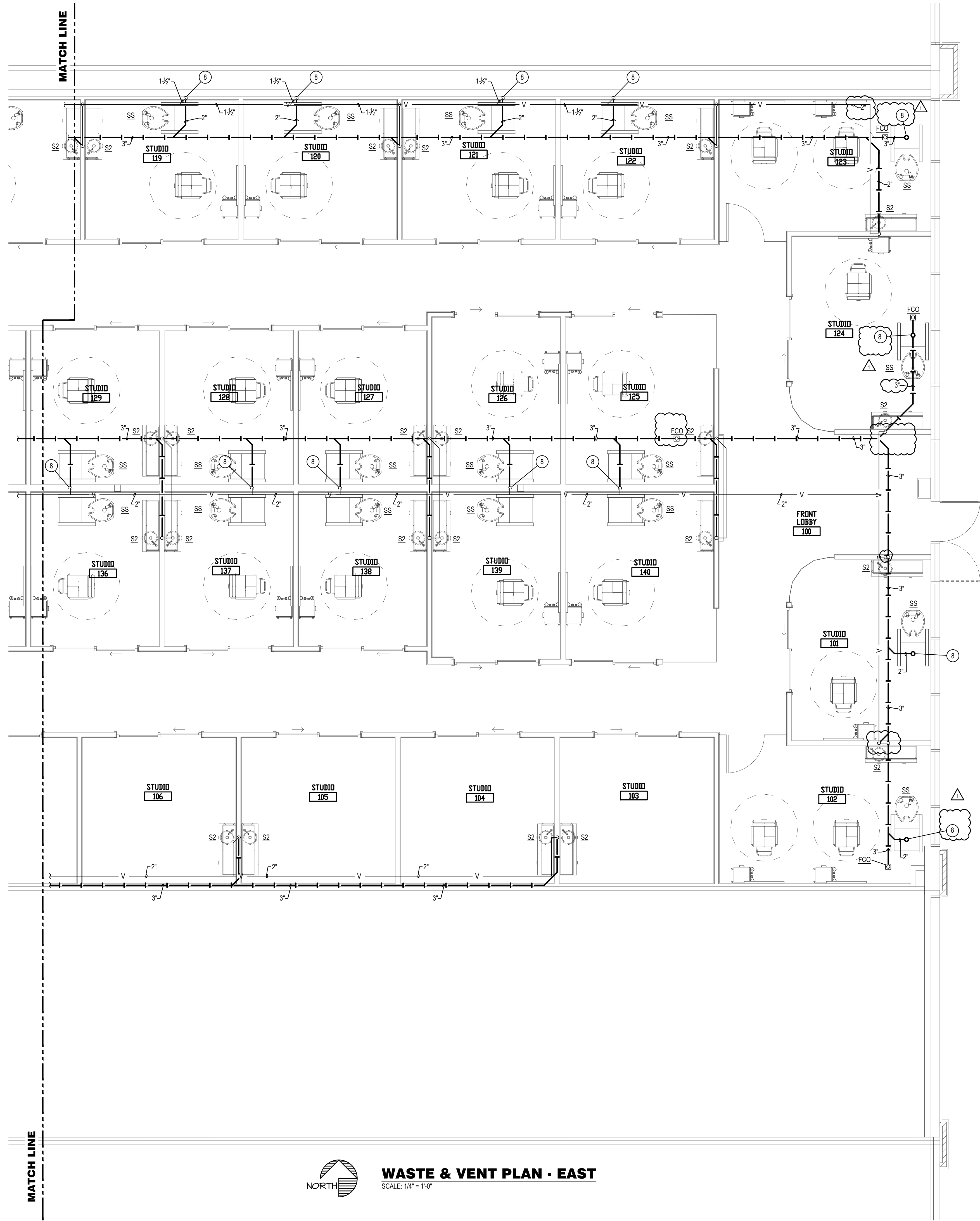


drawing title  
WASTE & VENT PLAN - WEST

drawing number

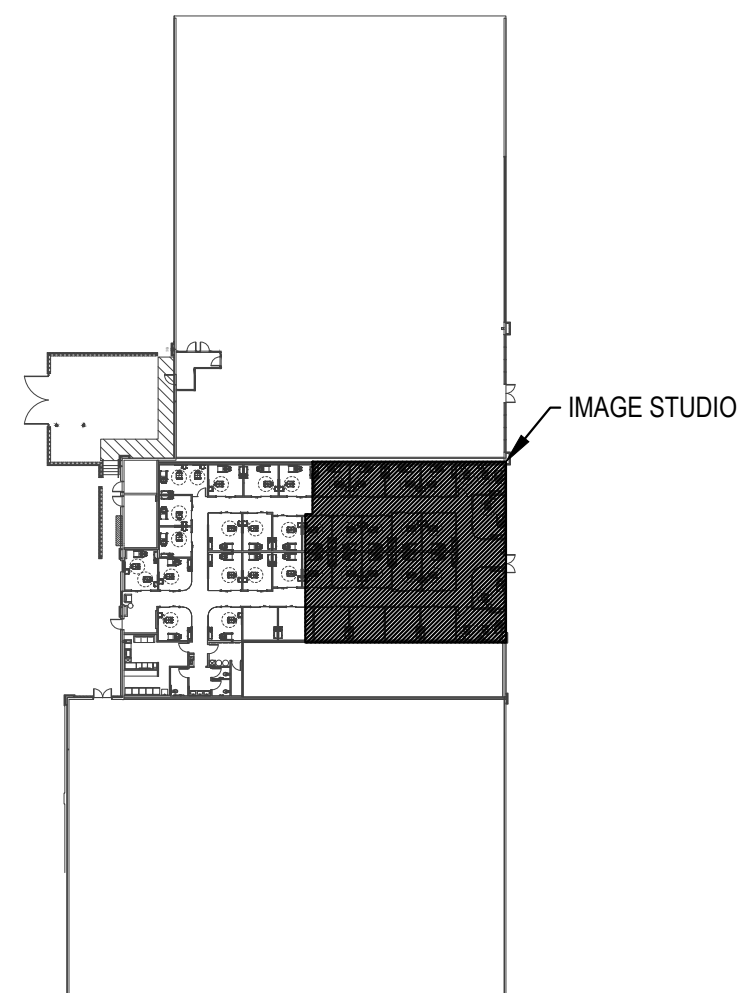
**P100**





PLUMBING PLAN NOTES: (NOT ALL NOTES MAY APPLY TO THIS SHEET)

- EXISTING SANITARY WASTE WASTE TO REMAIN. VERIFY EXACT LOCATION OF EXITING SANITARY WASTE WASTE PRIOR TO BEGINNING OF NEW WORK.
- CONNECT NEW SANITARY LINE TO EXISTING SANITARY LINE AS SHOWN ON THE PLAN AND AS REQUIRED. PLUMBING CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF EXISTING SANITARY LINE IN FIELD PRIOR TO INSTALLATION OF NEW PIPING.
- LOCATION OF 4" VTR. CONNECT TO NEW VENT LINE TO EXISTING 3" VTR LOCATION AS REQUIRED. VERIFY EXACT LOCATION OF EXISTING VTR IN FIELD. VERIFY 10' CLEARANCE FROM ALL OUTDOOR AIR INTAKES. SEAL PENETRATION WEATHERTIGHT.
- 
- ROUTE WATER HEATER T & P DRAIN PIPE DOWN AND DISCHARGE TO MOP SINK WITH AIR GAP.
- PROVIDE PROVISION FOR WASTE & VENT AND CAP FOR CONNECTION TO FUTURE SINK.
- PROVIDE PROVISION FOR WASTE & VENT AND CAP FOR CONNECTION TO FUTURE CLOTHES WASHER.
- PROVIDE WASTE CONNECTION FOR SHAMPOO BOWL. REFER TO THE SHAMPOO SINK INSTALLATION DETAIL ON SHEET P202 FOR MORE INFORMATION.
- PROVIDE 2" PVC INTAKE AND FLUE PIPING FROM EACH WATER HEATER AND MANIFOLD TO 6" COMMON VENTS. ROUTE PIPING UP TO THE MANUFACTURERS RECOMMENDED TERMINATION AT THE ROOF. SEAL PENETRATION WEATHER TIGHT.
- CONNECT DRAIN FROM ICE MACHINE TO SINK TAILPIPE WITH AIR GAP FITTING PER MANUFACTURER'S INSTRUCTION.
- ROUTE STORAGE TANK T & P DRAIN PIPE DOWN AND DISCHARGE TO MOP SINK WITH AIR GAP.
- PROVIDE FLEXIBLE DRAIN HOSE AND ROUTE FROM DISHWASHER DRAIN TO SINK TAILPIECE WITH AIR GAP FITTING AS REQUIRED BY MANUFACTURER'S INSTRUCTION.



KEY PLAN  
SCALE: NONE



WASTE & VENT PLAN - EAST  
SCALE: 1/4" = 1'-0"

BC PROJECT #: 23615  
MISSOURI PE COA #2009003629  
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project title

IMAGE STUDIOS  
SUMMIT FAIR

840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number

23060.003

drawing issuance

PERMIT/BID 03.15.24

drawing revisions

No. Description Date:

CITY/OWNER COMMENTS 04.16.24

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04/17/24



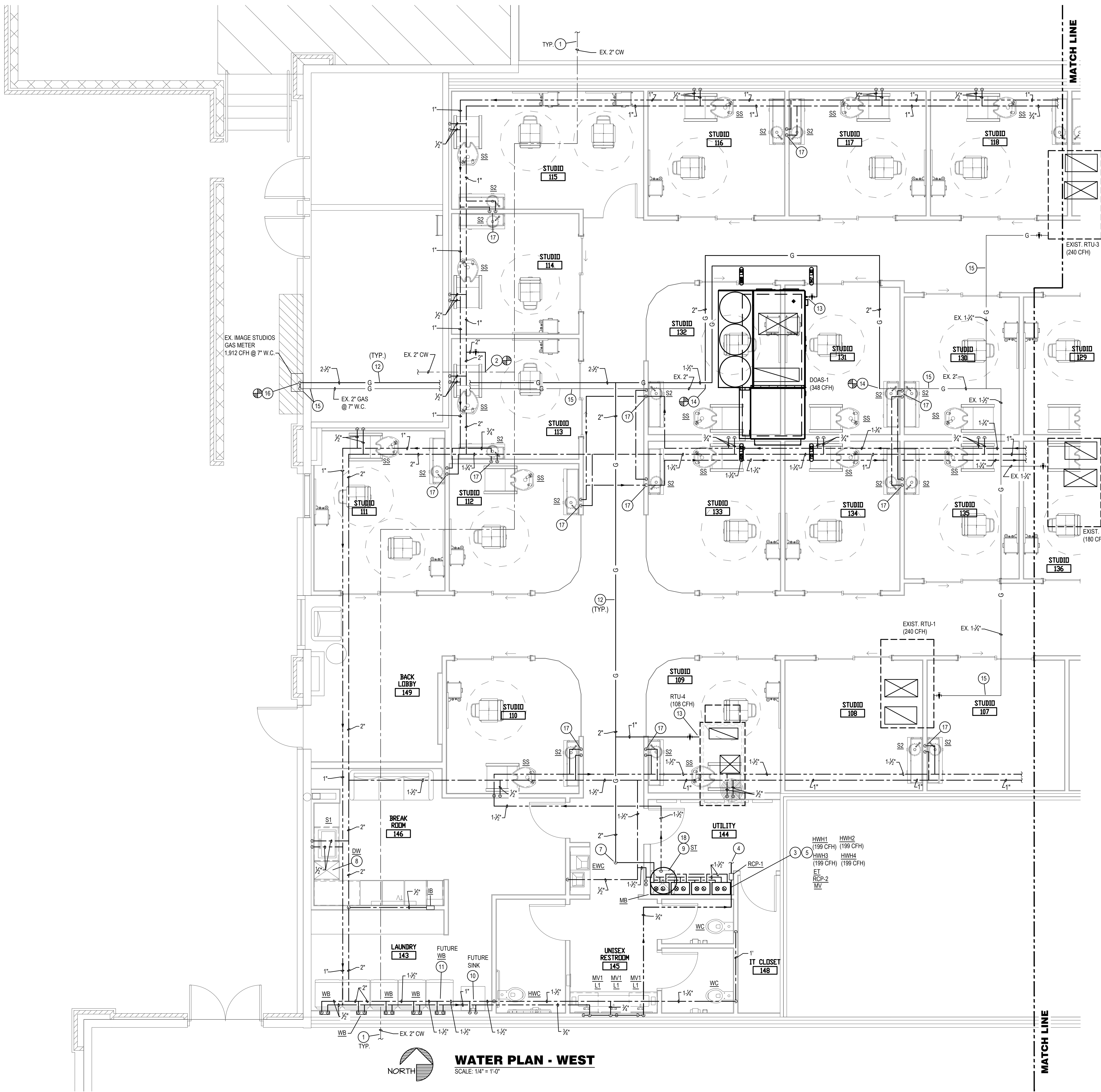
drawing title

WATER & VENT PLAN - EAST

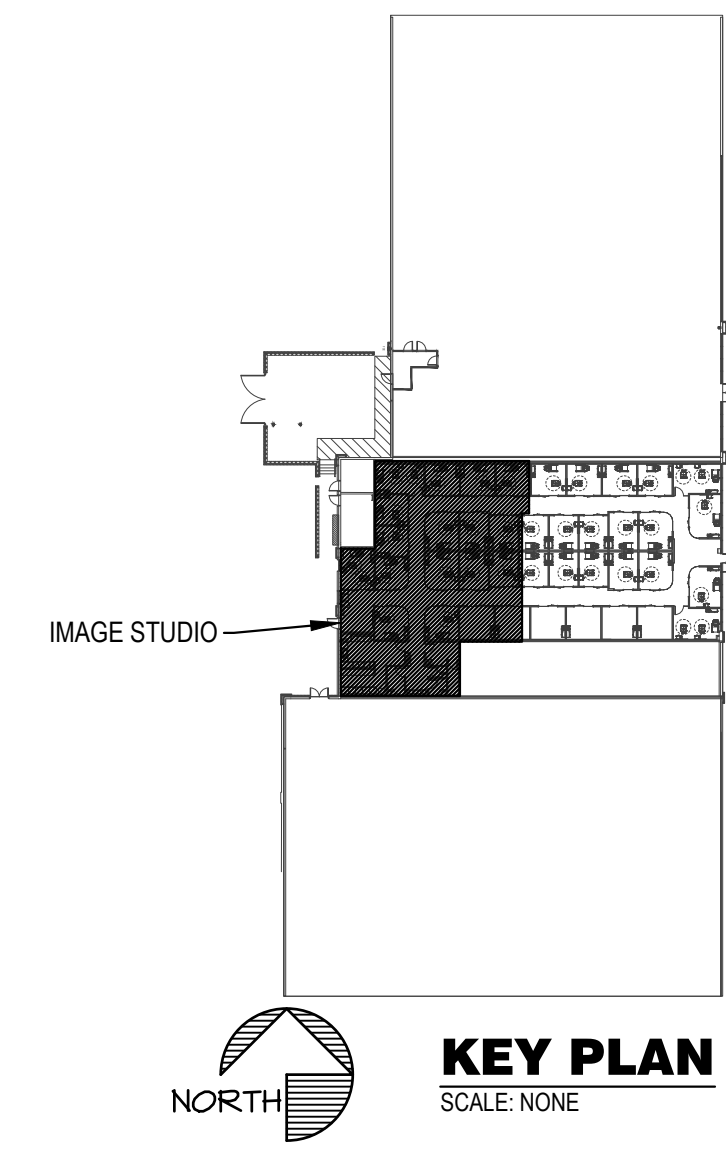
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P101





- PLUMBING PLAN NOTES:**
- EXISTING COLD WATER LINE TO REMAIN. PLUMBING CONTRACTOR SHALL VERIFY LOCATION OF EXISTING DOMESTIC WATER LINE IN FIELD PRIOR TO BEGINNING OF NEW WORK. TENANT TO SUB-METER WATER AS REQUIRED BY LANDLORD. COORDINATE WITH LANDLORD FOR SUB-METER REQUIREMENT.
  - CONNECT 2" CW TO EXISTING DOMESTIC CW AS REQUIRED. VERIFY EXACT LOCATION AND SIZE OF EXISTING WATER LINE PRIOR TO INSTALLATION OF NEW PIPING.
  - PROVIDE GAS FIRED WATER HEATER MOUNTED ON WALL UP HIGH JUST BELOW CEILING. MAKE HOT AND COLD WATER PIPING CONNECTIONS THROUGH DIELECTRIC UNIONS. PROVIDE AND INSTALL ALL HARDWARE AND APPURTENANCES FOR COMPLETE INSTALLATION PER APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE THERMAL EXPANSION TANK.
  - CONNECT HOT WATER RECIRC. PIPING BACK TO HOT WATER HEATER SYSTEM AS REQUIRED. REFER TO DOMESTIC WATER RISER DIAGRAM FOR MORE INFORMATION. SEE SHEET P301 FOR CONTINUATION.
  - CONNECT GAS PIPING TO WATER HEATER AS DETAILED AND AS PER THE MANUFACTURER INSTRUCTION.
  - COORDINATE WITH EQUIPMENT SUPPLIER FOR EXACT LOCATION OF WATER STUB UPS FOR SHAMPOO SINK. REFER TO SHAMPOO SINK INSTALLATION DETAIL ON SHEET 202 FOR MORE INFORMATION.
  - ROUTE NEW 2" GAS PIPING DOWN THRU ROOF AS REQUIRED. SEAL PENETRATION WEATHER TIGHT AS REQUIRED. ALL ROOFING WORK SHALL BE PERFORMED BY BUILDING OWNER'S ROOFING CONTRACTOR (AT THIS CONTRACTOR'S EXPENSE) TO MAINTAIN EXISTING ROOF WARRANTY. VERIFY APPROVED ROOFING CONTRACTOR WITH BUILDING OWNER PRIOR TO PERFORMING WORK.
  - ROUTE 1/2" HOT WATER FROM SINK TO DISHWASHER AS REQUIRED BY MANUFACTURER'S INSTRUCTION.
  - PROVIDE STORAGE TANK MOUNTED ON WALL UP HIGH ON STRUCTURAL PLATFORM PROVIDED BY OTHERS AT APPROXIMATELY 7 FT. ABOVE THE FLOOR. MAKE HOT AND COLD WATER PIPING CONNECTIONS THROUGH DIELECTRIC UNIONS. PROVIDE AND INSTALL ALL HARDWARE AND APPURTENANCES FOR COMPLETE INSTALLATION PER APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS. COORDINATE WITH ARCHITECT AND STRUCTURAL ENGINEER TO PROVIDE PLATFORM TO SUPPORT 80 GALLON STORAGE TANK. APPROXIMATELY 1,000 LBS.
  - PROVIDE PROVISION FOR HOT & COLD WATER AND CAP IN WALL FOR CONNECTION TO FUTURE SINK.
  - PROVIDE PROVISION FOR HOT & COLD WATER AND CAP IN WALL FOR CONNECTION TO FUTURE CLOTHES WASHER.
  - GAS PIPING ON ROOF. SUPPORT AS REQUIRED AND AS DETAILED.
  - CONNECT GAS PIPING TO ROOFTOP UNIT AS DETAILED AND AS PER THE MANUFACTURER INSTRUCTION.
  - ROUTE EXISTING GAS PIPE AROUND LOCATION OF NEW DOAS UNIT AS REQUIRED. COORDINATE WITH MECHANICAL CONTRACTOR TO ALLOW PROPER CLEARANCE FOR MAINTENANCE. CONNECT GAS PIPE TO EXISTING GAS PIPE ON ROOF AS REQUIRED. FIELD VERIFY EXACT LOCATION, SIZE AND PRESSURE PRIOR TO INSTALLATION OF ANY PIPING.
  - EXISTING GAS LINE TO REMAIN. PLUMBING CONTRACTOR SHALL VERIFY LOCATION OF EXISTING NATURAL GAS LINE IN FIELD PRIOR TO BEGINNING OF NEW WORK.
  - MANIFOLD NEW 2 1/2" GAS PIPING WITH EXISTING 2" GAS PIPE AT EXISTING GAS METER LOCATION AS REQUIRED. COORDINATE WITH GAS COMPANY FOR CONNECTION TO A GAS METER WITH CAPACITY FOR 1,912 CFH @ 7" W.C. ROUTE PIPING UP THE FACE OF THE BUILDING AND ONTO ROOF AS REQUIRED. VERIFY ALL EQUIPMENT GAS CAPACITIES AND OPERATING PRESSURES PRIOR TO INSTALLATION OF ANY PIPING.
  - COORDINATE WITH EQUIPMENT SUPPLIER FOR EXACT LOCATION OF WATER STUB UPS FOR HAND SINK.
  - INSTALL DIGITAL MIXING VALVE PER THE MANUFACTURER'S REQUIREMENTS. SET OUTLET TEMPERATURE TO 120 DEG. F. SET STORAGE TANK TEMPERATURE TO 140 DEG. F.



BC PROJECT #: 23615  
MISSOURI PE COA #2009003629

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**IMAGE STUDIOS**  
SUMMIT FAIR

840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number	23060.003
drawing issuance	PERMIT/BID 03.15.24
drawing revisions	No. Description Date:

professional seal

03/19/24

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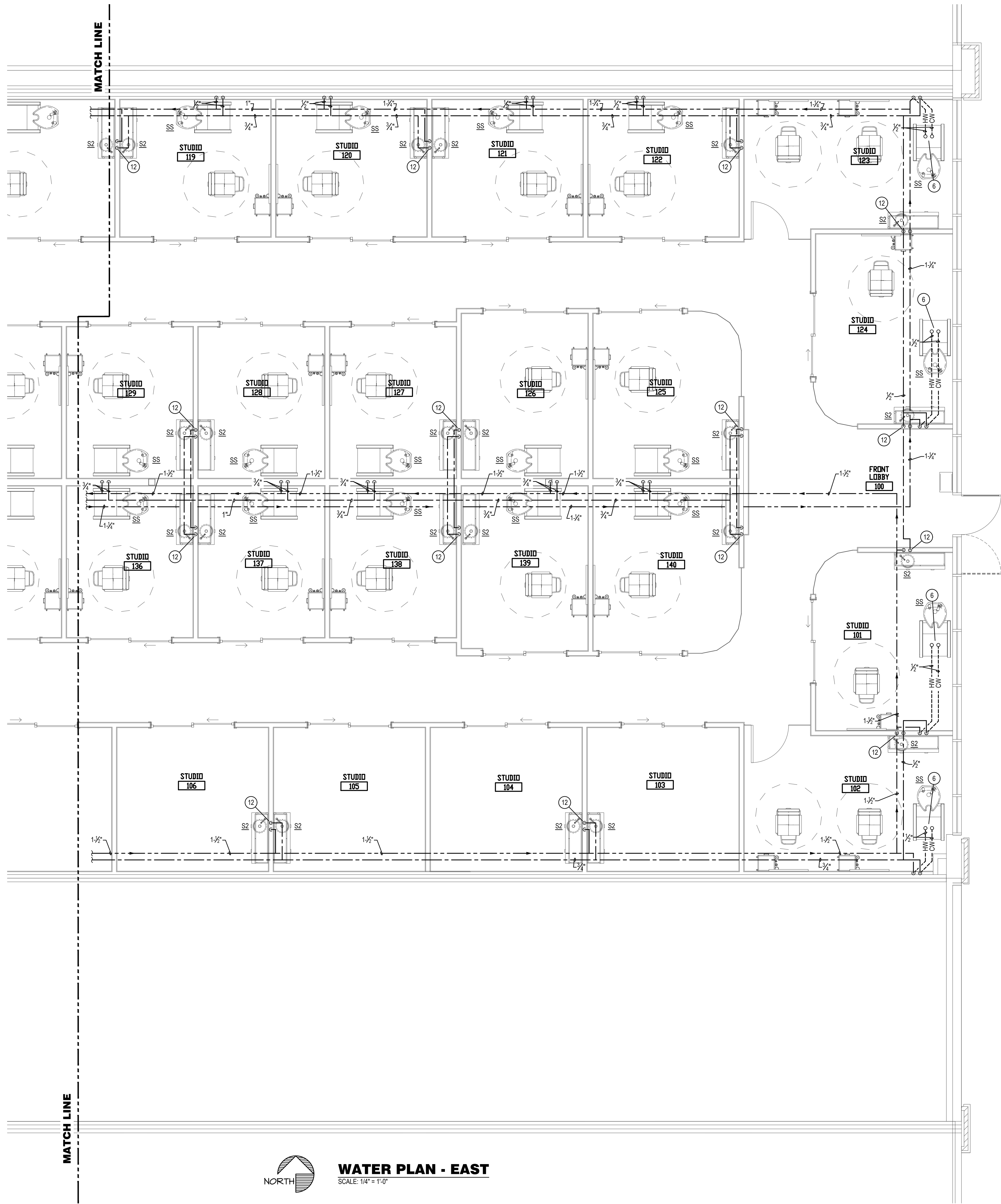
drawing title

WATER PLAN - WEST

drawing number

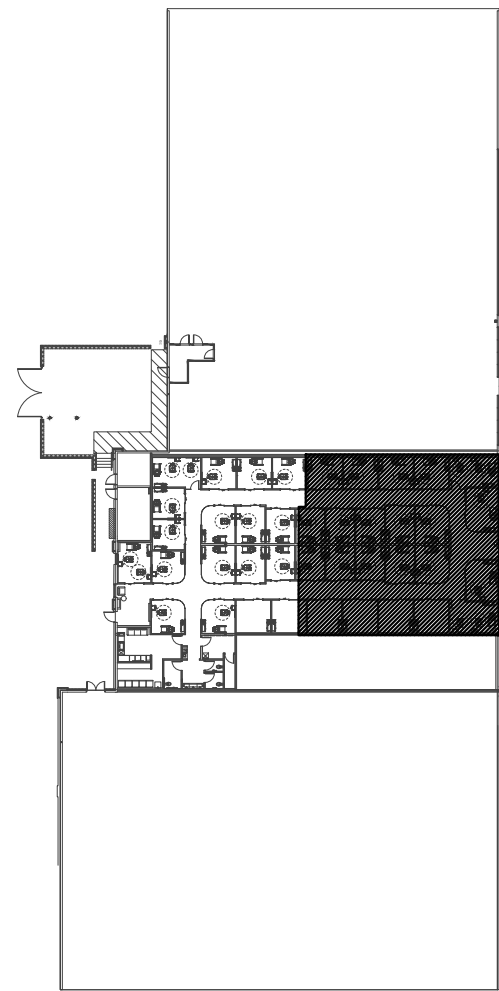
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PLUMBING PLAN NOTES:

- EXISTING COLD WATER LINE TO REMAIN. PLUMBING CONTRACTOR SHALL VERIFY LOCATION OF EXISTING DOMESTIC WATER LINE IN FIELD PRIOR TO BEGINNING OF NEW WORK. TENANT TO SUB-METER WATER AS REQUIRED BY LANDLORD. COORDINATE WITH LANDLORD FOR SUB-METER REQUIREMENT.
- CONNECT 2" CW TO EXISTING DOMESTIC CW AS REQUIRED. VERIFY EXACT LOCATION AND SIZE OF EXISTING WATER LINE PRIOR TO INSTALLATION OF NEW PIPING.
- PROVIDE GAS FIRED WATER HEATER MOUNTED ON WALL UP HIGH JUST BELOW CEILING. MAKE HOT AND COLD WATER PIPING CONNECTIONS THROUGH DIELECTRIC UNIONS. PROVIDE AND INSTALL ALL HARDWARE AND APPURTENANCES FOR COMPLETE INSTALLATION PER APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE THERMAL EXPANSION TANK.
- CONNECT HOT WATER RECIRC. PIPING BACK TO HOT WATER HEATER SYSTEM AS REQUIRED. REFER TO DOMESTIC WATER RISER DIAGRAM FOR MORE INFORMATION.
- CONNECT GAS PIPING TO WATER HEATER AS DETAILED AND AS PER THE MANUFACTURER INSTRUCTION.
- COORDINATE WITH EQUIPMENT SUPPLIER FOR EXACT LOCATION OF WATER STUB UPS FOR SHAMPOO SINK. REFER TO SHAMPOO SINK INSTALLATION DETAIL ON SHEET P302 FOR MORE INFORMATION.
- CONNECT GAS LINE TO EXISTING GAS LINE. FIELD VERIFY ALL EXISTING CONDITIONS. ROUTE NEW 1-1/2" GAS PIPING DOWN THRU ROOF. SEAL PENETRATION WEATHER TIGHT AS REQUIRED.
- ROUTE 1/2" HOT WATER FROM SINK TO DISHWASHER AS REQUIRED BY MANUFACTURER'S INSTRUCTION.
- PROVIDE STORAGE TANK MOUNTED ON WALL UP HIGH. MAKE HOT AND COLD WATER PIPING CONNECTIONS THROUGH DIELECTRIC UNIONS. PROVIDE AND INSTALL ALL HARDWARE AND APPURTENANCES FOR COMPLETE INSTALLATION PER APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS. COORDINATE WITH ARCHITECT AND STRUCTURAL ENGINEER TO PROVIDE PLATFORM TO SUPPORT 80 GALLON STORAGE TANK. APPROXIMATELY 1,000 LBS.
- PROVIDE PROVISION FOR HOT & COLD WATER AND CAP IN WALL FOR CONNECTION TO FUTURE SINK.
- PROVIDE PROVISION FOR HOT & COLD WATER AND CAP IN WALL FOR CONNECTION TO FUTURE CLOTHES WASHER.
- COORDINATE WITH EQUIPMENT SUPPLIER FOR EXACT LOCATION OF WATER STUB UPS FOR HAND SINK.



**KEY PLAN**  
SCALE: NONE

BC PROJECT #: 23615  
MISSOURI PE COA #2009003629

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project number

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drawing issuance

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03/19/24



drawing title

WATER PLAN - EAST

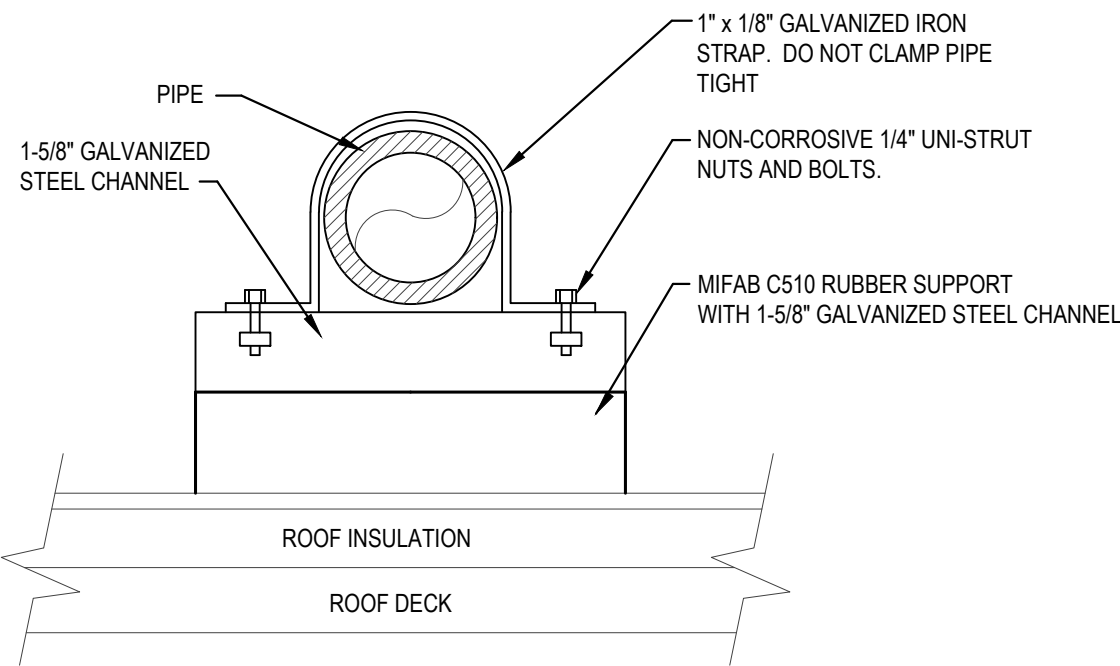
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**P201**



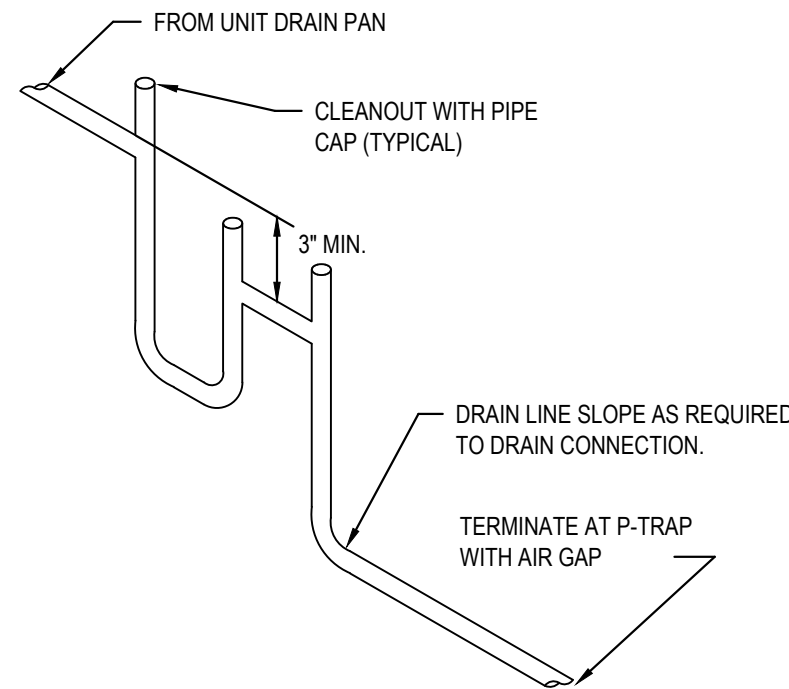
# PLUMBING SYMBOLS

	SOIL AND WASTE PIPING BELOW FLOOR/GRADE
	SOIL AND WASTE PIPING ABOVE FLOOR/GRADE
	SANITARY VENT PIPING ABOVE GRADE
	SANITARY VENT PIPING BELOW GRADE
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	DOMESTIC HOT WATER RECIRCULATION PIPING
	GAS PIPING
	GAS PIPING ON ROOF
	EQUIPMENT DRAIN LINE
	PIPING TURNING DOWN
	PIPING TURNING UP
	TEE TOP CONNECTION
	UNION
	BACKFLOW PREVENTER
	FLOOR DRAIN
	FLOOR CLEAN OUT
	WALL CLEAN OUT
	VALVE
	BALANCING VALVE
	SOLENOID VALVE
	PRESSURE REGULATOR
	CHECK VALVE
	CONNECT TO EXISTING
	I.E. INVERT ELEVATION OF PIPE
	MATCH MARKS ON PLUMBING RISER DIAGRAM
	CHECK VALVE
	THERMOMETER
	PRESSURE GAUGE
	TEMPERATURE AND PRESSURE RELIEF VALVE
	AQUASTAT

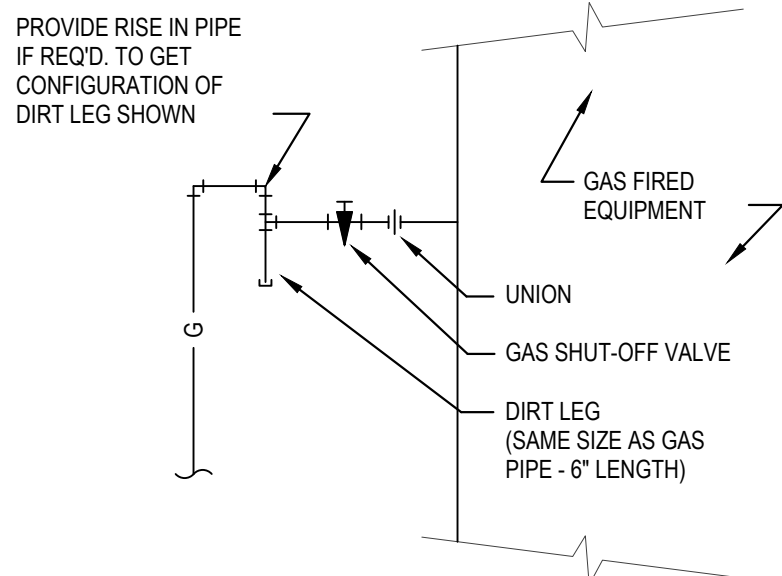


**RUBBER ROOF PIPE SUPPORT DETAIL**  
SCALE: NONE

PIPE HANGER SCHEDULE		
PIPE MATERIAL	MAXIMUM HANGER SPACING	HANGER ROD DIAMETER
ABS (All Sizes)	4'	3/8"
PVC (All Sizes)	4'	3/8"
CPVC, 1 inch and smaller	3'	1/2"
CPVC, 1-1/4 inches and larger	4'	1/2"
Cast Iron (All Sizes)	5'	5/8"
Cast Iron (All Sizes) with 10 foot length of pipe	10'	5/8"
Copper Tube, 1-1/4 inches and smaller	6'	1/2"
Copper Tube, 1-1/2 inches and larger	10'	1/2"
Steel, 3 inches and smaller	12'	1/2"
Steel, 4 inches and larger	12'	5/8"
Pex, 1" and below without support channel	32"	3/8"
Pex, 1-1/4" and above without support channel	48"	3/8"
Pex 3/4" and below with support channel	6'	3/8"
Pex 1" and above with support channel	8'	3/8"

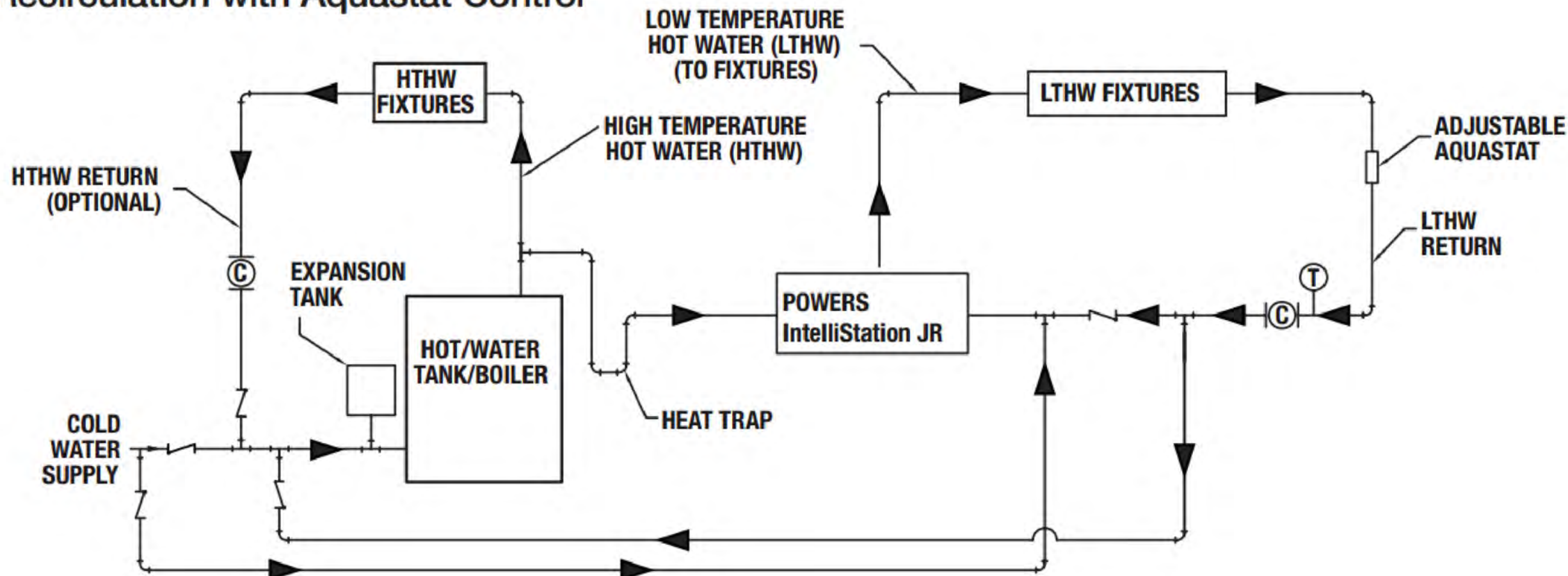


**CONDENSATE DRAIN DETAIL**  
SCALE: NONE



**GAS CONNECTION DETAIL**  
SCALE: NONE

## Recirculation with Aquastat Control



## PLUMBING DRAINAGE CALCULATIONS

SN	FIXTURE	QTY.	FIXTURE UNIT	TOTAL FIXTURE UNIT
1	WATER CLOSET (FLUSH VALVE)	3	6	18
2	LAVATORY	3	1	3
3	SINK - BREAKROOM	1	2	2
4	MOP BASIN	1	2	2
5	WASHER BOX	4	2	8
6	SINK - STUDIO	40	1	40
7	SINK - SHAMPOO	34	2	68
8	WATER COOLER	1	0.5	0.5
9	FLOOR DRAIN/SINK	4	2	8
TOTAL				149.5 FU

WASTE MAINS - 4"  
VENT VAINS - 4"

## PLUMBING FIXTURE WATER COUNT

SN	FIXTURE	QTY.	CW FU	CW TOTAL FU	HW FU	HW TOTAL FU	COMBINED FU	TOTAL COMBINED FU
1	WATER CLOSET (FLUSH VALVE)	3	10	30	0	0	10	30
2	LAVATORY	3	1.5	4.5	1.5	4.5	2	6
3	SINK - BREAKROOM	1	2.25	2.25	2.25	2.25	3	3
4	MOP BASIN	1	2.25	2.25	2.25	2.25	3	3
5	WASHER BOX	4	2.25	9.00	2.25	9.00	3	12
6	SINK - STUDIO	40	1.5	60.0	1.5	60.0	2	80
7	SINK - SHAMPOO	34	2.0	68.0	2.0	68.0	3	102
8	ICE BOX	2	0.25	0.50	0	0	0.25	0.50
9	WATER COOLER	1	0.25	0.25	0	0	0.25	0.25
TOTAL				176.75	146.00	146.00		237 FU

COLD WATER MAIN 2"  
HOT WATER MAIN 1-1/2"

## GAS DEMAND SCHEDULE

EQUIPMENT		GAS INPUT (BTUH)	
SN	ITEM	NEW	EXISTING
1	WATER HEATER - 1	199,000	
2	WATER HEATER - 2	199,000	
3	WATER HEATER - 3	199,000	
4	WATER HEATER - 4	199,000	
5	RTU - 4	108,000	
6	DOAS UNIT - 1	348,000	
7	RTUs - 1-3	660,000	
TOTAL BTU/HR		1,912,000	0
NEW TOTAL BTU/HR (EXISTING AND NEW)		1,912,000	
NEW TOTAL CFH (EXISTING AND NEW)		1,912	
MAXIMUM DEVELOPMENT LENGTH >		150 FT	

NOTE  
GAS LINE SIZED AS PER TABLE 402.4(2) OF IFG FOR PRESSURE OF 7" W.C.

### PLUMBING GENERAL NOTES:

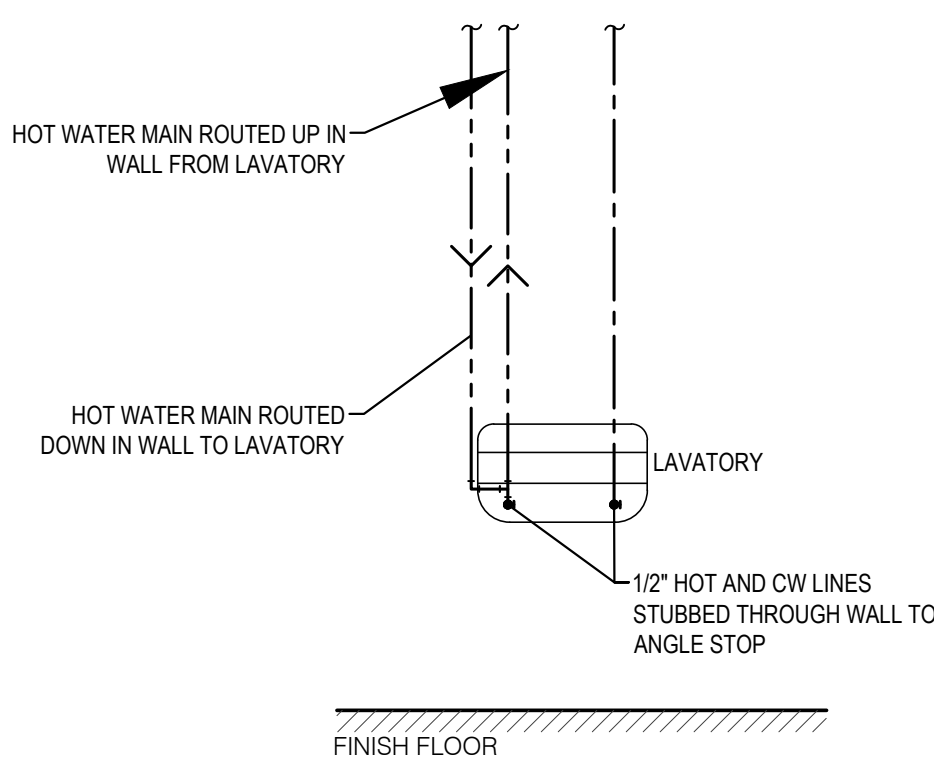
- INSTALL ALL PIPE, ETC. AS HIGH AS POSSIBLE.
- COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF FIXTURES.
- SAWCUT EXISTING FLOOR AS REQUIRED FOR INSTALLATION OF UNDERFLOOR PIPING. PATCH FLOOR TO MATCH EXISTING.
- NO PIPING SHALL BE ROUTED OVER THE TOP OF ELECTRICAL PANELS.
- CONTRACTOR TO TEST WATER PRESSURE ON SITE AND PROVIDE PRESSURE REDUCING VALVE ON WATER SERVICE IF PRESSURE IS OVER 80 PSI.

### PEX PIPING REQUIREMENTS

PIPE SIZES GIVEN ON THE DRAWINGS ARE NOMINAL COPPER PIPE SIZE. IF PEX PIPING IS USED, INCREASE PEX PIPING ONE SIZE ABOVE LISTED SIZES AS REQUIRED TO EQUAL OR EXCEED COPPER PIPE INSIDE DIAMETER. FOR ALL SUPPLY MAINS AND RECIRCULATION LOOPS.

PLUMBING FIXTURE BRANCH PIPING SCHEDULE				
FIXTURE	WASTE	VENT	CW	HW
WATER CLOSET (FLUSH VALVE)	4"	2"	1"	--
LAVATORY	1-1/4"	1-1/4"	1/2"	1/2"
SINK	1-1/2"	1-1/2"	1/2"	1/2"
FLOOR DRAIN	2"	2"	--	--
MOP BASIN	2"	2"	3/4"	3/4"
ELECTRIC WATER COOLER (BI-LEVEL)	1-1/2"	1-1/2"	1/2"	--
WASHER BOX	1-1/2"	1-1/2"	1/2"	1/2"

NOTE: INDIVIDUAL VENTS FOR FIXTURES ON PLANS AND RISER DIAGRAMS HAVE BEEN INCREASED WHERE HORIZONTAL VENT LENGTH IS IN EXCESS OF THE MAXIMUM DISTANCE INDICATED BY THE CODE.



**LAVATORY HOT WATER DETAIL**  
SCALE: NONE

### PLUMBING FIXTURE SCHEDULE:

WC	WATER CLOSET: KOHLER, #K-96053, ELONGATED BOWL, FLOOR MOUNTED, FLOOR OUTLET, VITREOUS CHINA, SIPHON-JET ACTION, SLOAN 111 MANUAL VALVE, 1.28 GAL/FLUSH, #SC534 OPEN FRONT ELONGATED SEAT WITH CHECK HINGE AND LESS COVER, CHROME PLATED ANGLE STOP AND RISER.
HWC	HANDICAP WATER CLOSET: KOHLER, #K-96057, FLOOR MOUNTED, FLOOR OUTLET, 16-1/2" HIGH ELONGATED BOWL, VITREOUS CHINA, SIPHON-JET ACTION, SLOAN 111 MANUAL VALVE, 1.28 GAL/FLUSH, #SC534 OPEN FRONT SEAT WITH CHECK HINGE AND LESS COVER, CHROME PLATED ANGLE STOP AND RISER. HANDLE ON WIDE SIDE OF FIXTURE.
L1	HANDICAP LAVATORY, UNDERMOUNT: TOTO #LT1535G, 17-11/16" x 13", VITREOUS CHINA, FRONT OVERFLOW, SLOAN EAF 250-ISM CP BATTERY OPERATED FAUCET, OFFSET GRID ELBOW DRAIN AND 1-1/4" TAILPIECE, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT (MOUNTED PARALLEL WITH WALL), CHROME PLATED LOOSE KEY ANGLE STOPS AND RISERS.
S1	BREAK ROOM SINK, SINGLE COMPARTMENT: RUVATI 33-INCH LOW-DIVIDE UNDERMOUNT TIGHT RADIUS 60/40 DOUBLE BOWL, 16 GAUGE, STAINLESS STEEL - RVH7419, AMERICAN STANDARD "EDGEWATER" #4932300.002 GOOSE NECK FAUCET, PULL OUT SPRAY, SWIVELING SPOUT, SINGLE LEVER HANDLE, AERATOR, #LK-35 BASKET STRAINER WITH 1-1/2" TAILPIECE, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, IN-SINK-ERATOR#BADGER 5 DISPOSAL, 1/2 HP, 120 VOLT, CHROME PLATED ANGLE STOPS AND RISERS. SINK CUT-OUT IN CASEWORK SHALL BE BY CASEWORK CONTRACTOR.
S2	STUDIO ROOM SINK: SINK PROVIDED BY OTHER. PROVIDE WITH CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, CHROME PLATED ANGLE STOPS AND RISERS.
SS	SHAMPOO SINK: SINK PROVIDED BY OTHER. PROVIDE WITH CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, CHROME PLATED ANGLE STOPS AND RISERS.
EWC	ELECTRIC WATER COOLER, ELKAY, #EZ3TLBWSSK, BARRIER FREE TWO-STATION WATER COOLER WITH BOTTLE FILLING STATION, 8.0 GPM, 50 DEGREES F WATER WITH 90 DEGREES F AIR TEMPERATURE, 120 VOLT, COLOR TO BE SELECTED BY ARCHITECT AFTER AWARD OF CONTRACT, FRONT AND SIDE PUSH BARS, CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT, CHROME PLATED LOOSE KEY ANGLE STOP, FLOOR MOUNTED CARRIER AND CANE APRON.
WB	WASHER BOX: SIOUX CHIEF #696-G2313XF, WASHER BOX WITH 1-1/2" DRAIN OUTLET AND TAILPIECE, BUILT IN WATER HAMMER ARRESTER AND 1/2" HOSE BIBBS.
MB	MOP BASIN: FIAT, #MSB-2424, MOLDED STONE MOP BASIN, 2" DRAIN, 24"X24" BASIN, VINYL BUMPER GUARD, STERN WILLIAMS #T-10-VB FAUCET, SPRING CHECKS, VACUUM BREAKER, INTEGRAL STOPS, WALL BRACE & PAIL HOOK, WALL BRACKET WITH 30" HOSE.
FD	FLOOR DRAIN: JR SMITH, #2005-A, CAST IRON FLOOR DRAIN WITH ADJUSTABLE TOP AND 6" NIKALOV STRAINER. PROVIDE WITH #2892 QUAD CLOSE TRAP SEAL DEVICE.
HHW1	HOT WATER HEATER: RINNAI, #CU199, GAS FIRED, 96% THERMAL EFFICIENCY, INSTANTANEOUS HEATER, 199 MBTUH INPUT, 4 GPM AT 100 DEGREES F RISE. PROVIDE WITH WALL MOUNTING BRACKET, PRESSURE RELIEF VALVE, CONDENSATE DRAIN HOSE, CONDENSATE NEUTRALIZER, VENT TERMINATORS. INTERCONNECTION CABLES FOR CASCADING.
HHW2	
HHW3	
HHW4	
ST	HOT WATER STORAGE TANK: AO SMITH, #TJ-80A, 80 GALLON INSULATED STORAGE TANK, 160 PSI WORKING PRESSURE, (4) 2" THREADED CONNECTIONS, THERMOMETER, THERMOWELL, RELIEF VALVE, AND DRAIN VALVE, R12.5 INSULATION.
ET	HOT WATER EXPANSION TANK: AMTROL, #ST-12, 4.4 GALLON EXPANSION TANK WITH DIAPHRAGM.
RCP-1	HOT WATER RECIRCULATING PUMP: BELL & GOSSETT, #SERIES NBF-10, 3 GPM @ 10 FT. HEAD, 1/12 HP, 120 VOLT, WITH AQUASTAT & TC-1 TIMER KIT.
RCP-2	TACO 0013-SF3 12 GPM @ 23' TOTAL HEAD, STAINLESS STEEL CONSTRUCTION, 1/6 HP, 120V. PROVIDE AQUASTAT WITH THERMOWELL FOR TANK AND TC-1 TIMER KIT.
MV	MIXING VALVE: WATTS INTELLISTATION JR, DIGITAL WATER MIXING VALVE, #LFIS100VL, 0.5-61 GPM, 0.5 GPM MINIMUM FLOW CAPACITY, 1" INLET, 1-1/4" OUTLET, WITH INLET AND OUTLET THERMOMETERS, 1/6 HP, INTEGRAL CHECK VALVES, WFI ENABLED, 3.3" COLOR TOUCH SCREEN, 125 PSI MAXIMUM OPERATING PRESSURE, ASSE 1017 CERTIFIED, SET AT 125°F, 110V.
MV1	MIXING VALVE: WATTS, #LFUSG-B, THERMOSTATIC CONTROLLED MIXING VALVE, LEAD FREE BRONZE BODY, LOCKED TEMPERATURE ADJUSTMENT CAP (VANDAL RESISTANT), COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH BRASS SHUTTLE, STAINLESS STEEL SPRINGS, INTEGRAL CHECK VALVES ON HOT AND COLD INLETS. (SET TO 110°F). ASSE 1070 LISTED.
IB	ICE BOX: SIOUX CHIEF #696-1000, ICE BOX WITH 1/2" INLET AND CONNECTION AND 1/4-TURN SHUT OFF VALVE.
FCOWCO	VINYL TILE FLOOR: JR SMITH #4140, OR EQUAL. QUARRY TILE FLOOR: JR SMITH #4200, OR EQUAL. CARPETED FLOOR: JR SMITH #4020-Y, OR EQUAL. UNFINISHED FLOOR: JR SMITH #4020, OR EQUAL. WALL: JR SMITH #4472, OR EQUAL, 24" ABOVE THE FLOOR.
FS-1	FLOOR SINK: SIOUX CHIEF, #860 ROUND PVC FLOOR SINK WITH STAINLESS STEEL MESH DEBRIS SCREEN, PVC HALF OPEN STRAINER.



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project title

IMAGE STUDIOS

SUMMIT FAIR

840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number

23060.003

drawing issuance

PERMIT/BID 03.15.24

drawing revisions

No. Description Date:

△ CITY/OWNER COMMENTS 04.16.24

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drawing title

PLUMBING SCHEDULES & DETAILS

drawing number

P300

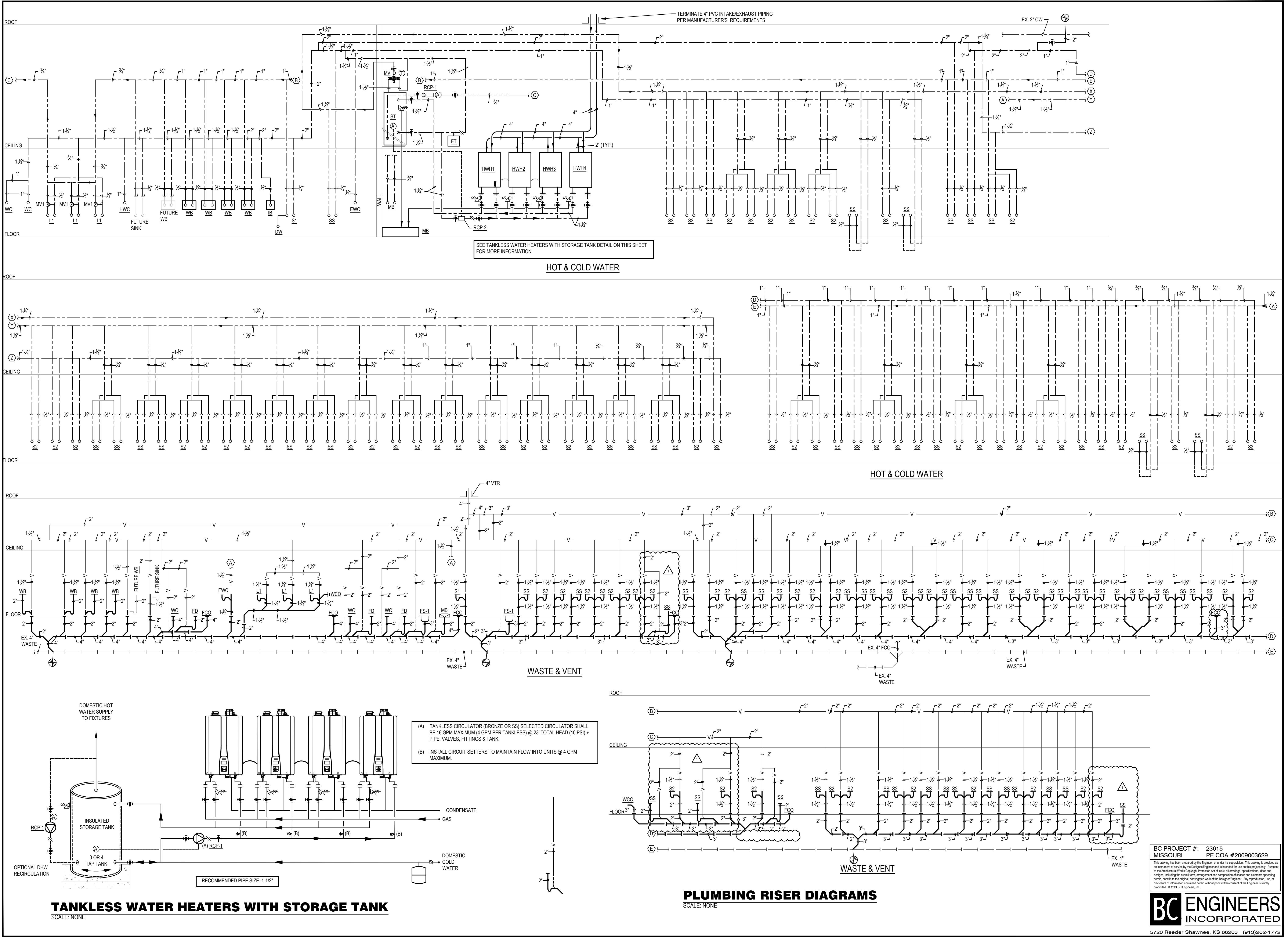
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project title

**IMAGE STUDIOS**  
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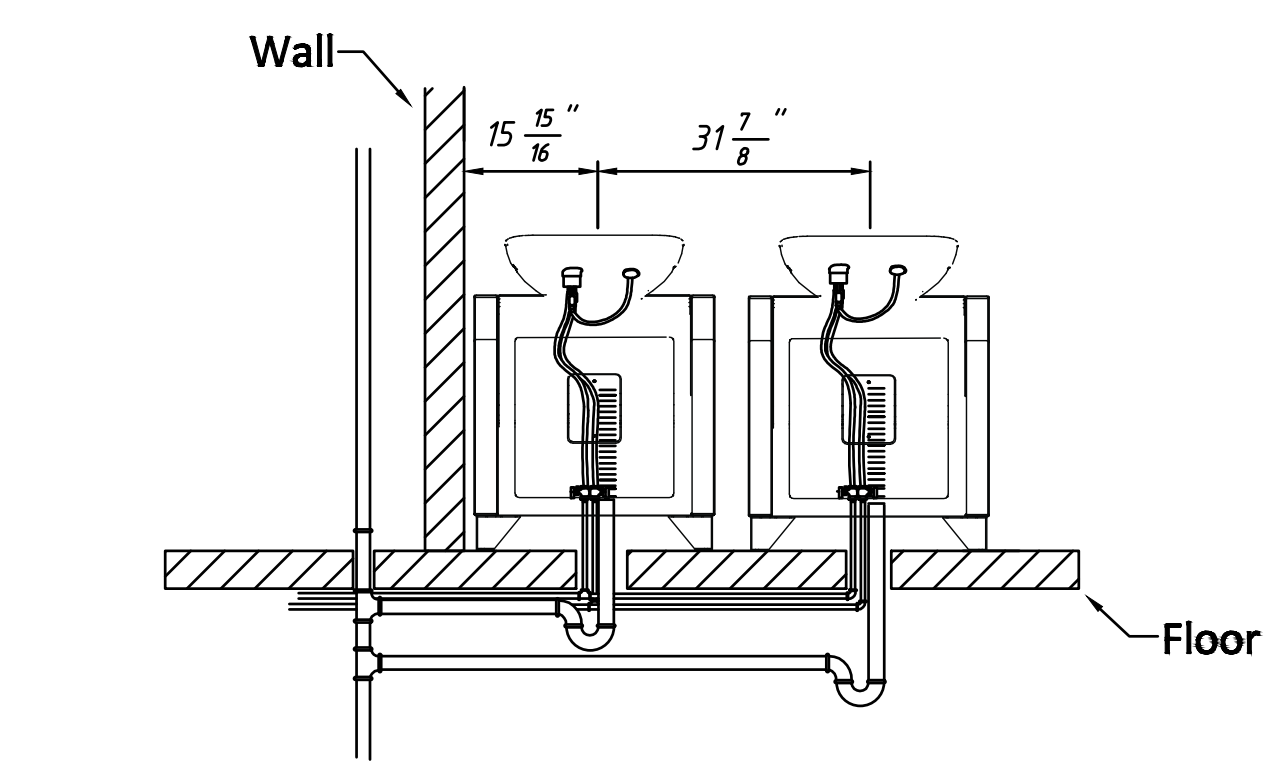
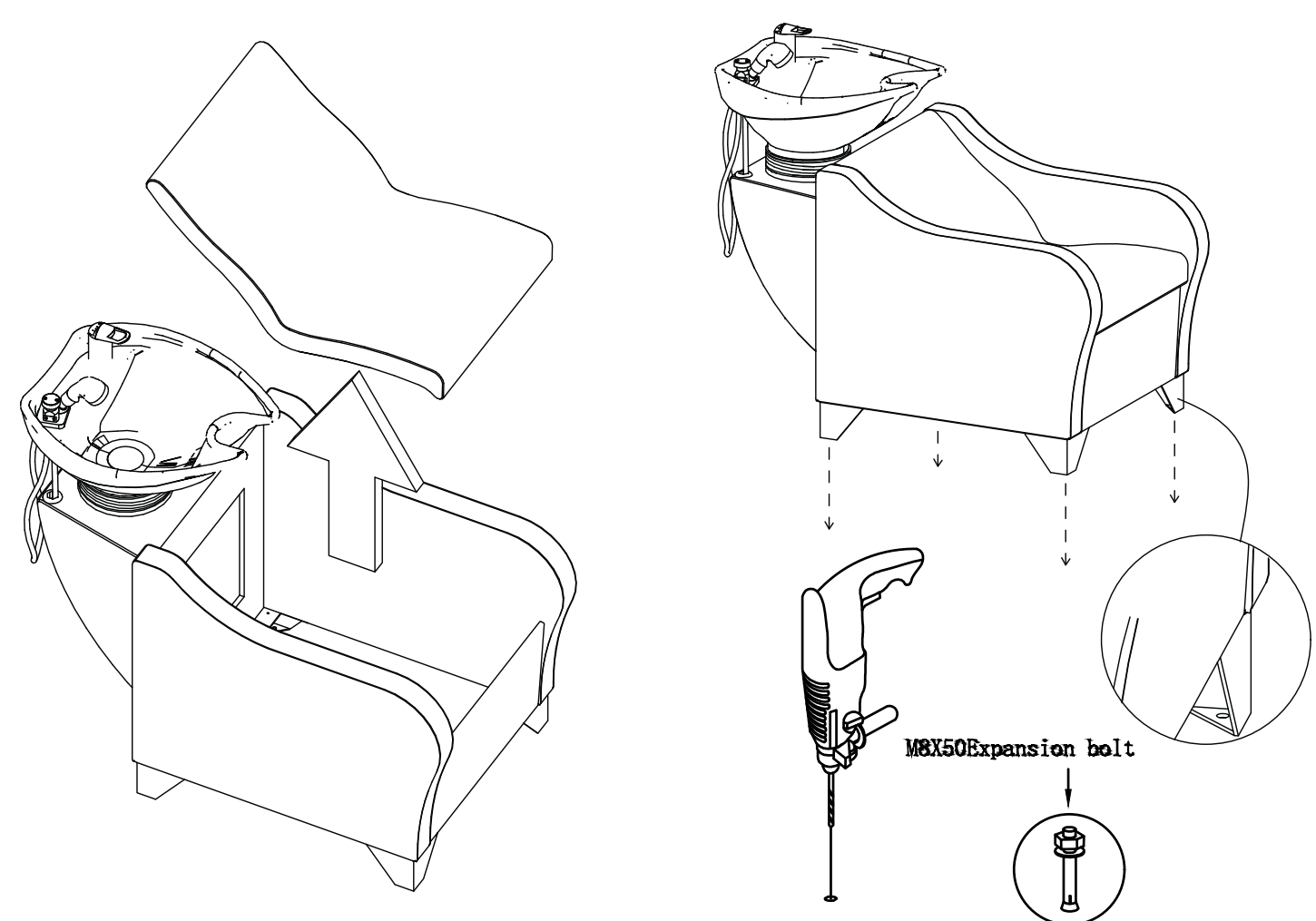
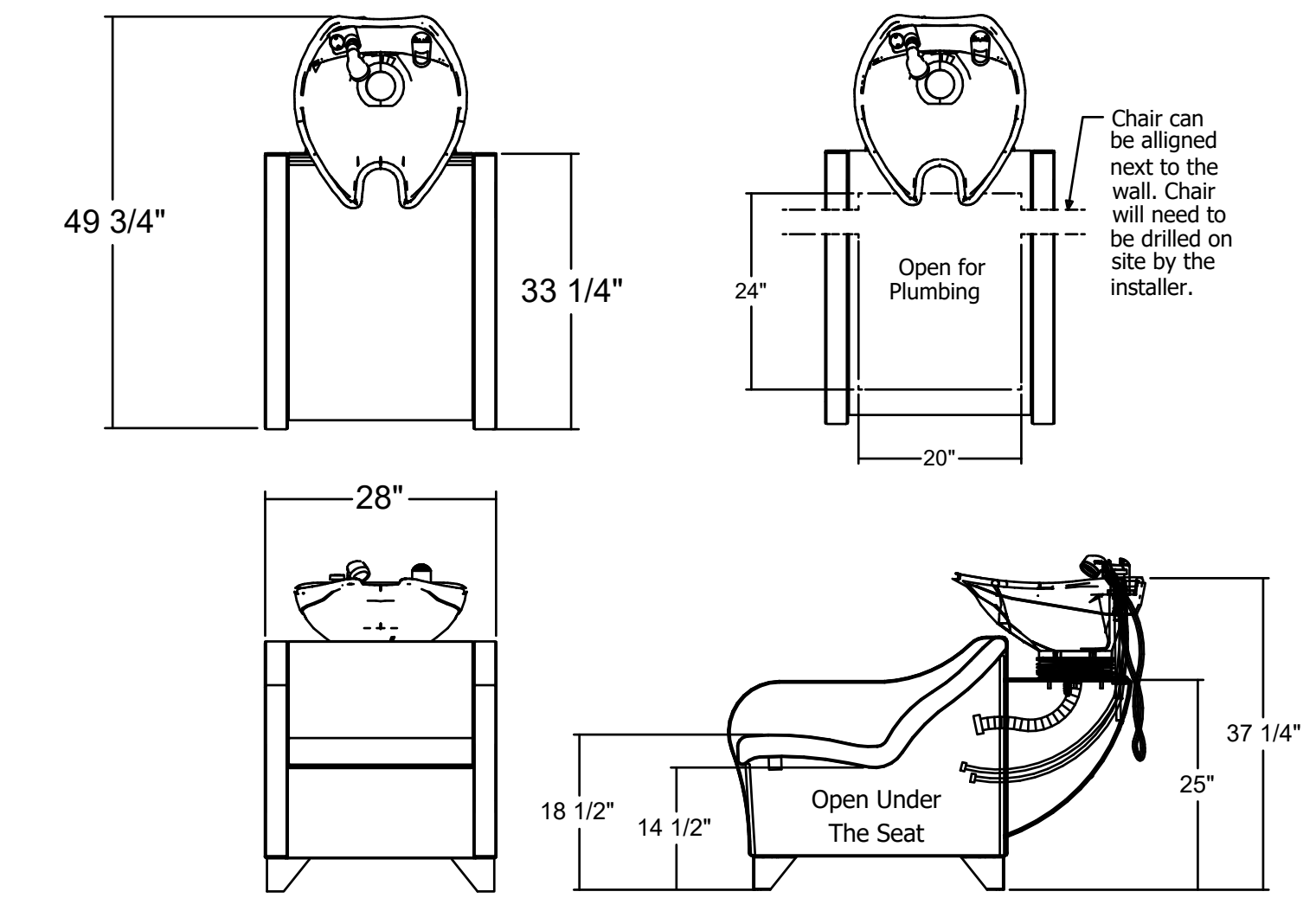
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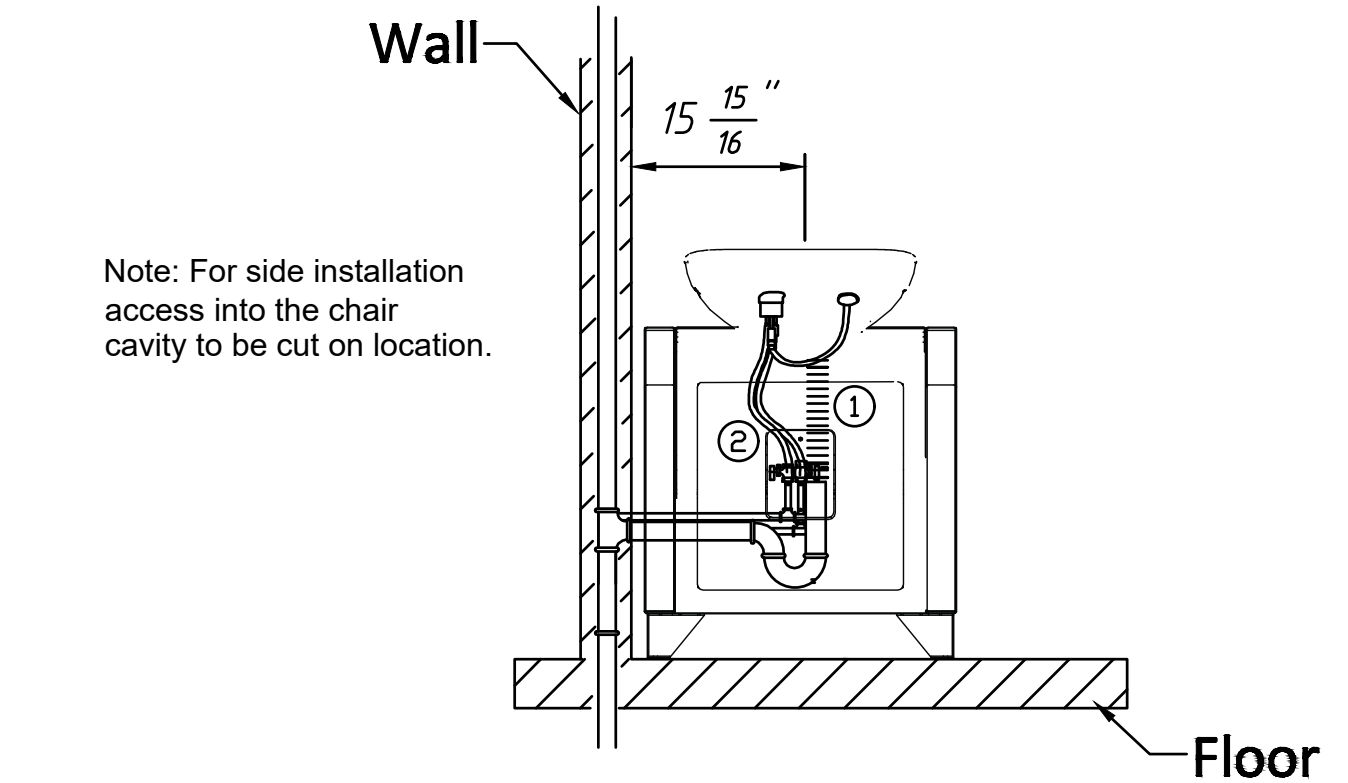
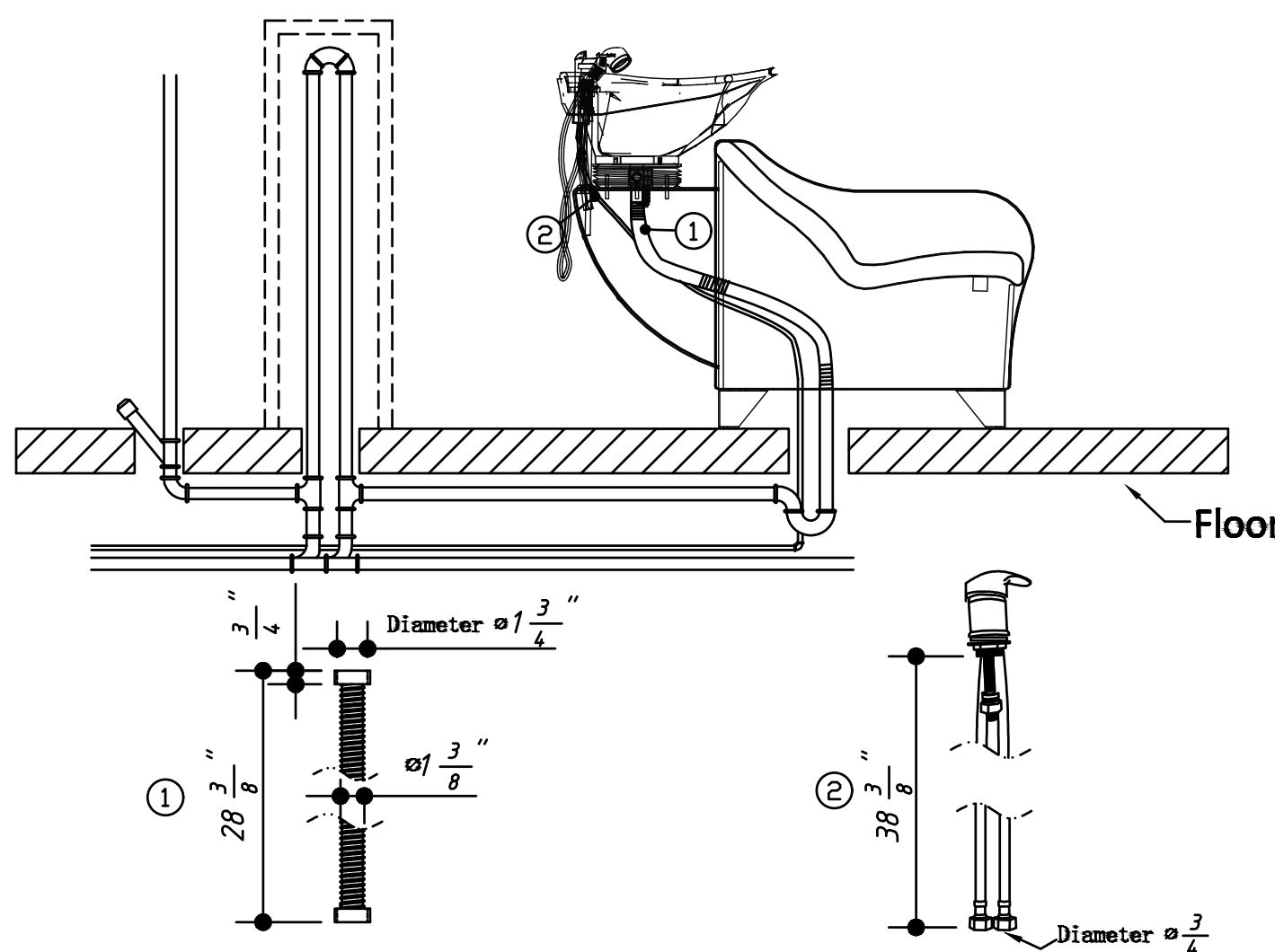
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PLUMBING RISER DIAGRAMS

drawing number  
**P301**

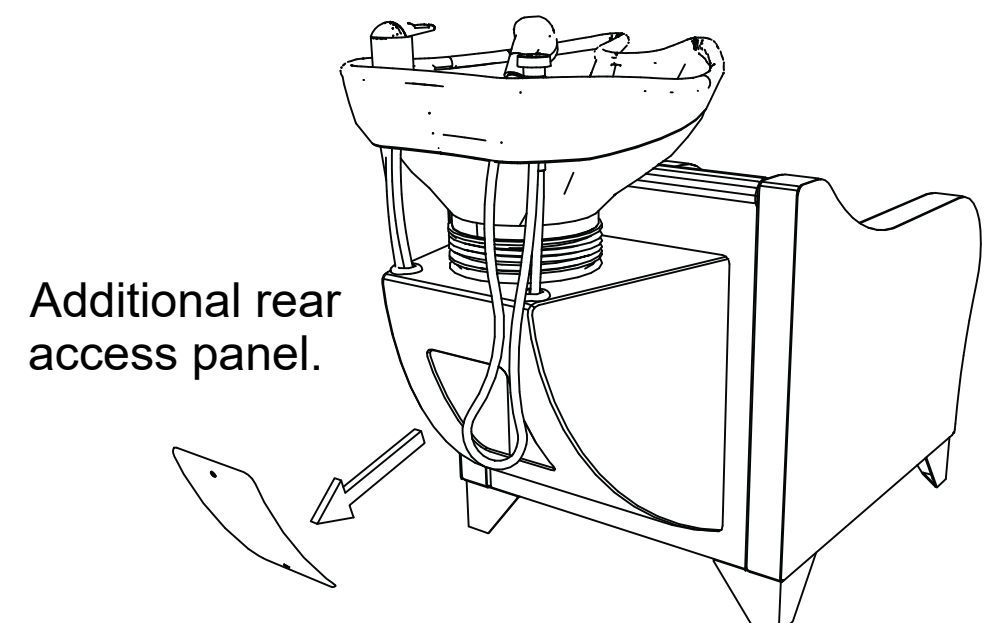
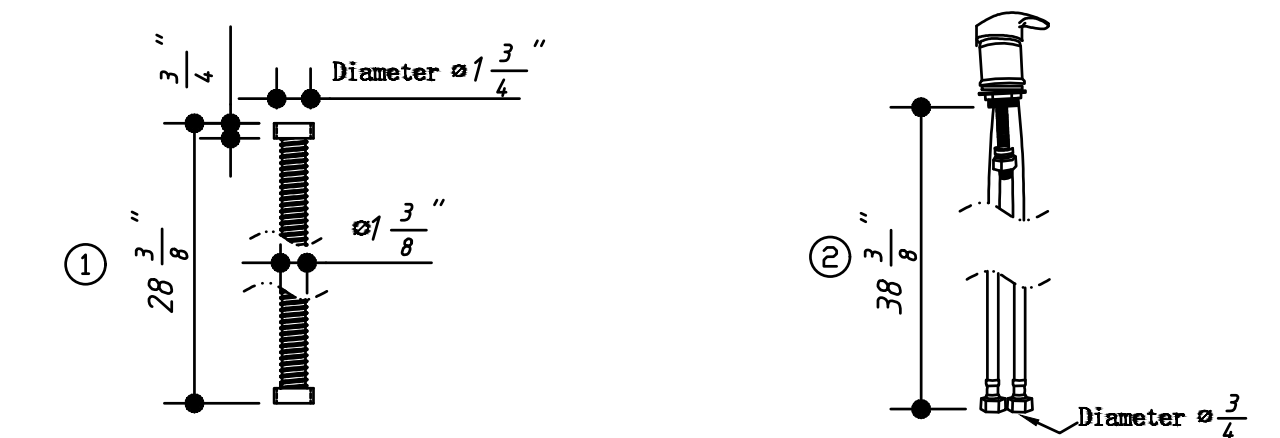




Water pipe installation A.  
Water pipes go all the way inside shampoo base.



Water pipe installation B.  
Side mounted Plumbing



**SHAMPOO SINK INSTALLATION DETAIL**  
SCALE: NONE

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**IMAGE STUDIOS**  
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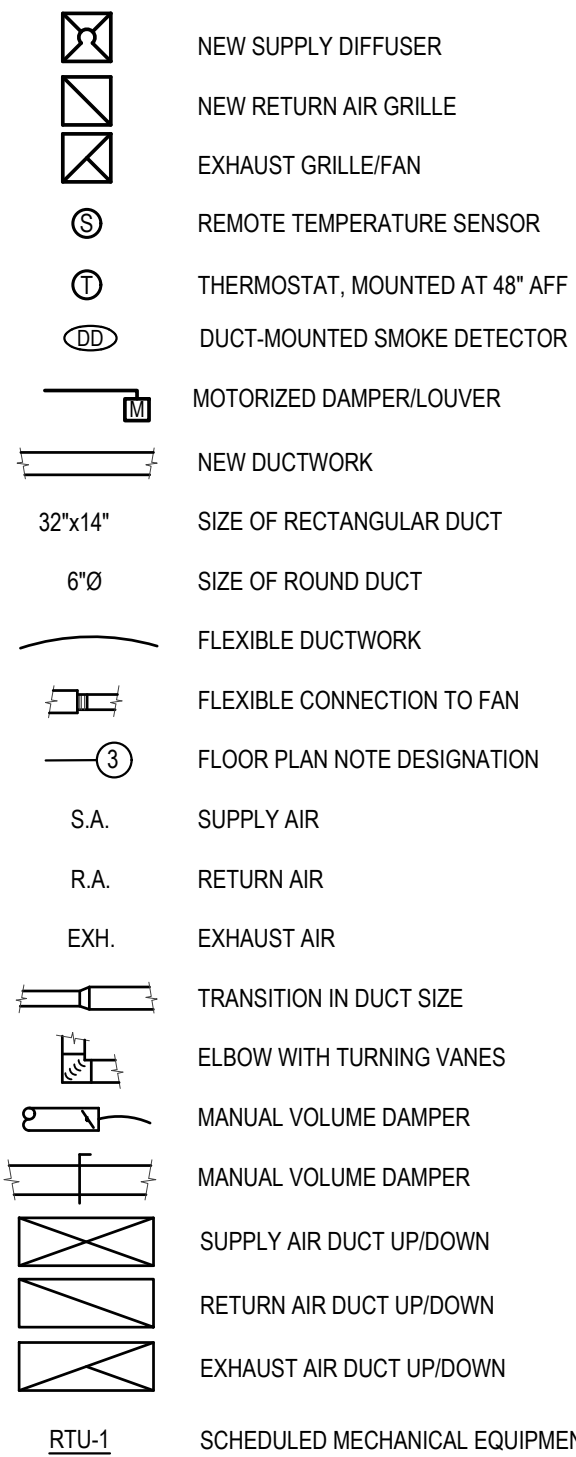
**BRIAN A. QUISSEL**  
LICENSED  
22305  
KANSAS  
PROFESSIONAL ENGINEER

drawing title  
SHAMPOO SINK DETAILS

drawing number  
**P302**



## MECHANICAL SYMBOLS



## MECHANICAL GENERAL NOTES:

- COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
- THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE MECHANICAL SYSTEMS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF DIFFUSERS.
- INSTALL ALL DUCT, PIPE, ETC. AS HIGH AS POSSIBLE.
- DUCT SIZES SHOWN ARE ACTUAL SHEET METAL SIZES AND INCLUDE AN ALLOWANCE FOR DUCT LINER WHERE APPLICABLE.
- PROVIDE FLEXIBLE CONNECTION BETWEEN DUCTWORK AND ROOFTOP UNITS, EXHAUST FANS, AND OTHER MOTORIZED EQUIPMENT.
- NO DUCT SHALL BE ROUTED OVER THE TOP OF ELECTRICAL PANELS.
- ALL MECHANICAL SYSTEMS SHALL BE BALANCED BY A CERTIFIED BALANCING CONTRACTOR. REFER TO SPECIFICATIONS FOR DETAILS.

## MECHANICAL PLAN NOTES:

- EXISTING ROOF TOP UNIT TO REMAIN AS IS. PERFORM PREVENTATIVE MAINTENANCE CHECK AS NOTED ON SHEET M200. CONNECT NEW DUCTWORK TO THE EXISTING DUCT DROPS WITH FLEXIBLE CONNECTIONS.
- EXISTING DUCT DETECTOR TO REMAIN. VERIFY UNIT IS IN PROPER WORKING ORDER. PROVIDE REMOTE ENUNCIATOR AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
- ALL SUPPLY DUCTWORK EXPOSED IN OPEN CEILING AREA SHALL BE INTERNALLY LINED. PREP DUCTWORK FOR PAINT.
- CONNECT VENTILATION SUPPLY DUCT TO THE RTU RETURNS AND CONNECT WITH A BALANCING DAMPER. REFER TO SCHEDULE FOR OUTDOOR AIR VOLUME.
- PROVIDE DUCT DETECTOR IN LOCATION SHOWN. PROVIDE REMOTE ENUNCIATOR AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
- LOCATION OF LOCAL HMI FOR THE DOAS UNIT. THE DOAS UNIT SHALL OPERATE IN DISCHARGE AIR TEMPERATURE CONTROL AND ENGAGE HEATING, COOLING OR DEHUMIDIFICATION BASED ON THE SET POINTS IN THE SEQUENCE OF OPERATION BELOW. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE A JUNCTION BOX AND CONDUIT FOR THE HMI.
- THERMOSTATS FOR RTU'S 1-4. PROVIDE NEW WIFI COMPATIBLE THERMOSTATS WITH REMOTE SENSORS FOR RTU-1, 2, 3.
- LOCATION OF TEMPERATURE SENSOR FOR RTU. MOUNT SENSOR 48" ABOVE THE FINISHED FLOOR.
- PROVIDE SOUND ABSORBING FLEX DUCT SOUND BOOT FOR EACH SUITE AS DETAILED. PROVIDE FLEXFLOW ELBOW. INSTALL AS DETAILED & AS REQUIRED BY THE MANUFACTURER.
- PROVIDE DRYERBOX #425 FOR EACH DRYER. CONNECT 4"Ø METALLIC FLEX DUCT TO DRYER VENT BOX AS REQUIRED BY THE MANUFACTURER.
- DRYER EXHAUST DUCT SHALL BE CONSTRUCTED OF METAL NOT LESS THAN 0.016 INCH IN THICKNESS. SUPPORT DRYER DUCT AT 4 FT. INTERVAL AND SEALED JOINTS AS SPECIFIED.
- ROUTE 4" DRYER EXHAUST DUCT THROUGH WALL AT 12" AFF. MAINTAIN 10" CLEARANCE FROM ALL OUTDOOR AIR INTAKES.
- CUT EXISTING ROOF AND FLASH INTO ROOF AS REQUIRED. ALL ROOFING WORK SHALL BE PERFORMED BY BUILDING OWNERS ROOFING CONTRACTOR (AT THIS CONTRACTOR'S EXPENSE) TO MAINTAIN EXISTING ROOF WARRANTY. VERIFY APPROVED ROOFING CONTRACTOR WITH BUILDING OWNER PRIOR TO PERFORMING WORK.
- 

## SEQUENCE OF OPERATION

## RTU SEQUENCE OF OPERATION:

## A. PACKAGED ROOFTOP UNITS

- UNIT SHALL CONSIST OF SUPPLY AIR FAN, FILTERS, DX COOLING COIL, GAS-FIRED HEAT SECTION, AND A 7-DAY PROGRAMMABLE THERMOSTAT WITH BACNET CONNECTION TO THE CENTRAL CONTROLLER.
- PROVIDE AN OVERRIDE CONTROL TO OPERATE THE UNIT DURING UNOCCUPIED HOURS. THIS CONTROL SHALL BE PART OF THE PROGRAMMABLE THERMOSTAT. OVERRIDE SWITCH ALLOWS THE UNIT TO OPERATE FOR TWO HOURS (ADJUSTABLE).
- OCCUPIED MODE: BASED ON THE ROOFTOP UNIT'S HOURS OF OCCUPANCY, START THE UNIT AT THE BEGINNING OF OCCUPANCY AND SHUT DOWN THE UNIT AT THE END OF OCCUPANCY (NOTE: OUTSIDE AIR DAMPER WITHIN THE RTU SHALL OPEN AND THEN THE RTU SHALL START). THE UNIT SHALL START EARLIER AS DETERMINED BY THE PROGRAM FOR EARLY WARMUP OR COOL DOWN. ON A SYSTEM STARTUP, THE RTU FAN SHALL START AND RUN CONTINUOUSLY. BASED ON THE SPACE TEMPERATURE SENSOR, THE UNIT SHALL CYCLE THE HEATING/COOLING TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. THE 2 SPEED SUPPLY FAN (RTU-4) SHALL REDUCE TO LOW SPEED WHEN THE UNIT IS IN FIRST STAGE HEATING OR COOLING MODE TO OPERATE THE UNIT IN SINGLE ZONE VAV MODE.
  - ECONOMIZER MODE: WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS BELOW 55° OR HAS AN ENTHALPY BELOW 28 BTU/LB, ECONOMIZER MODE SHALL BE ENABLED. ECONOMIZER MODE SHALL LINEARLY MODULATE OUTDOOR AIR CFM FROM MINIMUM OA CFM TO 100% BASED ON ENTHALPY READINGS.
- UNOCCUPIED MODE: THE RTU INTERNAL OA DAMPERS SHALL REMAIN CLOSED WHEN THE BUILDING IS NOT OCCUPIED. THE RTU SHALL STOP HEATING/COOLING AND THE FAN SHALL STOP. BASED ON THE SPACE TEMPERATURE SENSOR, THE UNIT SHALL CYCLE THE HEATING/COOLING TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. THE 2 SPEED SUPPLY FAN (RTU-4) SHALL REDUCE TO LOW SPEED WHEN THE UNIT IS IN FIRST STAGE HEATING OR COOLING MODE.
- UPON DETECTION OF SMOKE BY UNIT SMOKE DETECTOR ALL RTUS SHALL SHUT DOWN AND AN ALARM SHALL BE SENT TO THE FIRE ALARM CONTROL PANEL (WHERE APPLICABLE). LOCAL REMOTE ANNUNCIATORS SHALL ALSO BE ACTIVATED.

## DOAS SEQUENCE OF OPERATION:

- THE SUPPLY / EXHAUST FAN SHALL RUN CONTINUOUSLY DURING OPERATION HOURS. THE SUPPLY / EXHAUST FAN SHALL SHUT & THE OUTSIDE AIR DAMPER SHALL BE CLOSED DURING UNOCCUPIED HOURS.
- HEATING - THE UNIT SHALL ACTIVATE HEATING WHEN THE INTAKE TEMPERATURE DROPS BELOW 45 DEG F. THE HEATING DISCHARGE TEMPERATURE SHALL BE 55 DEG F.
- COOLING - THE UNIT SHALL ACTIVATE COOLING WHEN THE INTAKE TEMPERATURE RISES ABOVE 65 DEG F. THE COOLING DISCHARGE TEMPERATURE SHALL BE 55 DEG F.
- DEHUMIDIFICATION - THE UNIT SHALL ACTIVATE DEHUMIDIFICATION WHEN THE INTAKE CONDITIONS RISE ABOVE 56 DEG F AND THE DEW POINT IN THE SPACE RISES ABOVE 56 DEG F WB.

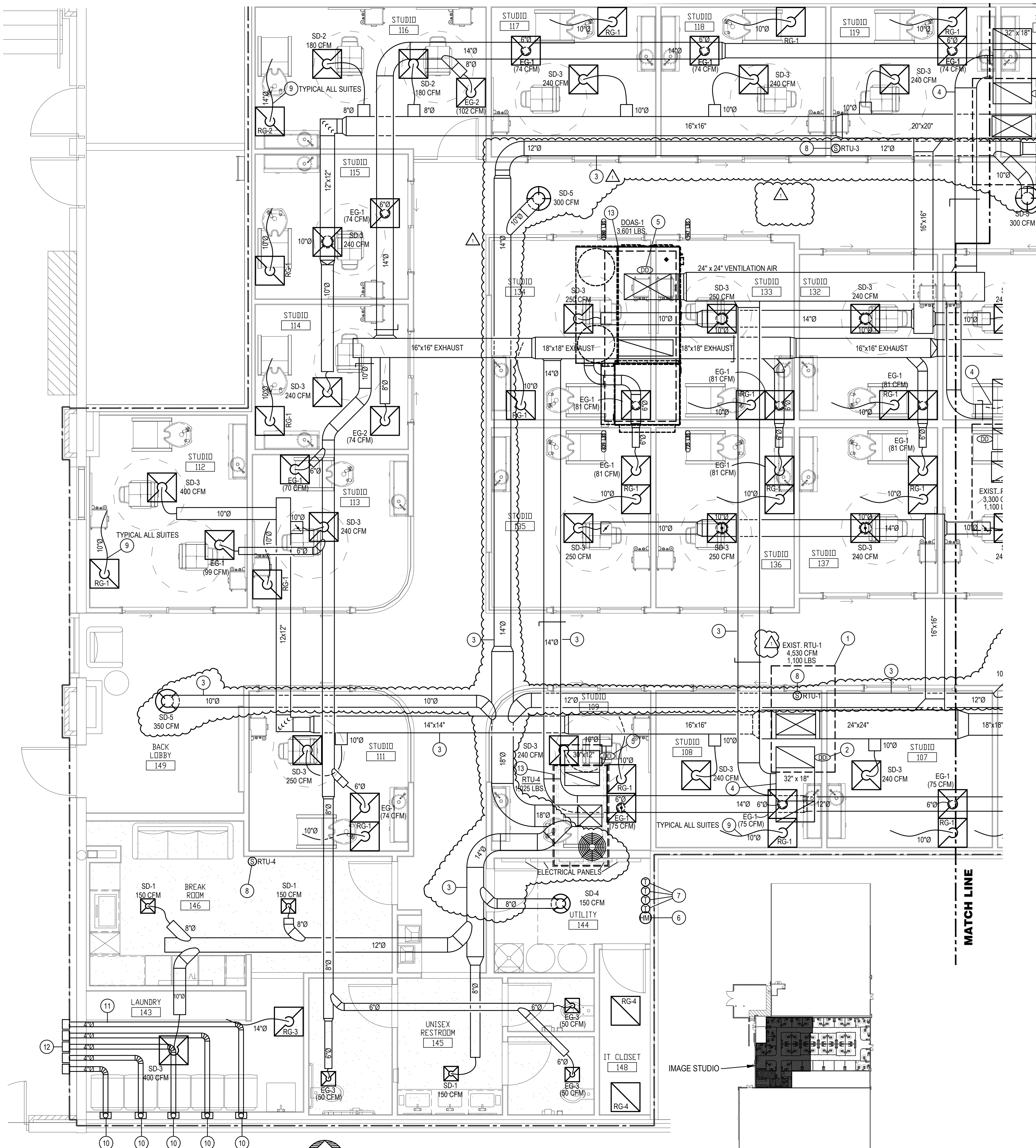
## BUILDING TEMPERATURE SET POINTS

OCCUPIED MODE ZONE SET POINTS (5° DEADBAND)  
COOLING SET POINT 75°F (ADJUSTABLE)  
HEATING SET POINT 70°F (ADJUSTABLE)


UNOCCUPIED MODE ZONE SET POINTS  
COOLING SET POINT 78°F (ADJUSTABLE)  
HEATING SET POINT 65°F (ADJUSTABLE)

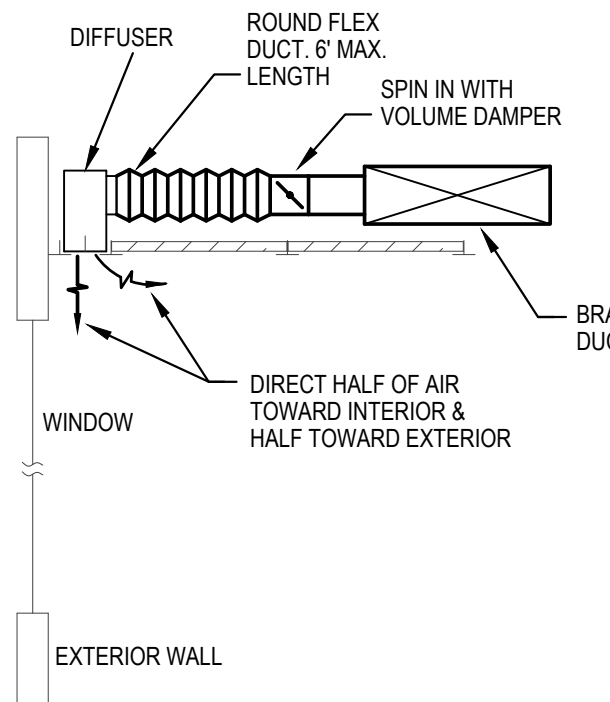
THE MECHANICAL CONTRACTOR SHALL ENSURE THE SYSTEMS ARE WIRED, INTERLOCKED, PROGRAMMED CORRECTLY, AND FULLY TESTED IN ALL MODES TO ENSURE THESE REQUIREMENTS ARE MET.

THE SYSTEMS SHALL BE BALANCE BY A NEBB CERTIFIED BALANCER, AND SHALL BE STARTED UP BY FACTORY TRAINED PERSONNEL.

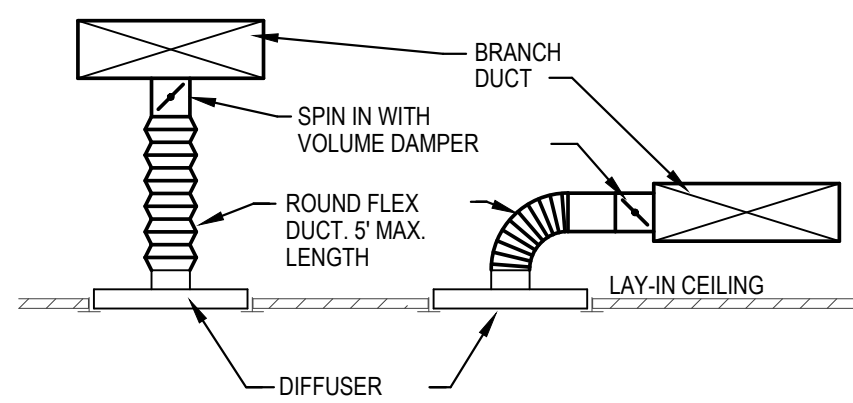




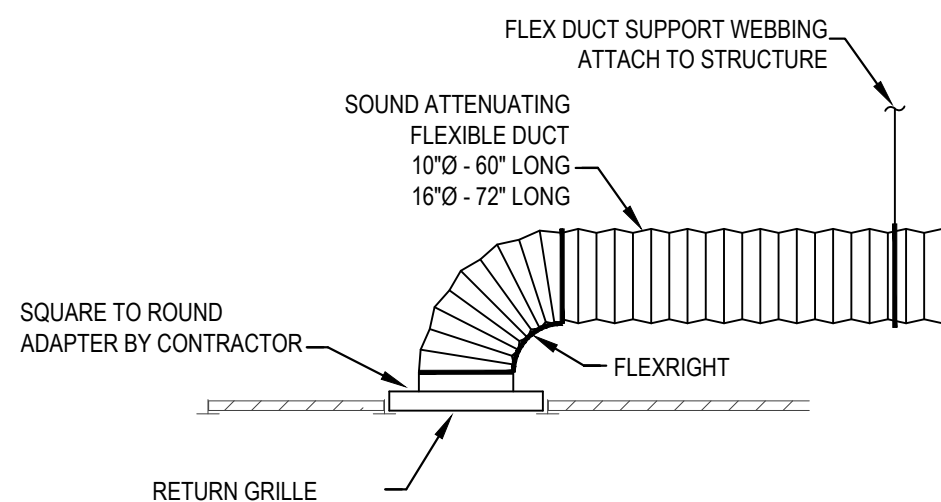
- MECHANICAL PLAN NOTES:**
- EXISTING ROOF TOP UNIT TO REMAIN AS IS. PERFORM PREVENTATIVE MAINTENANCE CHECK AS NOTED ON SHEET M200. CONNECT NEW DUCTWORK TO THE EXISTING DUCT DROPS WITH FLEXIBLE CONNECTIONS.
  - EXISTING DUCT DETECTOR TO REMAIN. VERIFY UNIT IS IN PROPER WORKING ORDER. PROVIDE REMOTE ENUNCIATOR AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
  - ALL SUPPLY DUCTWORK EXPOSED IN OPEN CEILING AREA SHALL BE INTERNALLY LINED. PREP DUCTWORK FOR PAINT.
  - CONNECT VENTILATION SUPPLY DUCT TO THE RTU RETURNS AND CONNECT WITH A BALANCING DAMPER. REFER TO SCHEDULE FOR OUTDOOR AIR VOLUME.
  - PROVIDE DUCT DETECTOR IN LOCATION SHOWN. PROVIDE REMOTE ENUNCIATOR AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
  - PROVIDE SOUND ABSORBING FLEX DUCT SOUND BOOT FOR EACH SUITE AS DETAILED. PROVIDE FLEXFLOW ELBOW. INSTALL AS DETAILED & AS REQUIRED BY THE MANUFACTURER.
  - 
  - LOCATION OF TEMPERATURE SENSOR FOR RTU. MOUNT SENSOR 48" ABOVE THE FINISHED FLOOR.



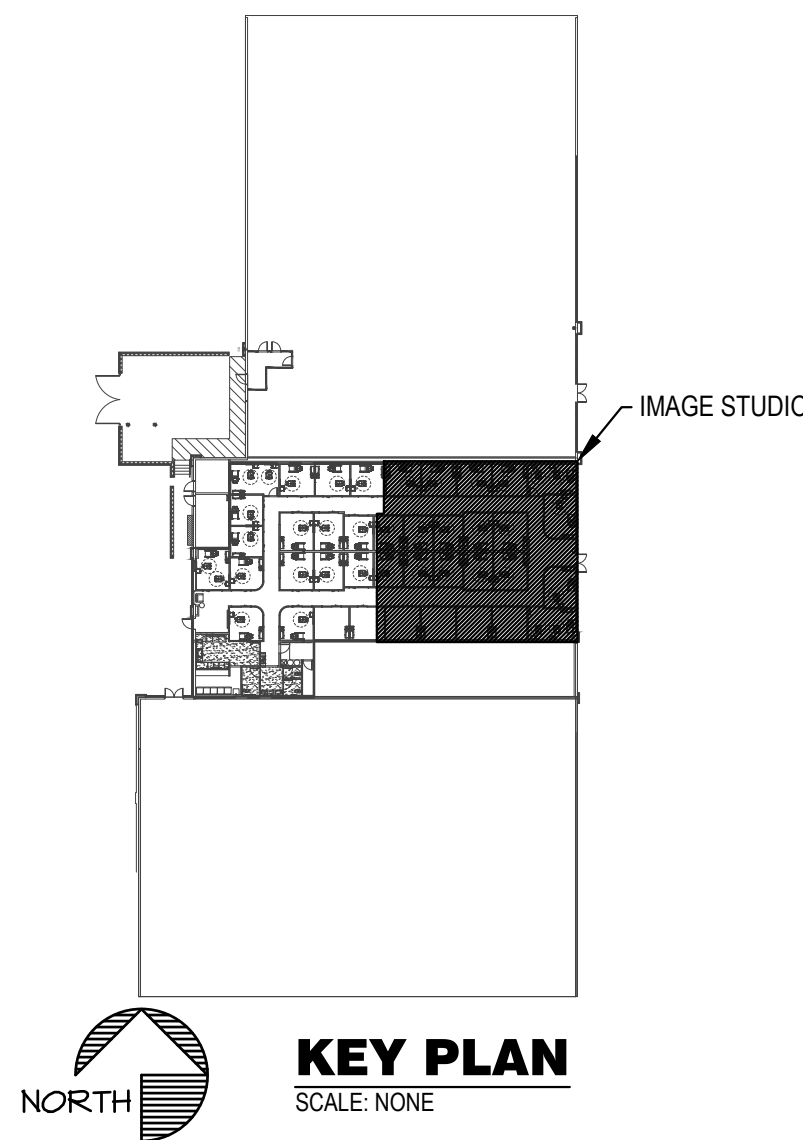
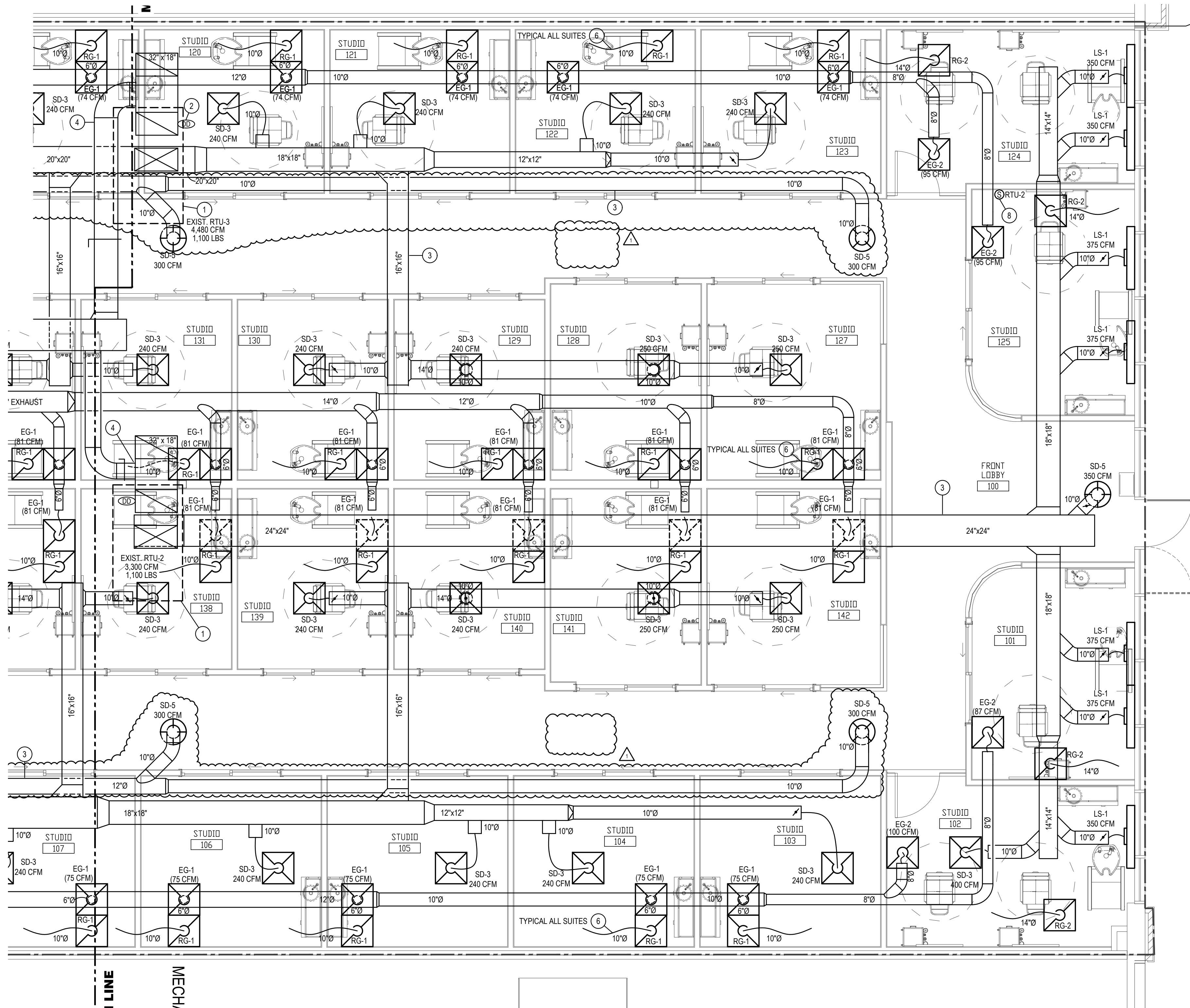
**LINEAR DIFFUSER DETAIL**  
SCALE: NONE



**DIFFUSER DETAIL**  
SCALE: NONE



**ACOUSTICAL RETURN BOOT DETAIL**  
SCALE: NONE



**MECHANICAL PLAN - EAST**  
SCALE: 1/4" = 1'-0"

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drawing title

**MECHANICAL PLAN**  
EAST

drawing number

**M101**



LINEAR DIFFUSER SCHEDULE								
MARK	MFGR	MODEL	# SLOTS	SLOT WIDTH	LENGTH	INLET	FINISH	NOTES
LS-1	TITUS	FTI-20	1	2"	48"	10"	WHITE	1,2

NOTES: 1. PROVIDE INSULATED PLENUM BOX FOR SUPPLY DIFFUSER.  
2. PROVIDE WITH HIGH THROW PATTERN CONTROLLER AND BORDER TYPE 11.

DIFFUSER, REGISTER & GRILLE SCHEDULE						
MARK	MFGR	MODEL	NECK SIZE	FACE SIZE	FINISH	NOTES
SD-1	TITUS	TMS/3	6"Ø	12"x12"	WHITE	1
SD-2			8"Ø	24"x24"		2
SD-3			10"Ø	24"x24"		2
SD-4			8"Ø	18" DIA.		2
SD-5			10"Ø	22.5" DIA.		2
RG-1		PAR/3	10"Ø	24"x24"		
RG-2			14"Ø			
RG-3			14"Ø			WITH GYP FRAME
EG-1		PAR/1	6"Ø	24"x24"		2
EG-2			8"Ø			2
EG-3		PAR/3	6"Ø	12"x12"		1

NOTES: 1. PROVIDE WITH AG-75 OPPOSED BLADE DAMPER IN NECK & GYP FRAME.  
2. PROVIDE WITH AG-75 OPPOSED BLADE DAMPER IN NECK.

EXISTING ROOFTOP UNIT SCHEDULE																		
MARK	MFGR	MODEL NO.	NOM. TONS	EVAP. CFM	EXHAUST CFM	EXT. STATIC P. IN. WG. (NOTE 2)	COOLING				HEATING (GAS)		ELECTRICAL	MINIMUM OUTDOOR AIR (CFM)	TOTAL WEIGHT (LBS)	EER	FREON	REMARKS
							TOTAL BTUH	SENS. BTUH	AMB.	EVAP. EAT DB/WB	BTUH INPUT	BTUH OUTPUT						
RTU-1	TRANE	-	10	4,000	4,000	1.0	113,600	85,200	105	80/67	240,000	192,000	480/3/60	1,744	1,600	12.0	R-410a	-
RTU-2	↓	-	7.5	3,000	3,000	↓	84,100	62,200	↓	↓	180,000	144,000	↓	524	1,525	12.5	↓	↓
RTU-3	↓	-	10	4,000	4,000	↓	113,600	85,200	↓	↓	240,000	192,000	↓	1,732	1,600	12.0	↓	↓

NOTES: EXISTING ROOF TOP UNIT TO REMAIN. INFORMATION PROVIDED FOR REFERENCE ONLY. PERFORM PREVENTATIVE MAINTENANCE CHECK AS LISTED BELOW.

ALL EXISTING HVAC UNITS SHOULD HAVE A PREVENTATIVE MAINTENANCE CHECK-UP TO INCLUDE THE FOLLOWING CRITERIA

- CHANGE ALL FILTERS.
- CLEAN ALL CONDENSATE DRAIN PANS AND FLUSH ALL CONDENSATE DRAIN LINES.
- CLEAN ALL EVAPORATOR AND CONDENSER COILS WITH A NON-ACID CLEANER.
- CHECK REFRIGERANT CHARGE (GUAGES OR RETURNSUPPLY TEMPERATURE VARIANCE).
- PROVIDE COMPLETE LUBRICATION OF ALL SHAFTS AND BEARINGS THAT HAVE LUBRICATION ZERKS.
- THE REPLACEMENT OF ALL BELTS, HOSES AND FABRICRUBBER COATED ITEMS THAT ARE SUBJECT TO WEAR.
- CHECK AMPS OF THE INDOOR, OUTDOOR MOTORS, AND COMPRESSORS
- TURN UNIT POWER OFF - TIGHTEN ALL ELECTRICAL CONNECTIONS, CONTACTORS, ETC.
- EXAMINE AND REPAIR ALL ELECTRICAL WIRING, CONTROLS, STARTERS, RELAYS, CAPACITORS AND LIKE ITEMS THAT TEND TO DETERIORATE OVER TIME OR BECOME NON-OPERATIONAL. THIS INCLUDES SMOKE DETECTORS.
- GREASE ALL FITTINGS
- CHECK DUCTWORK CONNECTIONS AND REPAIR AS NEEDED.
- NOTIFY GENERAL CONTRACTOR OF ANY REQUIRED PARTS OR REPAIRS NOT INCLUDED IN THIS LIST. ALL UNITS SHALL BE FUNCTIONING AND COOLING PROPERLY AT COMPLETION OF JOB.
- CHECK THE ECONOMIZER FOR PROPER FUNCTION AND CORRECT OPERATION OF THE SYSTEM WHEN A CALL FOR COOLING COMES FROM THE THERMOSTAT. REPAIR AND ADJUST AS NEEDED.
- VERIFY ANY WORK REQUIRED BY THE LANDLORD PRIOR TO BID.
- ALL FINDINGS AND VALUES TO BE NOTED AND PROVIDED TO TENANT'S CONSTRUCTION MANAGER & OR TENANT'S MAINTENANCE DIRECTOR.

ROOFTOP UNIT SCHEDULE																											
MARK	MFGR.	MODEL NO.	NOM. TONS	EVAP. CFM	EXT. STATIC P. IN. WG. (NOTE 2)	COOLING					HOT GAS REHEAT	HEATING (GAS)			ELECTRICAL					UNIT CONTROLS	BLOWER DRIVE TYPE	ECONOMIZER + BAROMETRIC RELIEF		MINIMUM OUTDOOR AIR (CFM)	IEER	TOTAL WEIGHT (LBS)	NOTES
						COOLING STAGES	TOTAL BTUH	SENS. BTUH	AMB.	EVAP. EAT DBWB		BTUH INPUT	BTUH OUTPUT	HEATING STAGES	VOLT/Ø/HZ	BLOWER MOTOR	POWER EXHAUST	MCA (AMPS)	MOCP (AMPS)			TYPE	CONTROLLER				
RTU-4	LENNOX	KGB072H4B	6	2,650	1.0	2	67,300	49802	105	80/67	NO	108,000	86,000	2	480/3/60	2 HP	NO	16	20	ELECTRO-MECHANICAL	MSAV	HIGH PERFORMANCE	SENSIBLE	260	15.0	1,025	1,2,3,4,5,6

- NOTES:
- PROVIDE HINGED ACCESS DOORS, SCROLL COMPRESSORS WITH CRANKCASE HEATER, HIGH PRESSURE SWITCHES, FREEZESTAT, HAIL GUARDS. STANDARD COOLING DOWN TO 30°F. OUTDOOR AIR DAMPER TO FULLY CLOSE W/ FAN SHUTDOWN FOR ALL UNITS.
  - EXTERNAL STATIC PRESSURE LISTED REPRESENTS STATIC PRESSURE REQUIRED FOR DUCTWORK AND DIFFUSERS OUTSIDE THE HVAC UNIT COMPLETELY INDEPENDENT OF ANY PRESSURE DROP THROUGH THE HVAC EQUIPMENT INCLUDING BUT NOT LIMITED TO FILTERS, COILS AND ECONOMIZERS. THE FAN AND MOTOR SHALL BE SIZED APPROPRIATELY TO MEET THIS DEFINITION OF EXTERNAL STATIC PRESSURE.
  - PROVIDE COMMERCIAL 7-DAY PROGRAMMABLE HEAT/COOL/AUTO CHANGEOVER TOUCHSCREEN , WIFI COMPATIBLE THERMOSTAT WITH OPTIMUM START CONTROLS, ECONOMIZER OUTPUT FAULT DETECTION INPUT. PROVIDE REMOTE TEMPERATURE. MATCH THERMOSTAT PROVIDED FOR RTU-1, RTU-2, RTU-3. ECONOMIZER/OUTDOOR AIR DAMPER IS TO CLOSE DURING UNOCCUPIED HOURS.
  - PROVIDE 18" HIGH (AT LOWEST POINT) PRE-FABRICATED INSULATED ROOF CURB WITH SLOPE TO MATCH SLOPE OF ROOF FOR EACH UNIT.
  - PROVIDE NEW 2" MERV 8 FILTERS UPON COMPLETION OF CONSTRUCTION.
  - MECHANICAL CONTRACTOR SHALL COORDINATE ALL UNIT MOCP'S OF ACTUAL INSTALLED EQUIPMENT WITH ELECTRICAL CONTRACTOR.

## OUTDOOR AIR CALCULATIONS

UNIT	Area (sqft)	OCCUPANCY CLASSIFICATION	Occupant Density #/1000 sqft	People outdoor airflow rate in breathing zone, (Rp) cfm/person	Area outdoor airflow rate in breathing zone, (Ra) cfm/sqft	Exhaust airflow rate cfm/sqft	Breathing zone outdoor airflow (Vbz)	Zone air distribution effectiveness (Ez)	Zone outdoor airflow (cfm)
RTU-1	2250	Beauty salons	25	20	0.12	0.60	1395	0.8	1744
								Total	1744
RTU-2	140	Corridors	0	0	0.06		8	0.8	11
	637	Beauty salons	25	20	0.12	0.60	395	0.8	494
								Total	504
RTU-3	2235	Beauty salons	25	20	0.12	0.60	1386	0.8	1732
								Total	1732
RTU-4	523	Break Room	25	5	0.06		97	0.8	121
	1600	Corridors	0	0	0.06		96	0.8	120
	123	Storage rooms	0	0	0.12		15	0.8	18
								Total	259



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project title

IMAGE STUDIOS

SUMMIT FAIR

840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

project number

23060.003

drawing issuance

PERMIT/BID

03.15.24

drawing revisions

No.

Description

Date

CITY/OWNER COMMENTS 04.16.24

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04/17/24



drawing title

MECHANICAL SCHEDULES  
& DETAILS

drawing number

M200

BC PROJECT #: 23615  
MISSOURI PE COA #2009003629

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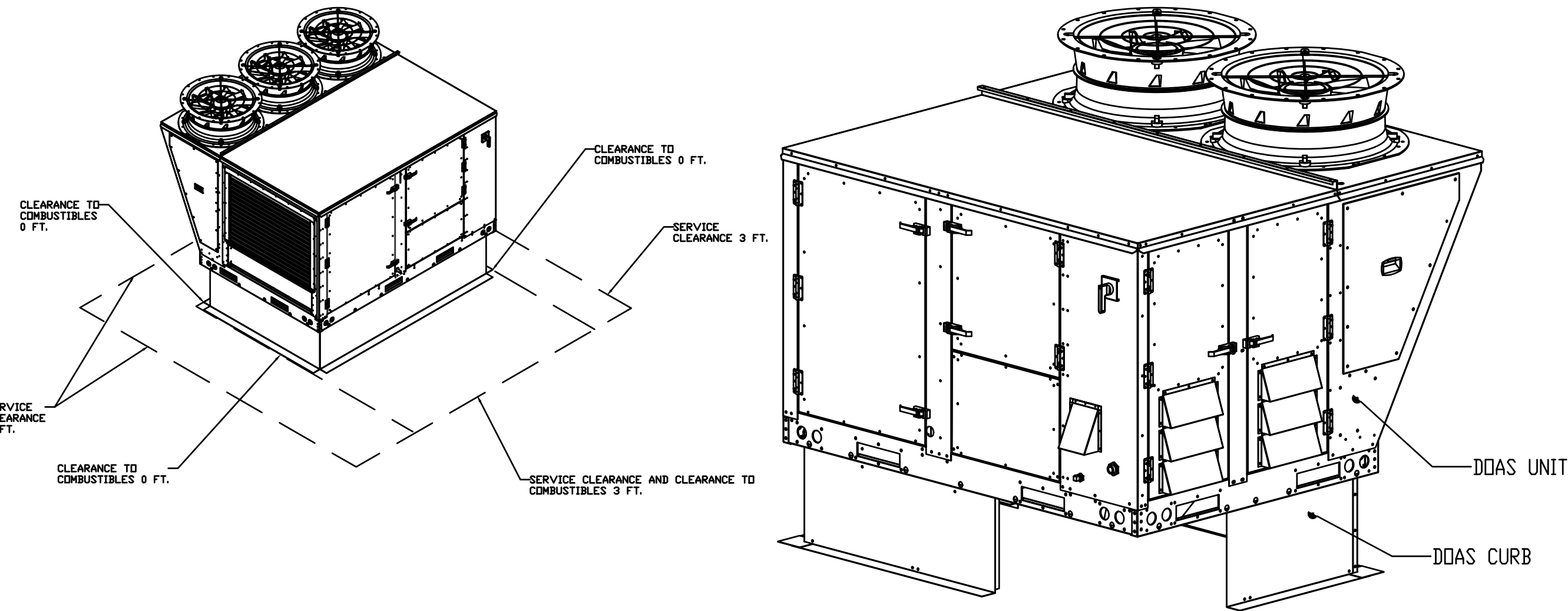
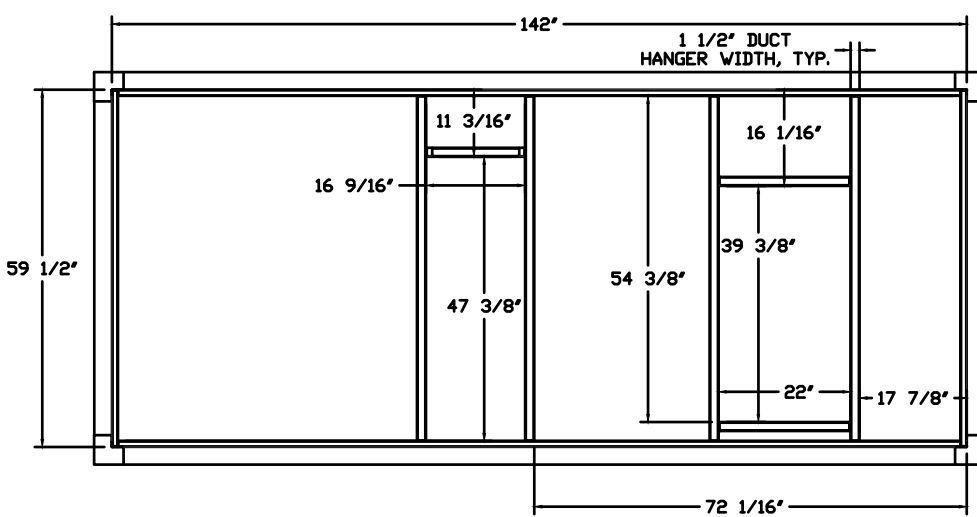
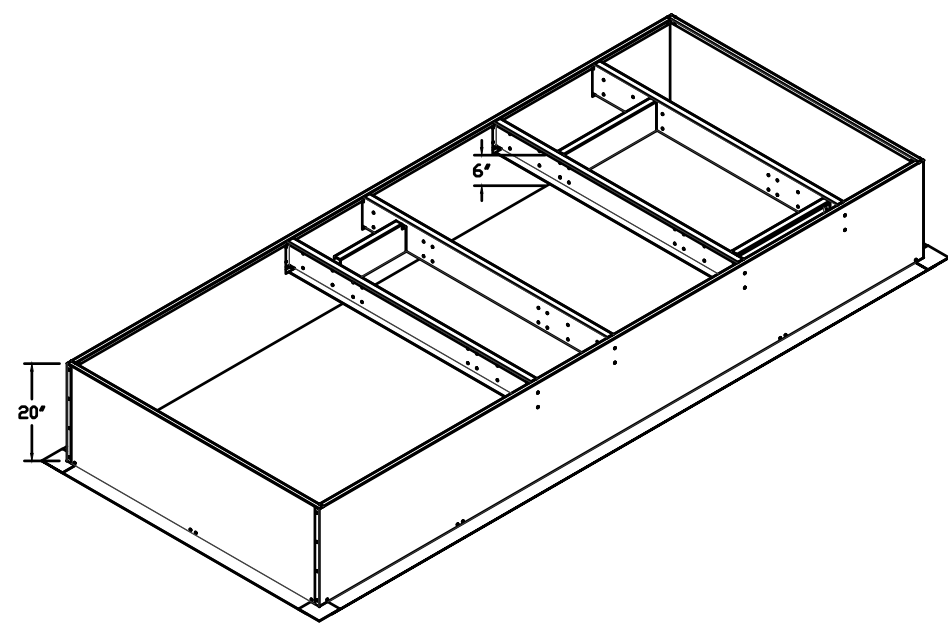
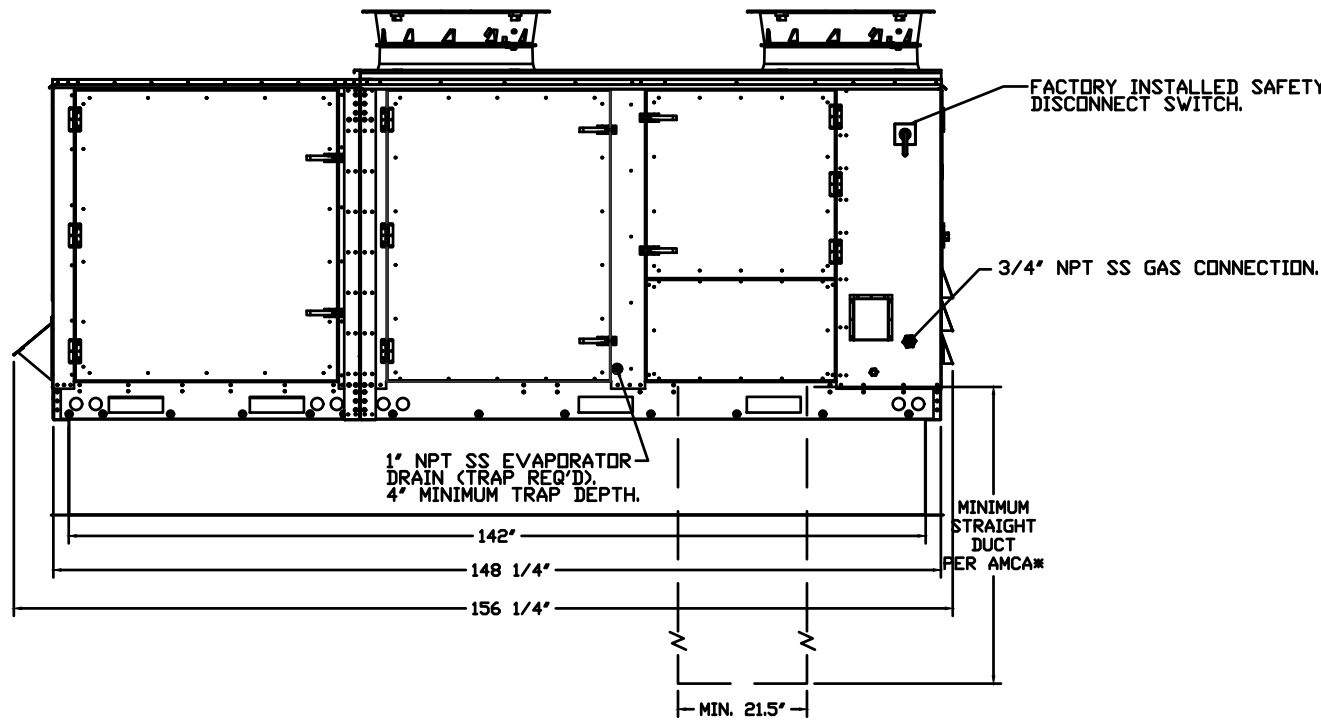
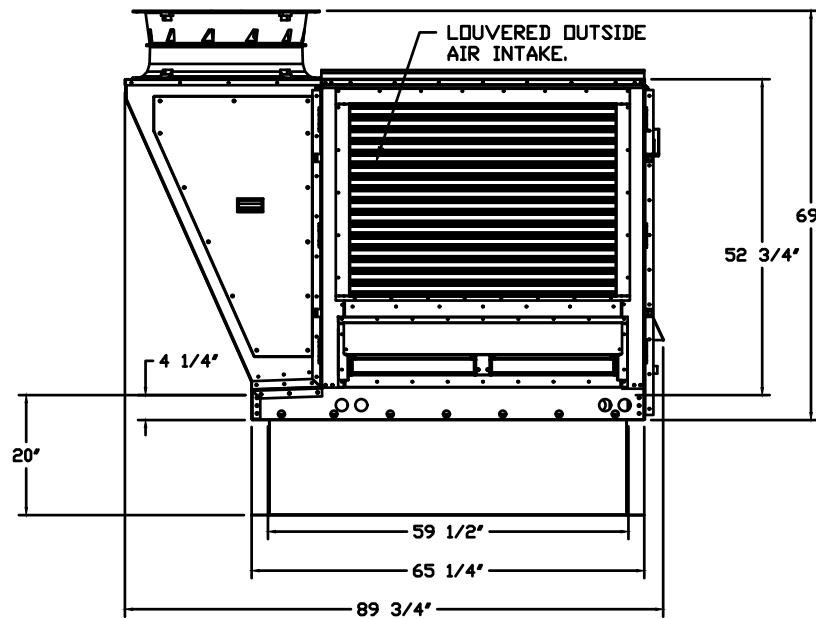
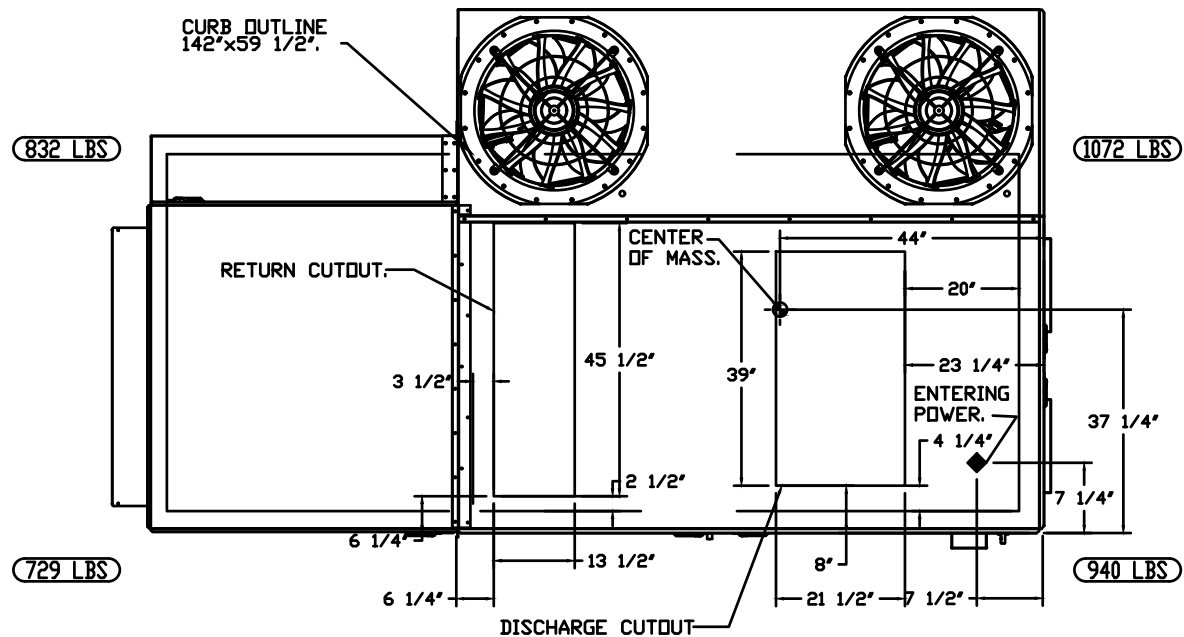
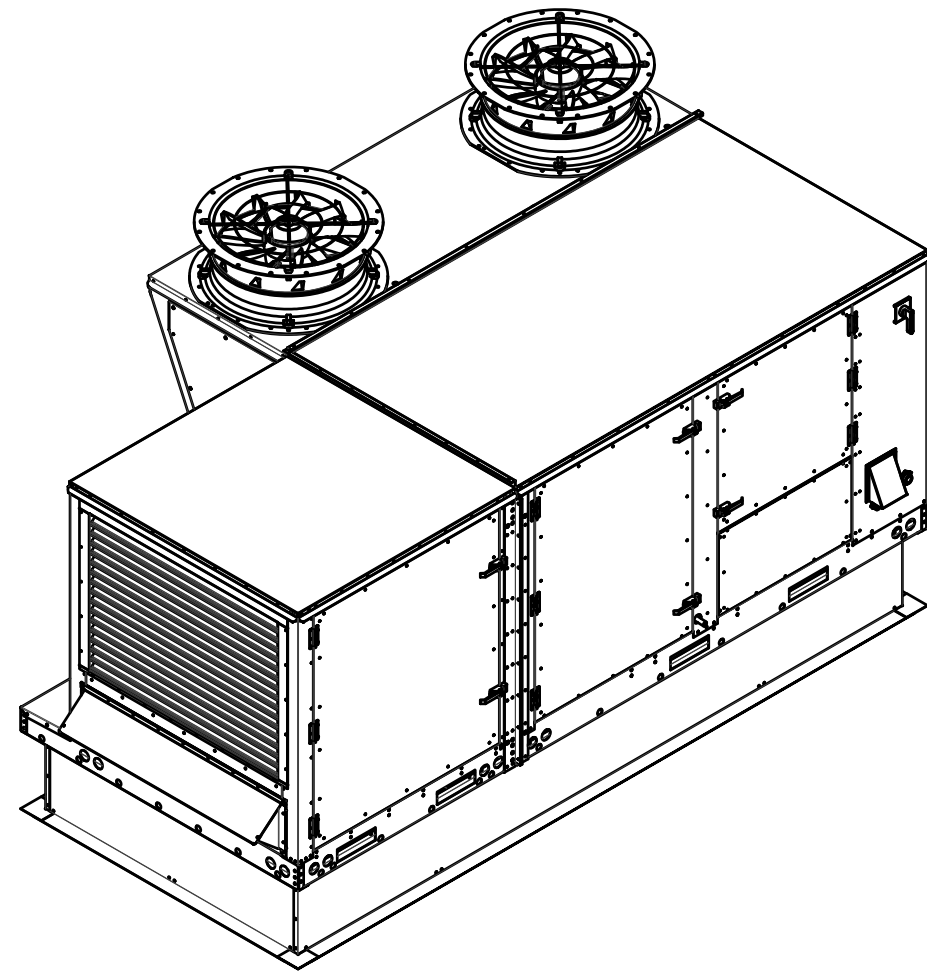




FAN #1 CASRTU3-1400-24MF-15T-ERV - HEATER (DDAS-1)

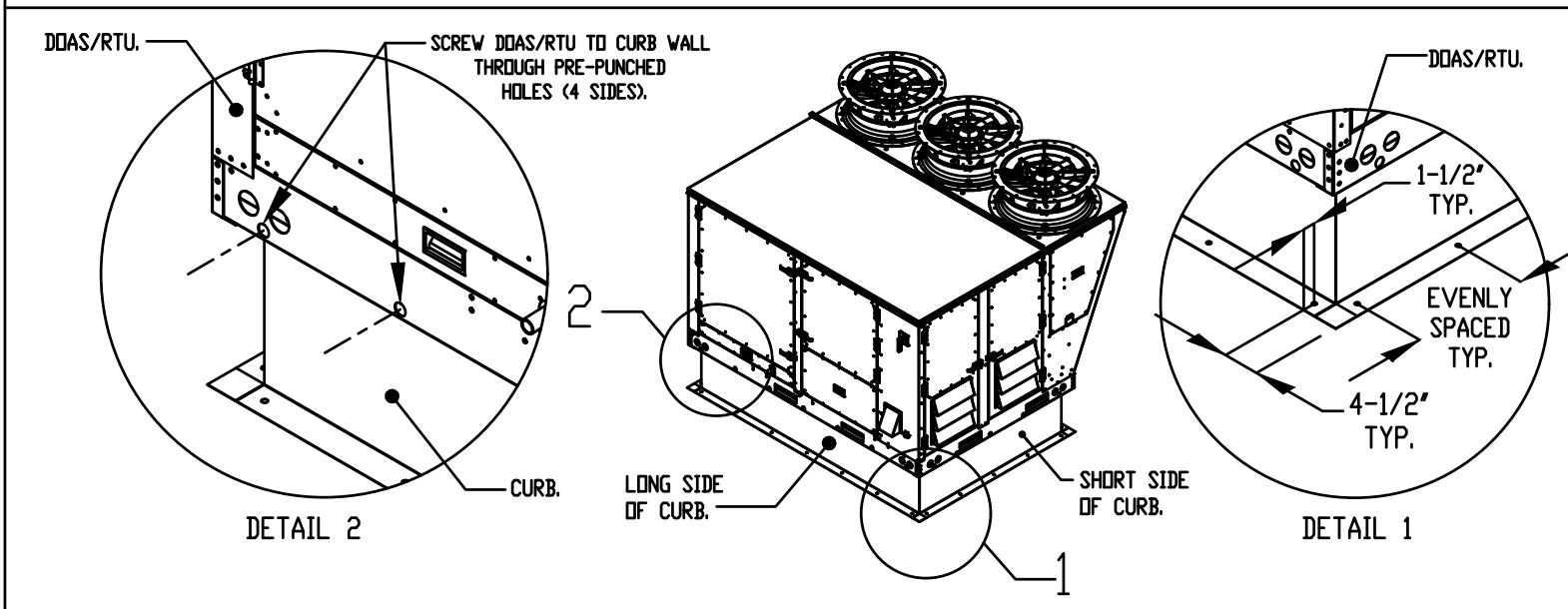
- NOTES:
- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
  - Ø DENOTES CORNER WEIGHT.
  - ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
  - CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.

\*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 21.5" x 39".



TYPICAL DDAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

- SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW, USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS. SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.
- SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.



CONTROLS DESIGN SERVICE

BIANNUAL ANALYSIS OF EQUIPMENT PERFORMANCE REQUIRED BY THE MANUFACTURER TO OPTIMIZE SYSTEM POST INSTALL. DETAILED PERFORMANCE REPORT TO BE PRESENTED TO OWNERSHIP ON QUARTERLY BASIS FOR THE FIRST YEAR.

HMI SCHEDULE				
UNIT NUMBER	HMI #		HMI LOCATION	MODBUS ADDRESS
FAN #1	HMI #1 - UNIT	HMI # 1	MOUNTED IN UNIT	NOT AVERAGED
FAN #1	HMI #2 - SPACE	HMI # 1		AVERAGED

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	DDAS-1	166 LBS	CURB	59.500"W X 142.000"L X 20.000"H INSULATED.

FOR QUESTIONS, CALL THE  
Kansas City Mechanical  
REGION 151  
PHONE: (816) 384 - 0236  
EMAIL: reg151@captiveaire.com



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Date:

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DETAILS

drawing number

M202

BC PROJECT #: 23615  
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ELECTRICAL SPECIFICATIONS

1. GENERAL PROVISIONS:

- A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEMS OUTLINED.
- B. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATES OF COMPLIANCE OR APPROVAL AS REQUIRED BY THE AUTHORITIES.
- C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE NATIONAL ELECTRIC CODE (NEC), AND ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE.
- D. ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK.
- E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, CONDUIT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL ACCEPTANCE.
- F. PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY WILL BE MAINTAINED.
- G. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.
- H. CONTRACTOR SHALL PROVIDE ACCESS PANELS WHERE NECESSARY FOR CONCEALED ELECTRICAL COMPONENTS.
- I. CONTRACTOR SHALL PROMPTLY CALL ENGINEERS ATTENTION TO ANY APPARENT CONTRADICTIONS, AMBIGUITIES, ERRORS, DISCREPANCIES, OR OMISSIONS IN THE PLANS OR SPECIFICATIONS.

2. OPERATION AND MAINTENANCE MANUALS:

- A. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS, ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT.
- B. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION IN THE OPERATION AND MAINTENANCE MANUALS.
- C. ALL LITERATURE LISTED ABOVE AND ALL PAPERS LISTING WARRANTIES, ETC. SHALL BE COLLATED AND LABELED WITH THE PROJECT NAME, ADDRESS, ARCHITECT, ENGINEER, CONTRACTORS, ETC. CONTRACTORS, ETC. DOCUMENTS SHALL BE COMPILED AND BOUND IN DIGITAL FILE OR 3 RING BINDER.

3. MANUFACTURERS:

- A. MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING ESTABLISHED A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN, UNLESS NOTED OTHERWISE.

4. TESTING, AND BALANCING:

- A. ALL CIRCUITS SHALL BE TESTED FOR CONTINUITY, SHORTS, AND GROUNDS BEFORE CONNECTING TO THE PROPER PHASE AS DESIGNED TO BALANCE THE LOADING BETWEEN PHASES.
- B. POWER AND LIGHTING PANELS SHALL BE PROPERLY PHASED TO DISTRIBUTE THE LOAD AND SHALL BE CONNECTED AND ADJUSTED TO OPERATE AS SPECIFIED.
- C. ALL MOTORS AND SIMILAR EQUIPMENT SHALL BE CHECKED FOR PROPER PHASE ROTATION AND OPERATION.

5. RACEWAYS:

- A. CONDUIT INSIDE THE BUILDING SHALL BE METALLIC TUBING (EMT), BEARING THE UL LABEL, WITH COMPRESSION TYPE FITTINGS OR SCREW SET FITTINGS.
- B. CONDUIT EXPOSED TO THE WEATHER, INSTALLED UNDERGROUND, IN CONCRETE, OR USED FOR SERVICE ENTRANCE SHALL BE STANDARD RIGID CONDUIT (GALVANIZED WITH THREADED FITTINGS).
- C. UNDERGROUND CONDUIT MAY BE POLYVINYL CHLORIDE WITH A DEFLECTION TEMPERATURE, UNDER LOAD AT 24 HRS. OF 75 DEGREES C, AND A TENSILE STRENGTH OF 5,200 PSI. JOINTS SHALL BE FUSED. SOLVENT WELDED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. CONDUIT SHALL BE EQUAL TO CARLON POWER AND COMMUNICATIONS DUCT TYPE OR DIRECT BURIAL. CONDUIT AND FITTINGS SHALL BE PROVIDED BY THE SAME MANUFACTURER.
- D. FLEXIBLE METAL CONDUIT SHALL ONLY BE USED FOR CONNECTIONS TO MOTORS, TRANSFORMERS, AND LIGHT FIXTURES. MAXIMUM LENGTH SHALL BE 6'-0".

6. CONDUCTORS:

- A. WIRES SHALL BE CONTINUOUS WITHOUT SPLICES OR TAPS IN CONDUIT RUNS. ALL SPLICES SHALL BE MADE IN JUNCTION, PULL, OR OUTLET BOXES. ALL WIRE SHALL BE INSTALLED IN CONDUIT, WIREWAYS, OR OTHER PROTECTIVE COVER SANCTIONED BY CODES.
- B. CONDUCTORS FOR LIGHTING AND POWER SHALL BE COPPER, MINIMUM NO. 12 A.W.G., 600 VOLT.
- C. NO. 10 GAUGE AND SMALLER CONDUCTORS SHALL BE TYPE THWN (WET LOCATIONS) OR THHN (DRY LOCATIONS), SOLID CONDUCTOR, UNLESS OTHERWISE INDICATED.
- D. NO. 8 GAUGE AND LARGER CONDUCTORS SHALL BE TYPE THWN (WET LOCATIONS) OR THHN (DRY LOCATIONS), STRANDED, UNLESS OTHERWISE INDICATED.
- E. SERVICE ENTRANCE AND PANEL FEEDER CONDUCTORS, NO. 3 GAUGE AND LARGER SHALL BE TYPE XHHW-2 (WET LOCATIONS) OR THHN (DRY LOCATIONS), STRANDED COPPER, UNLESS OTHERWISE INDICATED.

7. MC CABLE:

- A. MC CABLE SHALL CONSIST OF INTERLOCK ARMORED CABLE MADE OF THREE OR FOUR TYPE THHN SOLID (86 AWG) AND LARGER MAY BE STRANDED COPPER CONDUCTORS RATED 90°C FOR DRY LOCATIONS, WITH NYLON OR EQUIVALENT UL LISTED JACKET. PER UL STANDARD 3, THE THREE CONDUCTORS SHALL BE TWISTED TOGETHER WITH THE COPPER GROUNDING CONDUCTOR, SUITABLE FILLERS, AND WRAPPED IN BINDER TIE. THE ASSEMBLY SHALL BE ARMORED WITH SPIRALLY WRAPPED INTERLOCKED ARMOR OF ALUMINUM OR GALVANIZED STEEL.
- B. CABLES SHALL BE TESTED IN ACCORDANCE WITH UL STANDARD 1669 FOR TYPE MC CABLE AND RATED AT 600 VOLTS, 90 DEG. C FOR DRY LOCATIONS AND 75 DEG. C FOR WET LOCATIONS.

8. WIRING DEVICES:

- A. WALL SWITCHES SHALL BE SPECIFICATION GRADE, QUIET TYPE, FLUSH TOGGLE SWITCH, RATED FOR 20 AMPS, WITH THERMOPLASTIC COVER PLATES.
- 1) SINGLE POLE: HUBBELL #CS1221-X, OR EQUAL.
- 2) THREE WAY: HUBBELL #CS1223-X, OR EQUAL.
- 3) AS SPECIFIED ON PLANS.
- B. RECEPTACLES SHALL BE SPECIFICATION GRADE, DUPLEX, GROUNDING, THREE-WIRE TYPE, RATED FOR 20 AMPS, WITH THERMOPLASTIC COVER PLATES. HUBBELL #C8352-X, OR EQUAL.
- C. GROUND FAULT INTERRUPTER RECEPTACLES (GFI) SHALL BE HUBBELL #GF20-XL. DEVICE COVER PLATES SHALL BE AS HEREIN BEFORE SPECIFIED.
- D. RECEPTACLES OUTSIDE BUILDING AND WHERE NOTED AS WEATHERPROOF, SHALL BE LISTED WEATHER-RESISTANT HUBBELL #GFTR20-X OR EQUAL AND SHALL BE INSTALLED IN A WEATHERPROOF ENCLOSURE WHICH SHALL BE INTERMEDIATE WWP1010MMX OR WWP1010MMX DECATAL METAL WEATHERPROOF RECEPTACLE COVER. COVER SHALL BE WEATHER PROOF RATED WHILE IN USE.
- E. VERIFY DEVICES AND DEVICE COVERPLATES COLOR AND STYLE WITH ARCHITECT.

9. BOXES:

- A. HOT DIPPED GALVANIZED STEEL BOXES. PROVIDE TYPE TO SUIT CONDITIONS FOR INSTALLATION.
- B. ALL BOXES SHALL BE FLUSH MOUNTED, UNLESS INDICATED OTHERWISE.

10. PANELBOARDS:

- A. FURNISH AND INSTALL CIRCUIT BREAKER PANELBOARDS AS SHOWN ON THE DRAWINGS. PANELBOARDS SHALL BE LISTED BY UL AND SO LABELED, AND SHALL BE FULLY RATED FOR THE VOLTAGE AND CURRENT CAPACITY INDICATED ON THE PANEL SCHEDULE. PANELBOARDS SHALL BE EQUAL TO SQUARE D TYPE NO OR NF WITH BOLT IN TYPE BREAKERS. PANELBOARD LUGS SHALL BE RATED AT 75°C.
- 1) CIRCUIT BREAKER INTERRUPTING CAPACITIES SHALL MEET OR EXCEED THE AVAILABLE RMS SYMMETRICAL FAULT CURRENTS INDICATED AND AS REQUIRED TO MEET OR EXCEED THE AVAILABLE FAULT CURRENT FROM LOCAL UTILITY.
- B. CIRCUIT BREAKERS SHALL MEET APPLICABLE PORTIONS OF UL STANDARD 489 AND NEMA ABL-1. CIRCUIT BREAKERS SHALL BE BOLT-ON, GROUP MOUNTED, AMBIENT MAGNETIC, WITH COMMON TRIP, UL RATED TO CARRY 80% OF NAMEPLATE RATING CONTINUOUSLY IN FREE AIR AT 40° C. CIRCUIT BREAKERS SHALL BE TRIP INDICATING AND FULLY INTERCHANGEABLE WITHOUT DISTURBING ADJACENT UNITS. WIRE TERMINALS SHALL BE RATED 75 DEGREES C. THE OPERATING MECHANISM SHALL BE TRIP-FREE SO THAT CONTACTS CANNOT BE HELD CLOSED AGAINST ANY ABNORMAL OVERCURRENT OR SHORT CIRCUIT CONDITION.
- a) BREAKERS SHALL MEET APPLICABLE NEMA AND/OR UL SPECIFICATIONS.
- C. PANELBOARD BOXES SHALL BE GALVANIZED SHEET STEEL, WITH IMPL. WIRING GUTTER SPACE IN ACCORDANCE WITH NEC. FRONTS SHALL BE OF SHEET STEEL PAINTED LIGHT GREY OVER A SUITABLE RUST INHIBITOR PRIMER. PANELBOARDS SHALL BE EQUIPPED WITH ONE PIECE DOOR, CYLINDER TURNER TYPE LOCK, DIRECTORY CARD-HOLDER AND QUARTER-TURN ADJUSTABLE TROM CLAMPS.
- D. PANELBOARD INTERIORS SHALL CONSIST OF REINFORCED GALVANIZED SHEET STEEL FRAMES WITH ALUMINUM BUS BARS AND CIRCUIT BREAKERS, PROPERLY SUPPORTED TO PREVENT VIBRATIONS AND BREAKAGE IN HANDLING. BUS BARS SHALL BE SEQUENCE PHASED. PANELBOARD SHALL HAVE A FULL SIZED SOLID ALUMINUM NEUTRAL AND GROUND BUS.
- E. BUS BAR BRACING SHALL BE UL LISTED AS INDICATED ON DRAWINGS. ADDITIONAL BRACING SHALL BE PROVIDED AS REQUIRED TO MEET OR EXCEED INDICATED AVAILABLE FAULT CURRENTS.
- F. DIRECTORY CARDS SHALL BE COMPLETELY FILLED IN BY TYPEWRITER, LISTING CIRCUIT NUMBERS AND LOAD SERVED, INCLUDING EXISTING CIRCUITS. CIRCUIT BREAKERS SHALL BE IDENTIFIED BY CIRCUIT NUMBER LABELS AS HEREIN BEFORE SPECIFIED.

ELECTRICAL SPECIFICATIONS (CONTINUED)

11. DRY TYPE TRANSFORMERS:

- A. DRY TYPE TRANSFORMERS SHALL BE ENCLOSED IN DRIPPROOF METALLIC ENCLOSURES DESIGNED TO PROVIDE FOR AIR COOLING AND PREVENT ACCIDENTAL CONTACT WITH LIVE CONDUCTORS. MATERIALS AND FINAL PERFORMANCE SHALL COMPLY WITH APPLICABLE IEEE, ANSI AND NEMA STANDARDS. TRANSFORMERS SHALL BE FULLY RATED TWO WINDING UNITS CAPABLE OF CARRYING THE LOADS INDICATED. TRANSFORMERS SHALL BE EQUAL TO SQUARE D TYPE EP.
- B. TRANSFORMERS SHALL BE CAPABLE OF OPERATING AT 100% NAMEPLATE KVA RATING CONTINUOUSLY WHILE IN A 40°C AMBIENT WITHOUT EXCEEDING THE RATED AVERAGE WINDING TEMPERATURE RISE OF THE INSULATION USED. INSULATION SHALL BE CLASS 180C FOR TRANSFORMERS 3 KVA TO 25 KVA AND CLASS 220C FOR TRANSFORMERS 30 KVA TO 500 KVA. TRANSFORMERS SHALL BE UL APPROVED. TRANSFORMERS SHALL HAVE OVER-LOAD CAPACITY TO COMPLY WITH ANSI C57.98.0, WITH NORMAL LIFE MAINTAINED. SOUND RATINGS SHALL NOT EXCEED MAXIMUM VALUES FOR KVA RATINGS AS MEASURED PER ANSI C89.1.
- C. TRANSFORMERS 30 KVA AND LARGER SHALL BE EQUIPPED WITH TWO 2-1/2% FULL CAPACITY TAPS ABOVE AND FOUR 2-1/2% TAPS BELOW NORMAL RATED VOLTAGE. IN ADDITION, TRANSFORMERS OF THESE RATINGS SHALL BE PROVIDED WITH CLAMP-TYPE SOLDERLESS CONNECTORS SUITABLE FOR USE WITH COPPER OR ALUMINUM CABLES. THE CONNECTORS SHALL BE MOUNTED ON A TERMINAL BOARD WITH HIGH-VOLTAGE AND LOW-VOLTAGE TERMINALS HELD IN A FIXED POSITION AND CLEARLY MARKED. TRANSFORMER LUGS SHALL BE RATED AT 75°C. TRANSFORMERS 30 KVA AND LARGER SHALL BE PROVIDED WITH NEOPRENE RUBBER ISOLATION PADS MOUNTED BETWEEN THE CORE AND COIL ASSEMBLY AND ENCLOSURE TO ISOLATE SOUND AND VIBRATION.

12. DISCONNECTS:

- A. DISCONNECTS SHALL BE EXTERNALLY OPERATED, QUICK-MAKE, QUICK-BREAK, SAFETY, WITH PROVISIONS FOR PAD LOCKING. FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL BE PROVIDED AS INDICATED.
- B. INDOOR SWITCHES SHALL BE NEMA 1 AND OUTDOOR SWITCHES SHALL BE NEMA 3R, UNLESS INDICATED OTHERWISE.

13. FUSES:

- A. FUSES PROTECTING CIRCUIT BREAKER PANELS SHALL BE CURRENT LIMITING UL, CLASS RK-1 FUSES WITH 200,000 AMPERES RMS SYM INTERRUPTING CAPACITY. FUSING ELEMENTS SHALL BE SILVER FOR RATINGS ABOVE 60 AMPERES.
- B. ALL OTHER FUSES SHALL BE UL, CLASS RK-5, DUAL ELEMENT WITH A MINIMUM TIME-DELAY OF 10 SECONDS AT 500% RATING. FUSES SHALL HAVE CURRENT-LIMITING SHORT-CIRCUIT LINKS AND 200,000 AMPERES RMS SYM INTERRUPTING CAPACITY. FUSING ELEMENTS SHALL BE COPPER.

14. LIGHT FIXTURES:

- A. WHERE LIGHT FIXTURES ARE MOUNTED IN A LAY-IN CEILING, PROVIDE A MINIMUM OF 2 SUPPORT WIRES ATTACHED DIRECTLY BETWEEN EACH LIGHT FIXTURE AND THE BUILDING STRUCTURE. SUPPORT WIRES SHALL BE A MINIMUM OF 1/2 GAUGE GALVANIZED STEEL WIRE, SOFT ANNEALED.
- B. FIXTURES ARE REQUIRED AT ALL LIGHTING OUTLETS SHOWN ON THE DRAWINGS. APPROVED LIGHTING FIXTURE WIRE IS REQUIRED IN ALL FIXTURES AND FIXTURE RACEWAYS. WEATHERPROOF WIRING IS REQUIRED FOR EXTERIOR FIXTURES. ALL PARTS OF FIXTURES AND WIRING SHALL BE IN ACCORDANCE WITH NEC REQUIREMENTS.
- C. ALL FIXTURES SHALL CARRY UL AND ETL LABELS.
15. SLEEVES:
- A. PROVIDE, SET, AND PROPERLY LOCATE PIPE SLEEVES AS REQUIRED FOR THIS WORK.
- B. INTERIOR PARTITIONS: 16 GAUGE GALVANIZED STEEL PACK BETWEEN CONDUIT AND SLEEVE WITH FIRE SAFING AND CAULK AT EACH END WITH FIRE RESISTANT SEALANT.
- C. ROOF: PROSET OR EQUAL, MANUFACTURED PVC SCHEDULE 40 PIPE SLEEVE WITH WEATHERPROOF SEAL. COORDINATE WITH ROOFING CONTRACTOR AND FLASH AS REQUIRED TO MAINTAIN ROOF WARRANTY.

16. GROUNDING:

- A. GROUND ALL ELECTRICAL APPARATUS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) 250, AND ANY LOCAL REQUIREMENTS. INSURE CONTINUOUS BOND WHERE FLEXIBLE CONDUIT IS USED. PROVIDE BONDING JUMPER INSIDE ALL FLEXIBLE CONDUIT.
- B. BOND METAL PIPING SYSTEMS IN COMPLIANCE WITH NEC 250.4(A)(4).

17. REMODELING WORK:

- A. DEMOLITION, DISCONNECT, DEMOLISH AND REMOVE ABANDONED ELECTRICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND NOT INDICATED TO BE SALVAGED OR REPAIR.
- B. EQUIPMENT TO BE SALVAGED:
- 1) DISCONNECT AND REMOVE EXISTING ELECTRICAL EQUIPMENT INDICATED TO BE REMOVED AND SALVAGED. DELIVER EQUIPMENT TO THE LOCATION DESIGNATED BY THE OWNER FOR STORAGE.
- 2) ALL MATERIALS AND EQUIPMENT DESIGNATED TO BE REUSED OR RELOCATED SHALL BE CAREFULLY REMOVED AND STORED UNTIL NEEDED FOR REMODELING WORK. ALL ITEMS SHALL BE RESTORED TO "LIKE NEW" CONDITION WITH RUST OR CORROSION REMOVED, SURFACE PAINT TOUCHED UP OR REPAIRED AS REQUIRED TO MATCH NEW CONSTRUCTION, AND THOROUGHLY CLEANED AND INSPECTED. ANY ITEMS WHICH BECOME DAMAGED BEYOND REPAIR AS A RESULT OF CONSTRUCTION OR DEMOLITION ACTIVITY SHALL BE REPLACED WITH NEW MATERIAL EQUIVALENT IN EVERY RESPECT.
- C. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND EQUIPMENT NOT INDICATED TO BE SALVAGED.
- D. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER REMODELING OPERATIONS ARE COMPLETE.
- E. PROVIDE ALL ALTERATIONS AND REWORK INDICATED AND/OR REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF ALL EXISTING ELECTRICAL SYSTEMS, INTEGRATING THE NEW AND EXISTING AREAS. LOCATE, IDENTIFY, AND PROTECT ELECTRICAL SERVICES PASSING THROUGH REMODELING AREA AND SERVING OTHER AREAS OUTSIDE THE REMODELING LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE REMODELING LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.

- 1) ABANDONED CONDUIT SHALL HAVE WIRE REMOVED AND SHALL BE CAPPED. ABANDONED OUTLETS IN WALLS OR PARTITIONS SHALL HAVE DEVICES AND WIRE REMOVED, AND SHALL BE COVERED.
- 2) WHERE EXISTING CONDUITS TERMINATE AT AN EXISTING OUTLET IN A WALL, CEILING, OR FLOOR TO BE REMOVED, DISCONNECT AND REMOVE DEVICE AND WIRE FROM CONDUIT. CONDUIT SHALL BE CUT BACK AND CAPPED (BELOW THE FLOOR OR ABOVE THE CEILING) SO NOT TO CREATE AN OBSTRUCTION. PATCH FLOOR TO MATCH EXISTING.
- 3) WHERE EXISTING CIRCUITS EXTEND BEYOND THE OUTLET IN THE EXISTING WALL, CEILING, OR FLOOR TO BE REMOVED, FURNISH AND INSTALL NEW CONDUIT AND WIRE TO EITHER REROUTE THE CIRCUIT OR FEED THE REMAINING OUTLET(S) FROM ANOTHER ELECTRICAL SOURCE, BUT IN SUCH A MANNER AS NOT TO REVISE THE CIRCUIT. ALL REROUTED CONDUIT SHALL BE APPROVED BY THE ARCHITECT.
- 4) WHERE EXISTING OUTLETS IN A WALL, CEILING, OR FLOOR TO BE REMOVED ARE ESSENTIAL TO MAINTAIN OPERATION OF OTHER REMAINING OUTLETS, RELOCATE THE OUTLET TO A NEW CONVENIENT LOCATION. EXISTING WIRING DEVICES SHALL NOT BE REUSED, UNLESS OTHERWISE INDICATED.
- 5) WHERE LIGHTING FIXTURES ARE INDICATED TO BE DEMOLISHED, REMOVE ALL WIRE AND MODIFY THE EXISTING CONDUIT (IF APPLICABLE) FOR THE NEW LIGHTING. ALL UNUSED CONDUIT SHALL BE REMOVED.
- 6) WHERE A TELEPHONE CIRCUIT EXTENDS BEYOND AN OUTLET IN AN EXISTING WALL, CEILING, OR FLOOR TO BE REMOVED, PROVIDE NECESSARY EMPTY CONDUIT AND NOTIFY THE OWNER WHO WILL REQUEST THE OWNER TO ARRANGE WITH THE TELEPHONE COMPANY FOR NEW WIRING TO OUTLETS THAT REMAIN.

- 7) WHERE EXISTING CONDUIT AND WIRE RUNS ARE LOCATED IN OR ATTACHED TO AN EXISTING WALL, CEILING OR FLOOR TO BE REMOVED, THEY SHALL BE REROUTED IN EITHER NEW OR EXISTING CONSTRUCTION TO MAINTAIN CONTINUITY OF CIRCUITS UNLESS OTHERWISE INDICATED.
- 8) CONDUIT SHALL BE CONCEALED WITHIN THE EXISTING BUILDING CONSTRUCTION WHEREVER POSSIBLE, EXCEPT WHERE OTHERWISE INDICATED.
- 9) EXISTING WIRE SHALL BE DISCONNECTED AND REMOVED WHEREVER EXISTING CIRCUITS ARE ABANDONED.

18. BOXES IN FIRE RATED ASSEMBLIES:

- A. OUTLET BOXES THAT DO NOT EXCEED 16 SQUARE INCHES AND INSTALLED IN FIRE RATED WALLS SHALL NOT BE INSTALLED CLOSER THAN 2" HORIZONTAL INCHES TO OTHER OUTLET BOXES.
- B. IF BOXES MUST BE INSTALLED WITHIN 24" OF EACH OTHER THAN BOTH OUTLET BOXES SHALL BE PROTECTED WITH LISTED PUTTY PADS, 3/4" FIRE BARRIER MODULABLE PUTTY + OR EQUAL.

19. FIRE ALARM SYSTEM:

- A. ELECTRICAL CONTRACTOR SHALL PROVIDE DESIGN BUILD ENGINEERED SHOP DRAWINGS OF FIRE ALARM SYSTEM TO BE INSTALLED. PROVIDE DEVICES, CONDUIT, WIRES, CABLE, PROGRAMMING AND TESTING AS DIRECTED BY EQUIPMENT MANUFACTURER AND LOCAL FIRE DEPARTMENT FOR A CODE COMPLIANT FIRE ALARM DETECTION SYSTEM. MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL MEET PREVAILING CODES. THE SYSTEM SHALL BE COMPLETE AND OPERABLE. SUBMIT ONE LINE DIAGRAM OF SYSTEM WITH SIZES AND BATTERY CALCULATIONS. EQUIPMENT TO BE NEW AND SHALL BE STAMPED, SIGNED, CALIBRATION AND TESTED BY FACTORY CERTIFIED TECHNICIAN. FIRE ALARM DEVICES ARE SHOWN FOR REFERENCE ONLY FOR PERMITTING PROCESS. CONTRACTOR IS RESPONSIBLE FOR INCLUDING IN BID DESIGN ALL NECESSARY DEVICES (ANNUNCIATORS), NOTIFICATION APPLIANCES, INITIATING DEVICES, AND ADDITIONAL COMPONENTS).

ELECTRICAL SYMBOLS LIST	
CIRCUITING & NOTES	
+46"	SPECIAL MOUNTING HEIGHT FOR ASSOCIATED DEVICE (CENTERLINE OF DEVICE)
GFI	GROUND FAULT CIRCUIT INTERRUPTER DEVICE
WP	WEATHERPROOF ENCLOSURE ON DEVICE
(TIE)	PARTIAL HOMERUN. REFER TO PLANS FOR ADDITIONAL DEVICES CONNECTED TO THIS CIRCUIT.
X	ELECTRICAL FLOOR PLAN NOTE WITH DESIGNATION
2 LP	CONDUIT CONCEALED WHERE POSSIBLE OR AS NOTED, ARROWS INDICATE HOME RUN TO PANEL. CIRCUIT NUMBERS INDICATED
⎓	#12 WIRE IN CONDUIT, UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFICATION
⎓	GROUNDING CONDUCTOR, #12 WIRE UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFICATION
LIGHTING	
⎓	EMERGENCY TWIN HEAD LIGHT FIXTURE
⎓	EXIT LIGHT WITH DIRECTIONAL ARROWS INDICATED
A	STRIP FIXTURE WITH TYPE DESIGNATION
A	RECESSED OR SURFACE MOUNTED FIXTURE WITH TYPE DESIGNATION
A	CEILING OR RECESSED FIXTURE WITH TYPE DESIGNATION
A	WALL MOUNTED FIXTURE WITH TYPE DESIGNATION
POWER DEVICES	
⎓	DUPLEX RECEPTACLE, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED OTHERWISE
⎓	FOURPLEX RECEPTACLE, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED OTHERWISE
⎓	DUPLEX RECEPTACLE ON SWITCHED CIRCUIT, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED OTHERWISE
⎓	DEVICE MOUNTED ABOVE COUNTER AND/OR SPLASH GUARD
⎓	HEAVY DUTY OUTLET - NEMA CONFIGURATION SIZE PER EQUIPMENT MANUFACTURER'S RECOMMENDATION
⎓	PANEL BOARD, TOP OF BOX 6'-0" AFF
⎓	JUNCTION BOX
⎓	NON-FUSED DISCONNECT SWITCH
⎓	FUSED DISCONNECT SWITCH
⎓	MOTOR WITH DESIGNATION
CONTROLS	
S	SINGLE POLE WALL SWITCH, TOP OF BOX AT 48" AFF
OCCUPANCY SENSORS	
1. DUAL TECHNOLOGY/ULTRASONIC CEILING SENSORS SHALL BE MOUNTED 6' FROM SUPPLY/EXHAUST AIR DIFFUSERS. 2. LOW VOLTAGE CEILING SENSORS SHALL BE PROVIDED WITH 6' SLACK CONDUCTOR COILED AT SENSOR.	
S	WALL MOUNTED DUAL-TECHNOLOGY OCCUPANCY SENSOR, WATT STOPPER #DSW-301, TOP OF BOX AT 48" AFF
S	INFRARED OCCUPANCY SENSOR WITH DIMMING, WATT STOPPER #PW-1000 LINE VOLTAGE OR #DW-311 0-10V, TOP OF BOX AT 48" AFF, VERIFY DIMMER COMPATIBILITY
S	DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSORS, WATTSTOPPER DT-300
S	OCCUPANCY SENSOR POWER PACK, WATTSTOPPER BZ-150 OR EQUAL. PROVIDE LOW VOLTAGE WIRING TO OCCUPANCY SENSORS AND MOMENTARY SWITCHES
S	MOMENTARY SWITCH, WATTSTOPPER LVSW-10X OR EQUAL, TOP OF BOX AT 48" AFF
COMMUNICATIONS	
▼	DATA/TELEPHONE OUTLET WITH MINIMUM 3/4" CONDUIT STUBBED UP TO ABOVE ACCESSIBLE CEILING, BOTTOM OF BOX AT 16", UNLESS NOTED OTHERWISE. PROVIDE WITH PULL STRING
TV	FLAT SCREEN TELEVISION - PROVIDE AND INSTALL ONE (1) HUBBELL #RR1510X RECESSED TAMPER-RESISTANT DUPLEX RECEPTACLE WITH COVERPLATE AND ONE(1) HUBBELL #HBL260 TWO GANG LARGE CAPACITY WALL BOX (UP TO 2" KNOCKOUT) W/ MUD RING AND COVERPLATE FOR DATA. PROVIDE 2" WITH PULL STRING TO ABOVE ACCESSIBLE CEILING FOR DATA CABLES. MOUNT BOX AT 7'-6" AFF UNLESS NOTED OTHERWISE (VERIFY)
⊙	CEILING SPEAKER
FIRE ALARM - FIRE ALARM SYSTEM IS EXISTING TO REMAIN. PROVIDE ADDITIONAL COMPATIBLE DEVICES AND CONNECT TO EXISTING SYSTEM AS REQUIRED.	
⊙	DUCT MOUNT SMOKE DETECTOR
F	FIRE ALARM PULL STATION, TOP OF BOX AT 48" AFF
⊙	FIRE ALARM HORN/STROBE COMBINATION SIGNAL, CENTERLINE AT 6'-8" AFF
⊙	FIRE ALARM VISUAL STROBE, CENTERLINE AT 6'-8" AFF
MISCELLANEOUS	
CR	ACCESS CONTROL SYSTEM CARD READER. PROVIDE 2-GANG BOX WITH SINGLE-GANG MUD RING. TOP OF BOX AT 48" AFF. PROVIDE 3/4" CONDUIT WITH PULLSTRING TO ACCESSIBLE CEILING SPACE.
DC	DOOR CONTACT. PROVIDE 3/4" CONDUIT WITH PULLSTRING TO ACCESSIBLE CEILING SPACE.
⊙	PUSH BUTTON, TOP OF BOX AT 48" UNLESS NOTED OTHERWISE

ELECTRICAL GENERAL NOTES:

1. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
2. IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO PROPERLY BALANCE ALL BRANCH CIRCUITS BETWEEN THE PHASES OF THE SYSTEM REGARDLESS OF CIRCUITING INDICATED.
3. ALL EXPOSED RACEWAYS SHALL BE IN EMT CONDUIT, MC CABLE IS NOT PERMITTED IN EXPOSED AREAS.
4. ELECTRICAL CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, FIXTURES, SYSTEMS, CONDUIT AND WIRE, ETC. NOT BEING REUSED, DO NOT JUST ABANDON.
5. ELECTRICAL CONTRACTOR TO COORDINATE MANUFACTURER ELECTRICAL REQUIREMENTS FOR HVAC EQUIPMENT BEING FURNISHED WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. EQUIPMENT DISCONNECTS TO BE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE IN MECHANICAL SCHEDULES.
6. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LIGHT FIXTURES AND DEVICES.
7. REFER TO ARCHITECTURAL & STRUCTURAL DRAWINGS FOR REQUIREMENTS FOR SUPPORTING TRANSFORMERS, EQUIPMENT, ETC. FROM THE STRUCTURE. PROVIDE ADDITIONAL STEEL AS REQUIRED TO PROPERLY SUPPORT SYSTEMS FROM THE STRUCTURE.
8. ALL ELECTRICAL DEVICES ARE EXISTING AND TO REMAIN UNLESS NOTED OTHERWISE OR CONFLICT WITH NEW CONSTRUCTION. MAINTAIN PROPER OPERATION OF ALL EXISTING ELECTRICAL.
9. ALL MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
10. EACH BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL PER NEC 210.4.
11. FIRE ALARM SYSTEM IS SHOWN FOR SCHEMATIC PURPOSES. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR PROVIDING DESIGN AND SHOP DRAWINGS SUBMITTAL TO FIRE MARSHAL FOR APPROVAL AS REQUIRED BY THE FIRE MARSHAL. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE ADDITIONAL DEVICES, POWER SUPPLIES, ETC. FOR COMPLIANCE WITH CODE.
12. PLANS INDICATE MINIMUM WIRE SIZES PER NEC. ALL BRANCH CIRCUITS SHALL BE SIZED TO ALLOW FOR A MAXIMUM OF 3% VOLTAGE DROP. ALL FEEDERS SHALL BE SIZED TO ALLOW FOR A MAXIMUM OF 2% VOLTAGE DROP. ELECTRICAL CONTRACTOR SHALL VERIFY WIRING INDICATED IS SUFFICIENT AND INCREASE CONDUCTOR SIZE AS REQUIRED BASED OFF ACTUAL INSTALLED LENGTH OF CONDUCTORS.
13. PROVIDE LOW VOLTAGE WIRING BETWEEN ALL 0-10V DIMMING DRIVERS CONTROLLED BY 0-10V DIMMERS PER MANUFACTURER'S INSTRUCTIONS.
14. WHEREVER POSSIBLE, CONDUIT SHALL BE RUN CONCEALED WITHIN WALLS, CEILINGS, SOFFITS, ETC. SURFACE MOUNTED CONDUIT IN FINISHED SPACES MUST BE APPROVED BY THE ENGINEER OR ARCHITECT PRIOR TO INSTALLATION. EXTERIOR CONDUIT SHALL NOT BE RUN EXPOSED IN PUBLICLY VISIBLE AREAS WITHOUT APPROVAL OF THE ARCHITECT OR ENGINEER.
15. OUTLET ROUGH-IN BOXES SHALL BE COMPATIBLE WITH TWO SCREW COVER PLATES.



project title



project number

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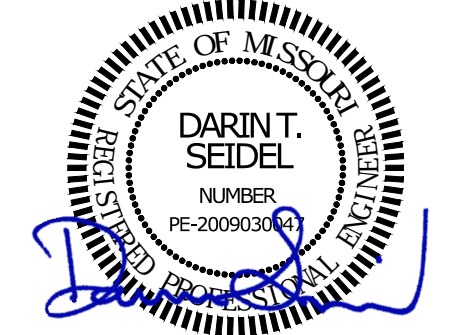
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drawing title

ELECTRICAL SPECIFICATIONS

drawing number

E1

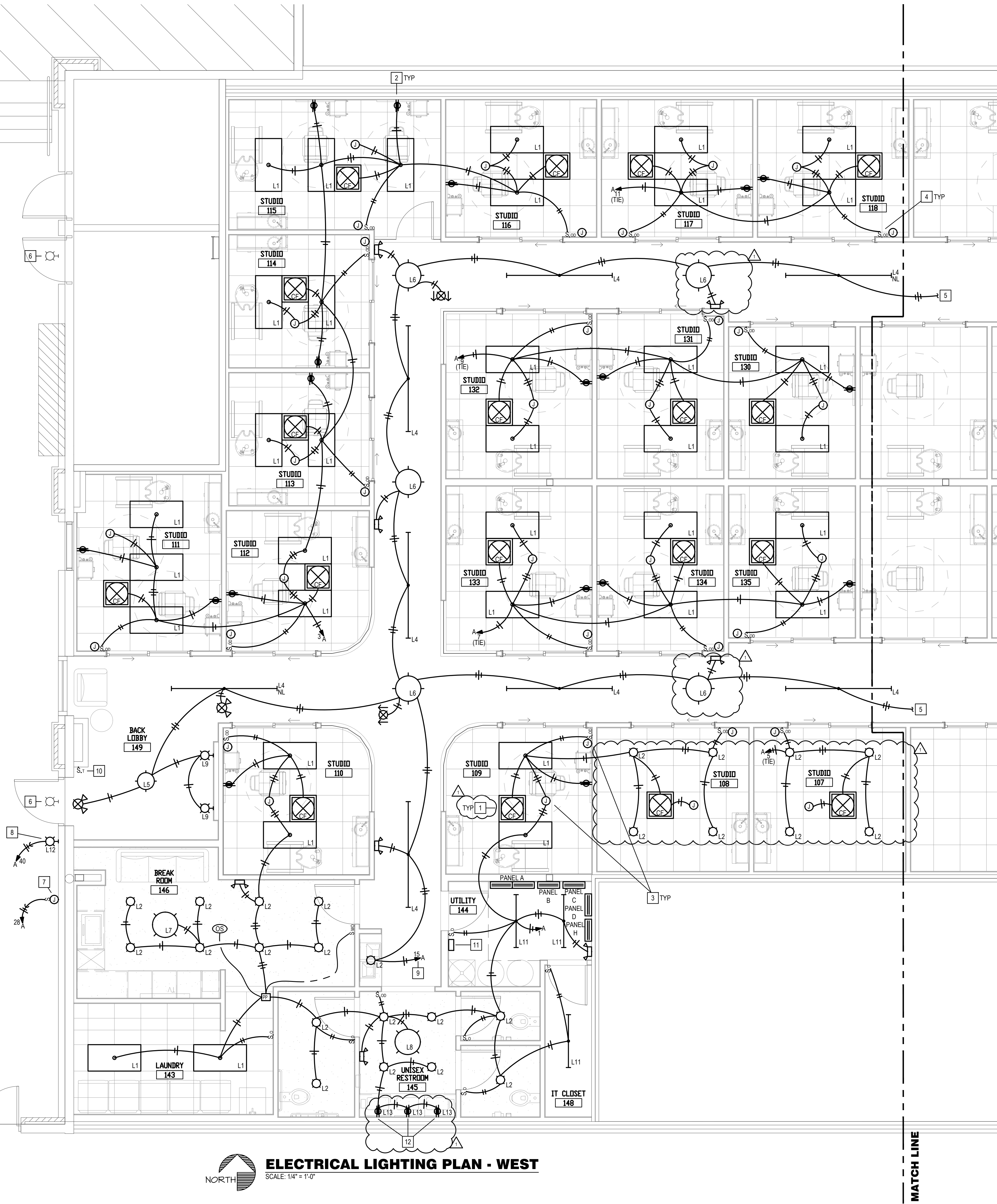
BC PROJECT #: 23615  
MISSOURI PE COA #2009003629

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- LIGHTING PLAN NOTES:**
- 1 CEILING FAN SHALL BE CONTROLLED INDEPENDENTLY OF ROOM LIGHTING, BY REMOTE CONTROL.
  - 2 MOUNT CONTROLLED RECEPTACLE AT 53.5" AFF, RECESSED IN WALL AND CENTERED ON MIRROR. CONTROL WITH LIGHTING IN ROOM.
  - 3 PROVIDE JUNCTION BOX WITH BLANK COVER PLATE ABOVE CEILING FOR POSSIBLE FUTURE TENANT DECORATIVE LIGHT. PROVIDE JUNCTION BOX WITH BLANK COVER PLATE ON WALL ADJACENT TO LIGHT SWITCH FOR FUTURE DECORATIVE LIGHT CONTROL. FUTURE LIGHT TO BE CONTROLLED INDEPENDENTLY OF ROOM LIGHTING. PROVIDE 1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH PULL STRING. FUTURE LIGHT MAY HAVE DIMMING CAPABILITY, AND IT IS NOT KNOWN IF SYSTEM WILL BE 0-10V, ELV, ETC. PROVIDE ALTERNATE COST TO ADD SWITCH AND WIRE TO EACH JUNCTION BOX FOR CHANDELIER.
  - 4 OCCUPANCY SENSOR WALL SWITCH IN STUDIO TO CONTROL 2x4 LIGHTS AND MIRROR RECEPTACLE.
  - 5 CONTINUED ON SHEET E2.2.
  - 6 EXISTING EXTERIOR EMERGENCY LIGHT, ON EXISTING LANDLORD CIRCUIT, TO REMAIN.
  - 7 PROVIDE WEATHERPROOF JUNCTION BOX WITH DISCONNECTING MEANS PER NEC FOR POWER TO ILLUMINATED BUILDING SIGNAGE. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH SIGNAGE VENDOR. ROUTE CIRCUIT TO PANEL VIA TIME CLOCK. SEE LIGHTING/SIGNAGE CONTROL DIAGRAM ON SHEET E2.2.
  - 8 PROVIDE NEW EXTERIOR LIGHT FIXTURE. ROUTE CIRCUIT TO PANEL VIA TIME CLOCK. SEE LIGHTING/SIGNAGE CONTROL DIAGRAM ON SHEET E2.2.
  - 9 ROUTE SWITCHED LEG OF CIRCUIT THROUGH TIMECLOCK FOR AUTOMATIC SHUTOFF. PROVIDE UNSWITCHED "HOT" CONDUCTOR ROUTED AHEAD OF LIGHTING CONTROLS FOR EXIT, EMERGENCY AND NIGHT-LIGHTS. SEE LIGHTING/SIGNAGE CONTROL DIAGRAM ON SHEET E2.2.
  - 10 2-HOUR SPRINGWOUND TIMER FOR AUTOMATIC LIGHTING CONTROL OVERRIDE. SEE LIGHTING/SIGNAGE CONTROL DIAGRAM ON SHEET E2.2.
  - 11 PROPOSED LOCATION OF INTERIOR LIGHTING CONTROLS. SEE LIGHTING/SIGNAGE CONTROL DIAGRAM ON SHEET E2.2.
  - 12 MOUNT CONTROLLED RECEPTACLE AT 60" AFF, RECESSED IN WALL AND CENTERED ON MIRROR. CONTROL WITH LIGHTING IN ROOM.

**ELECTRICAL LIGHTING PLAN - WEST**  
SCALE: 1/4" = 1'-0"

BC PROJECT #: 23615  
MISSOURI PE COA #2009003629

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**IMAGE STUDIOS**  
SUMMIT FAIR  
840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

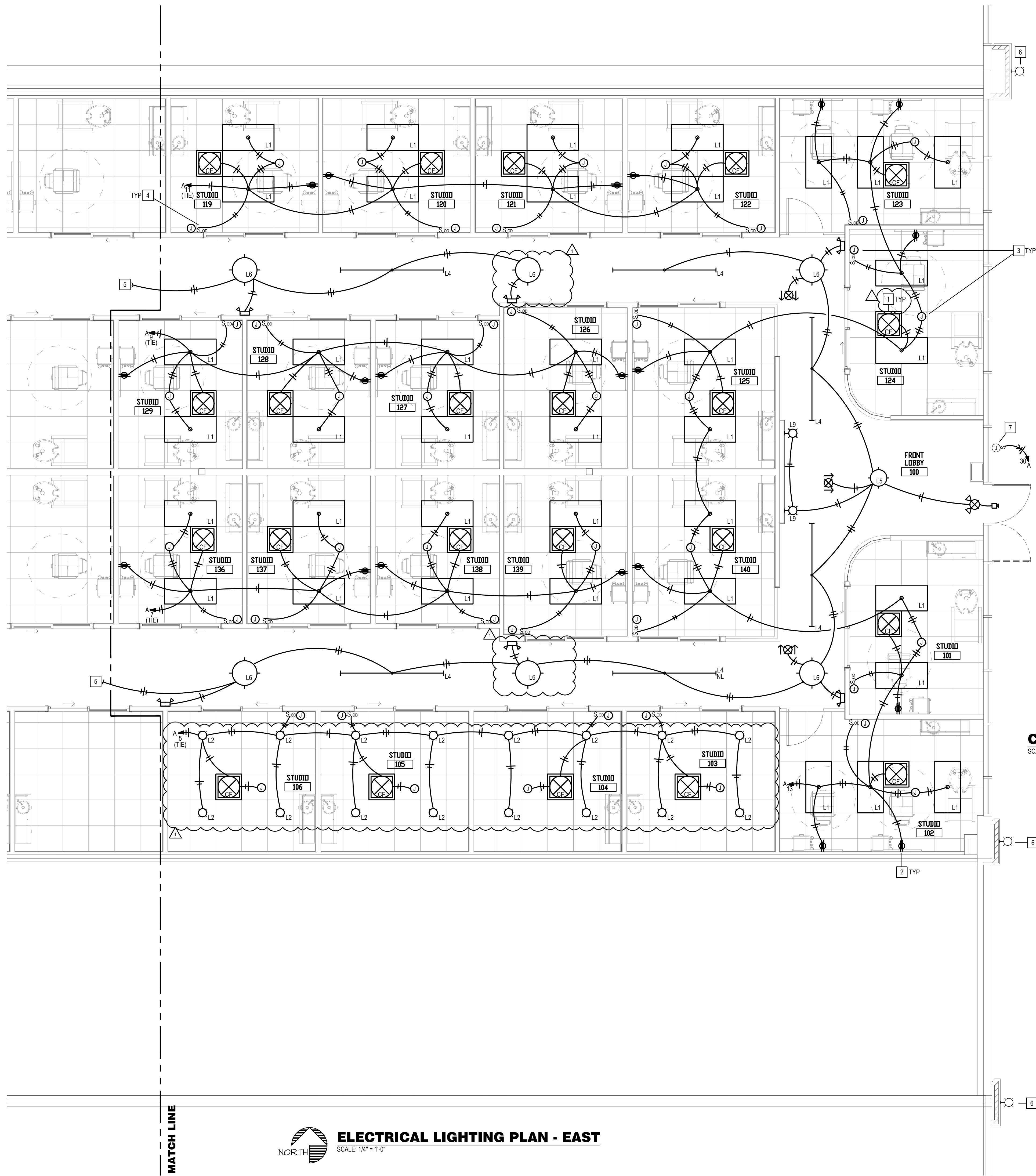
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drawing revisions No. Description Date:  
CITY/OWNER COMMENTS 04.16.24

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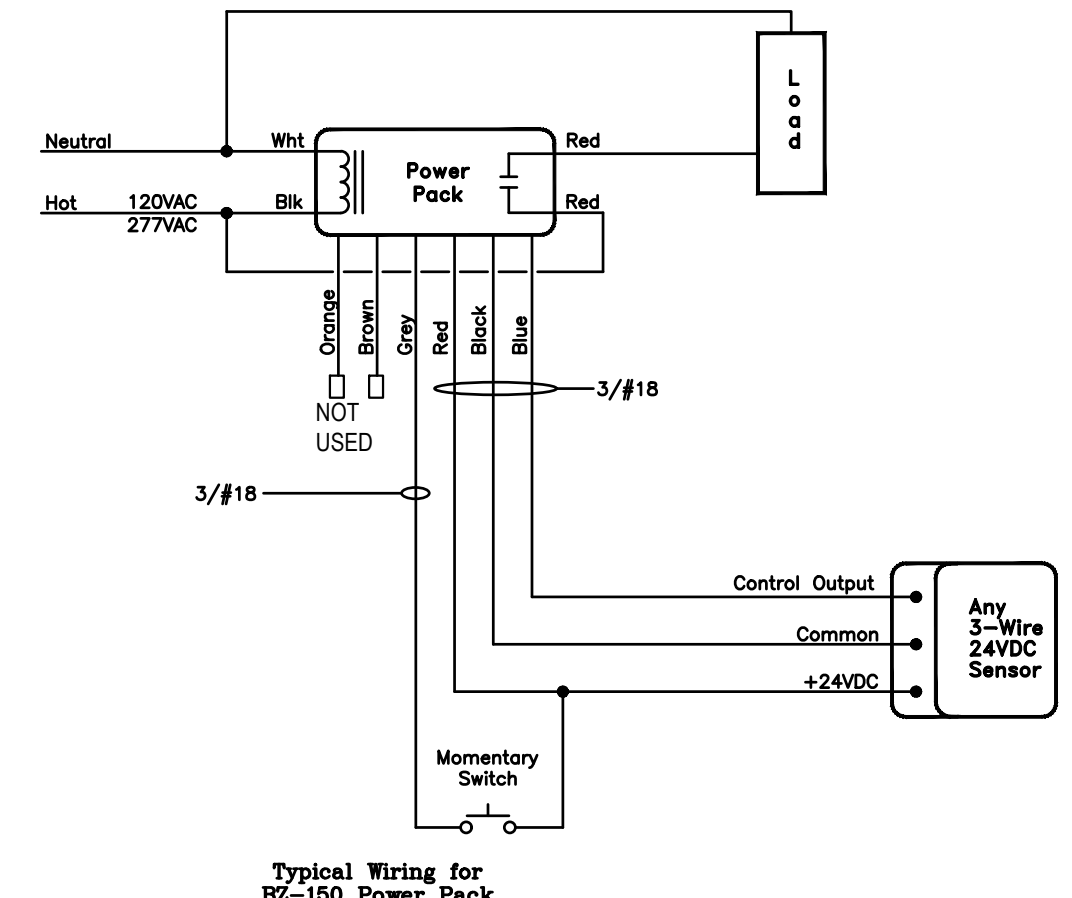


drawing title ELECTRICAL LIGHTING PLAN - WEST  
drawing number **E2.1**

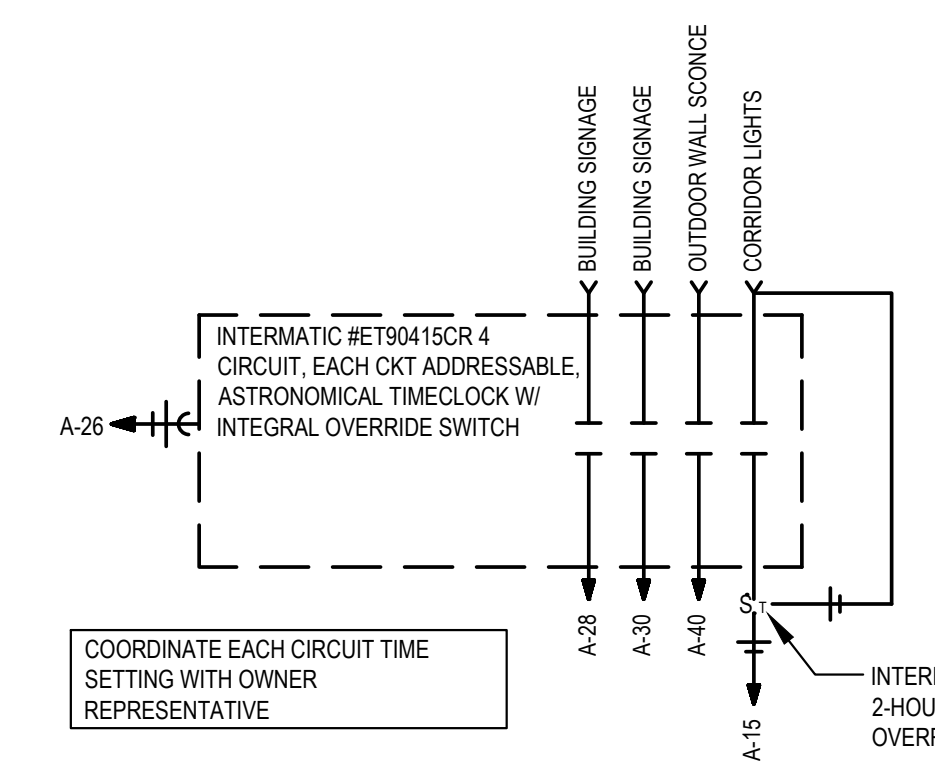




- LIGHTING PLAN NOTES:**
- 1 CEILING FAN SHALL BE CONTROLLED INDEPENDENTLY OF ROOM LIGHTING, BY REMOTE CONTROL.
  - 2 MOUNT CONTROLLED RECEPTACLE AT 53.5" AFF, RECESSED IN WALL AND CENTERED ON MIRROR. CONTROL WITH LIGHTING IN ROOM.
  - 3 PROVIDE JUNCTION BOX WITH BLANK COVER PLATE ABOVE CEILING FOR POSSIBLE FUTURE TENANT DECORATIVE LIGHT. PROVIDE JUNCTION BOX WITH BLANK COVER PLATE ON WALL ADJACENT TO LIGHT SWITCH FOR FUTURE DECORATIVE LIGHT CONTROL. FUTURE LIGHT TO BE CONTROLLED INDEPENDENTLY OF ROOM LIGHTING. PROVIDE 1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH PULL STRING. FUTURE LIGHT MAY HAVE DIMMING CAPABILITY, AND IT IS NOT KNOWN IF SYSTEM WILL BE 0-10V, ELV, ETC. PROVIDE ALTERNATE COST TO ADD SWITCH AND WIRE TO EACH JUNCTION BOX FOR CHANDELIER.
  - 4 OCCUPANCY SENSOR WALL SWITCH IN STUDIO TO CONTROL 2x4 LIGHTS AND MIRROR RECEPTACLE.
  - 5 CONTINUED ON SHEET E2.1.
  - 6 EXISTING WALL SCONCE, ON EXISTING LANDLORD CIRCUIT, TO REMAIN.
  - 7 EXISTING JUNCTION BOX WITH DISCONNECTING MEANS FOR ILLUMINATED BUILDING SIGNAGE. ROUTE CIRCUIT TO PANEL VIA TIME CLOCK. SEE LIGHTING/SIGNAGE CONTROL DIAGRAM ON THIS SHEET.



**CEILING OCCUPANCY SENSOR WIRING DIAGRAM**  
SCALE: NONE



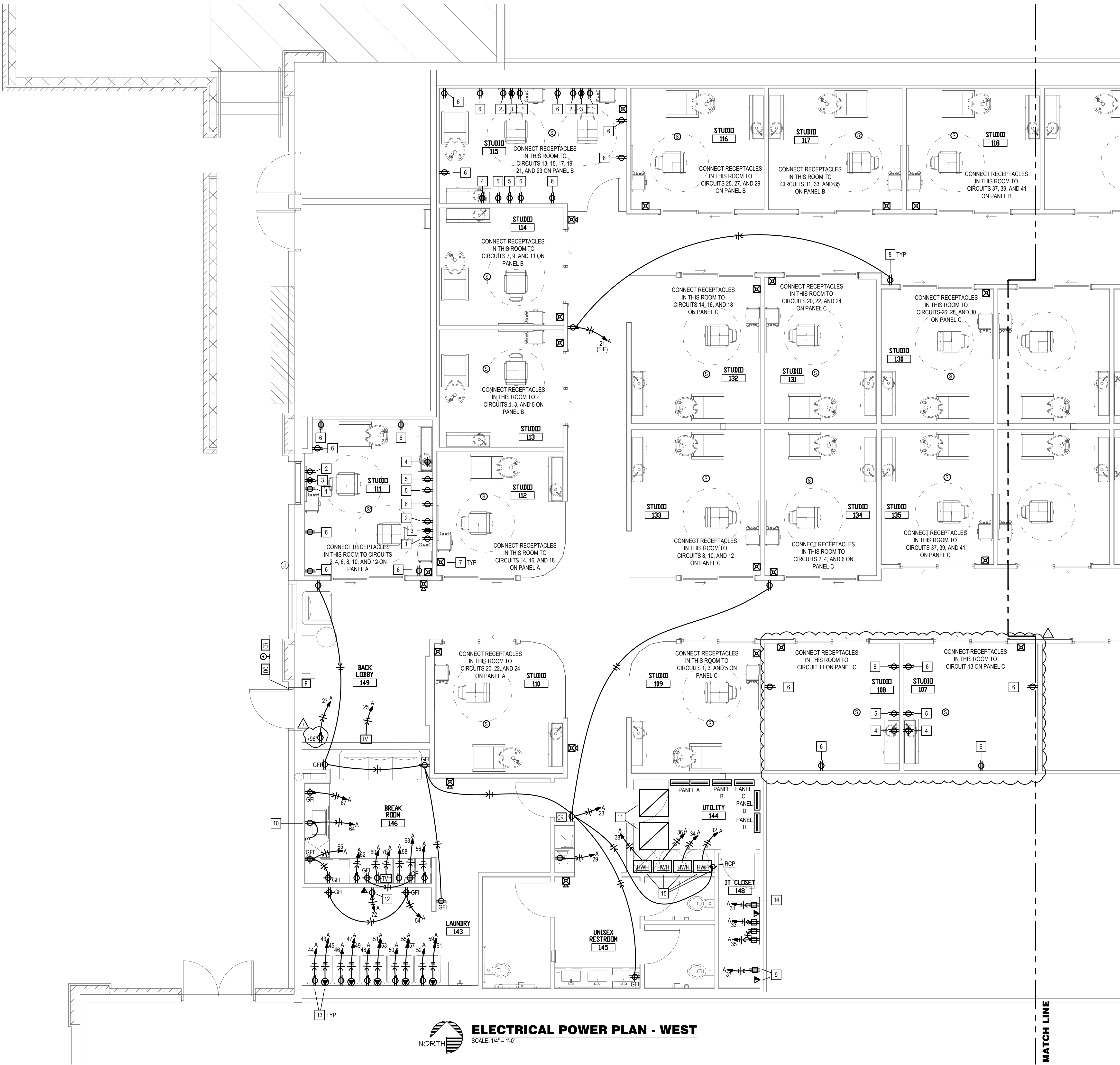
**LIGHTING/SIGNAGE CONTROL DIAGRAM**  
SCALE: NONE

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MISSOURI PE COA #2009003629

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- POWER PLAN NOTES:
1. STYLING TOOLS. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  2. BLOW DRYER. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  3. MIRROR. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION. REFER TO LIGHTING PLAN ON SHEETS E2.1 & 2.2 FOR CIRCUITING.
  4. MILLWORK COUNTERTOP. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  5. FUTURE MINI-FRIDGE. RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  6. CONVENIENCE RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  7. FIRE ALARM STROBES TO BE EITHER CEILING MOUNTED OR TO MATCH THE WALL COLOR. WALL STROBES PREFERRED DUE TO LARGE AMOUNT OF DIFFUSERS, GRILLES, LIGHTS, ETC. IN CEILINGS.
  8. RECEPTACLE AND COVER PLATE COLORS IN CORRIDORS WILL VARY BASED ON WALL PAINT COLOR. VERIFY REQUIREMENTS WITH ARCHITECT.
  9. RECEPTACLE AND JUNCTION BOX FOR AV RACK, WITH (2) 1" CONDUITS FOR CAT5 AND SPEAKER WIRE TO ABOVE ACCESSIBLE CEILING FOR SOUND SYSTEM. COORDINATE EXACT REQUIREMENTS AND LOCATION PRIOR TO ROUGH-IN.
  10. SPLIT SWITCHED DUPLEX RECEPTACLE LOCATED IN CABINET BELOW SINK FOR CONNECTION TO DISHWASHER AND DISPOSAL. VERIFY EXACT LOCATION.
  11. MOUNT TRANSFORMERS ON OVERHEAD PLATFORM.
  12. PROVIDE RECEPTACLE INSIDE CABINET FOR FUTURE PRINTER OR OTHER APPLIANCE. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
  13. VERIFY RECEPTACLE MOUNTING HEIGHT WITH MANUFACTURER'S INSTRUCTIONS.
  14. PROVIDE 4'x8'x3/4" FIRE RETARDANT PLYWOOD TELECOM BACKBOARD WITH #6 CU BOND TO BUILDING ELECTRODE SYSTEM. EXTEND (2) 4" WITH PULL STRING FROM LANDLORD'S PHONEBOARD TO ABOVE TENANT BACKBOARD.
  15. MAKE CONNECTIONS TO WATER HEATERS AND RE-CIRCULATION PUMP PER MANUFACTURER'S INSTRUCTIONS. COORDINATE WITH PLUMBING CONTRACTOR.

**ELECTRICAL POWER PLAN - WEST**  
SCALE: 1/4" = 1'-0"

BC PROJECT #: 23615  
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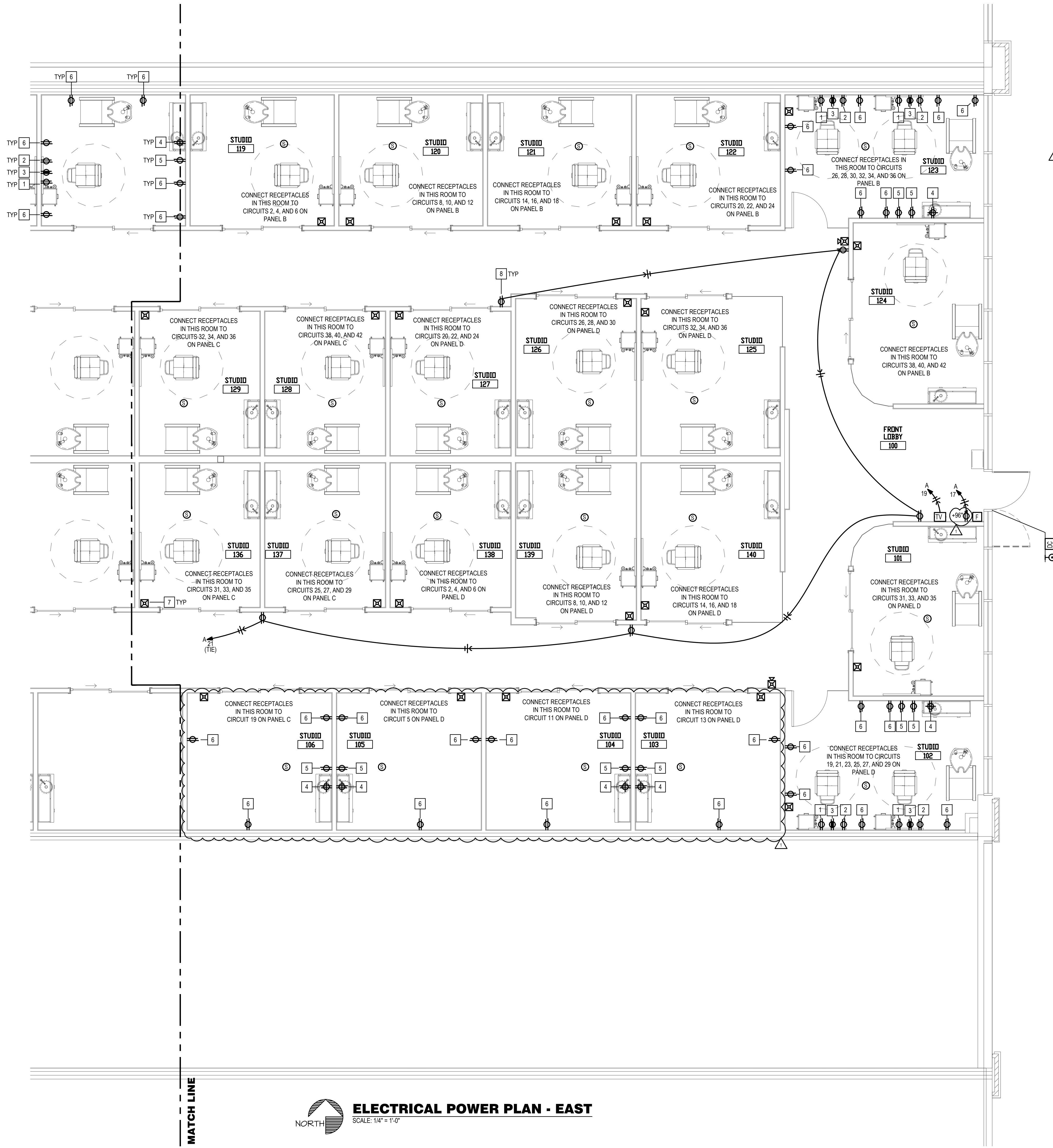


project title  
**IMAGE STUDIOS**  
SUMMIT FAIR  
840-D NW BLUE PARKWAY  
LEES SUMMIT, MO 64086

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ELECTRICAL POWER PLAN - WEST  
drawing number  
**E3.1**





- POWER PLAN NOTES:
- 1 STYLING TOOLS RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  - 2 BLOW DRYER RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  - 3 MIRROR RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION. REFER TO LIGHTING PLAN ON SHEETS E2.1 & 2.2 FOR CIRCUITING.
  - 4 MILLWORK COUNTERTOP RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  - 5 FUTURE MINI-FRIDGE RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  - 6 CONVENIENCE RECEPTACLE. REFER TO ENLARGED TYPICAL STUDIO PLAN ON SHEET E4 FOR ADDITIONAL INFORMATION.
  - 7 FIRE ALARM STROBES TO BE EITHER CEILING MOUNTED OR TO MATCH THE WALL COLOR. WALL STROBES PREFERRED DUE TO LARGE AMOUNT OF DIFFUSERS, GRILLES, LIGHTS, ETC. IN CEILINGS.
  - 8 RECEPTACLE AND COVER PLATE COLORS IN CORRIDORS WILL VARY BASED ON WALL PAINT COLOR. VERIFY REQUIREMENTS WITH ARCHITECT.

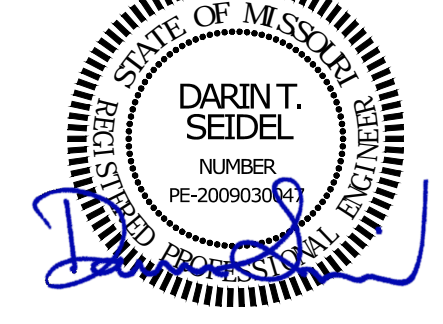


project title

IMAGE STUDIOS  
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LEES SUMMIT, MO 64086

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No. Description Date  
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drawing title  
ELECTRICAL POWER PLAN - EAST

drawing number

E3.2

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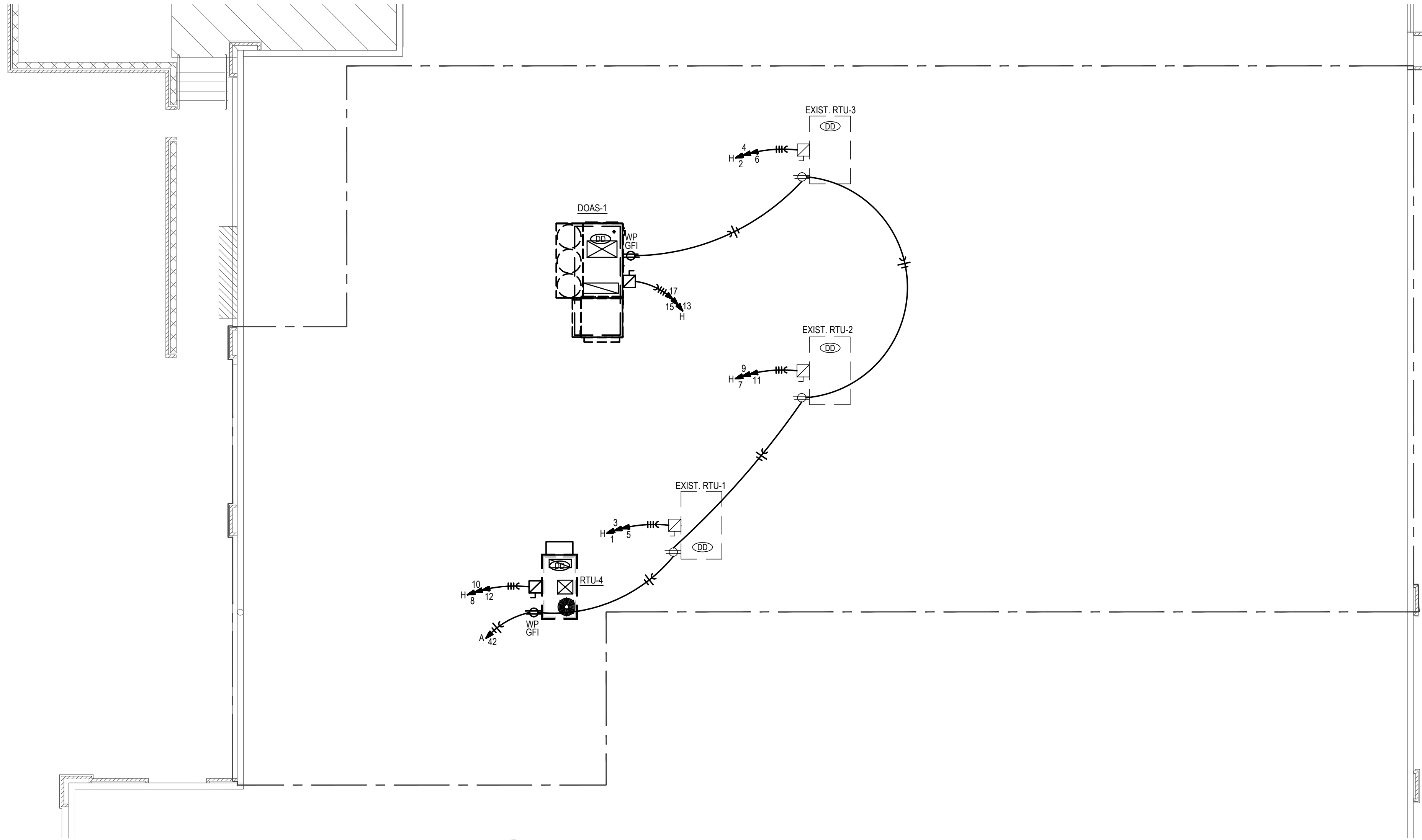
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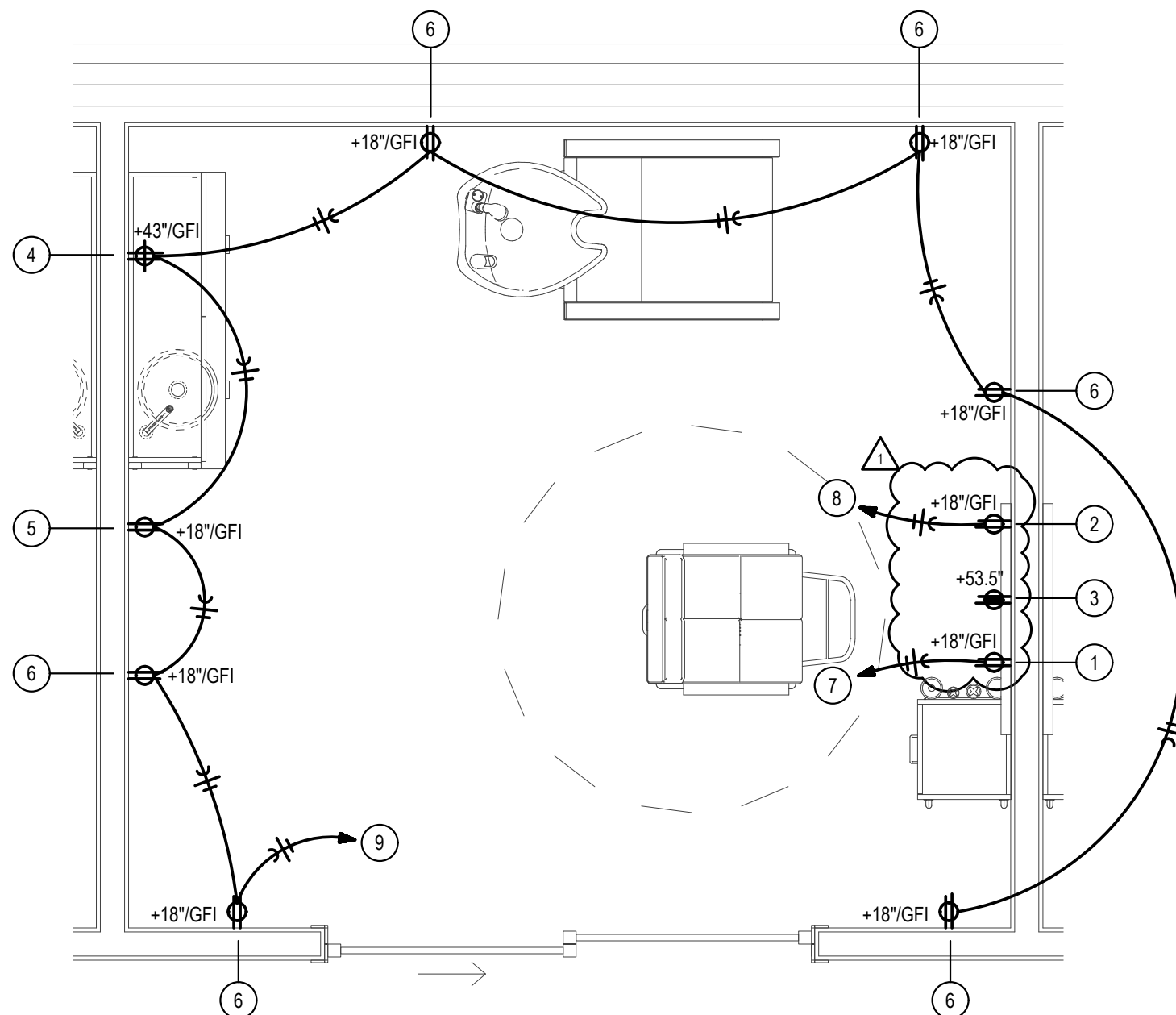
5720 Reeder Shawnee, KS 66203 (913)262-1772

ELECTRICAL POWER PLAN - EAST  
SCALE: 1/4" = 1'-0"





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



**ENLARGED TYPICAL STUDIO PLAN**  
SCALE: 1/2" = 1'-0"

**ENLARGED PLAN NOTES:**

1. **STYLING TOOLS**. RECEPTACLE TO BE ON DEDICATED CIRCUIT. LOCATE NEAR MIRROR-REFER TO ELECTRICAL POWER PLAN FOR MIRROR LOCATION IN EACH ROOM. RECEPTACLE AND COVERPLATE TO BE BLACK.
2. **BLOW DRYER**. RECEPTACLE TO BE ON DEDICATED CIRCUIT. LOCATE NEAR MIRROR-REFER TO ELECTRICAL POWER PLAN FOR MIRROR LOCATION IN EACH ROOM. RECEPTACLE AND COVERPLATE TO BE BLACK.
3. **MIRROR**. PROVIDE RECESSED RECEPTACLE, ROUTED THROUGH LIGHTING CONTROLS. REFER TO LIGHTING PLAN ON SHEETS E2.1 & 2.2.
4. **MILLWORK COUNTERTOP**. REFER TO ELECTRICAL POWER PLAN FOR MILLWORK LOCATION IN EACH ROOM.
5. **FUTURE MINI-FRIDGE**. LOCATE RECEPTACLE FOR FUTURE MINI-FRIDGE. VERIFY EXACT LOCATION
6. **CONVENIENCE RECEPTACLE**.
7. CONNECT TO "TOOLS" CIRCUIT ON PANELBOARD.
8. CONNECT TO "DRYER" CIRCUIT ON PANELBOARD.
9. CONNECT TO "GENERAL" CIRCUIT ON PANELBOARD.

DEDICATED OUTLETS INSIDE OF STUDIOS SHOULD BE BLACK WITH A BLACK COVER PLATE.

LIGHT FIXTURE SCHEDULE					
MARK NO.	MANUFACTURER & CATALOG NUMBER	VOLTS WATTS	LIGHT SOURCE	DESCRIPTION	EQUIVALENT MANUFACTURERS
L1	COOPER 24CGTS-L3C3	120 53	LED 6426 LUM 3500K	2'X4' LED RECESSED TROFFER WITH 0-10V DIMMING.	
L2	CREE CR6T-825L-35K-12-E26GU24 HOUSING: RC6-UNI	120 12	LED 800 LUM 3500K	6" RECESSED DOWNLIGHT, DIMMABLE TO 5%.	WILLIAMS LITHONIA OR EQUAL
L4	SAYLITE L23-P-SF-96L-T-32W-DMV-BK-35K-HC612BK	120 32	LED 3500 LUM 3500K	8' LONG DIRECT LINEAR PENDANT WITH BLACK TRIM AND 0-10V DIMMING.	WILLIAMS LITHONIA OR EQUAL
L5	ROYAL PEARL B09ZK5NPYJ	120 240	LED 12000LUM 6000K	GOLD 6-RING MODERN PENDANT CHANDELIER.	
L6	EDISLIVE B07T9H76TK	120 10	LED 3000K	MODERN ARTISTIC 1-LIGHT 6-CLEAR GLOBE GLASS BUBBLE SPUTNIK CHANDELIER.	WILLIAMS LITHONIA OR EQUAL
L7	PUVAUE MD2023-D600	120 63	LED 3000K	24" DIAMETER SILVER MODERN CRYSTAL TREE BRANCH CHANDELIER. MOUNT AT 8'-0" AFF. SUPPLY LED EQUIVALENTS OF (9) G8 BULBS	
L8	LIGHTING LION B085VW4X12	120 100	LED 2800 LUM 3000K	MODERN RING CHANDELIER.	
L9	FARMHOUSE LIGHT	120 18	LED 3000K	MINIMALIST BLACK LED WALL SCONCE.	
L11	LITHONIA ZL1D L48 3000LM FST MVOLT 35K 80CRI	120 30	LED 3966 LUM 3500K	4' STRIP LIGHT	H E WILLIAMS OR EQUAL
L12	OZARKE IP65	120 25	LED 1900 LUM	40" TALL BLACK WALL SCONCE, OUTDOOR RATED, WITH CHANGEABLE COLOR TEMPERATURE	OR OWNER-APPROVED EQUAL
L13	TETOTE 40x24 LED BACKLIT VANITY MIRROR	120 36	LED 3900 LUM 6000K	RESTROOM CORRIDOR MIRRORS WIRED INTO RESTROOM OCCUPANCY SENSORS	
CF	ALASKA SA-398 OR AS DIRECTED BY CLIENT	120 45		RECESSED CEILING FAN WITH HANDHELD REMOTE CONTROL.	
EL	DUAL-LITE EV2-x	120 1	INCL	EMERGENCY LIGHT WITH TWIN ADJUSTABLE 1 WATT LED HEADS AND BATTERY, MOUNT AT 7'-6"±, TO CLEAR OBSTACLES. (PROVIDES 1 FC AVG. ON 27" CENTER FIXTURE SPACING). HOUSING FINISH COLOR WILL VARY BASED ON WALL PAINT COLOR; VERIFY REQUIREMENTS WITH ARCHITECT.	SURE-LITES LITHONIA OR EQUAL
EL	DUAL-LITE EVE-U-R-x-E	120 1	INCL	EXIT LIGHT WITH LED LAMPS, RED LETTERS, UNIVERSAL MOUNT, BATTERY BACKUP. HOUSING FINISH COLOR WILL VARY BASED ON WALL PAINT COLOR; VERIFY REQUIREMENTS WITH ARCHITECT.	SURE-LITES LITHONIA OR EQUAL
EL	DUAL-LITE EVC-U-R-x	120 3	INCL	COMBINATION EMERGENCY/EXIT LIGHT WITH LED LAMPS, RED LETTERS, TWIN LED EMERGENCY LIGHT HEADS, UNIVERSAL MOUNT, BATTERY BACKUP. HOUSING FINISH COLOR WILL VARY BASED ON WALL PAINT COLOR; VERIFY REQUIREMENTS WITH ARCHITECT.	SURE-LITES LITHONIA OR EQUAL
EL	DUAL-LITE EVC-U-R-x-D4 WITH EVO-D-X	120 5	INCL	COMBINATION EMERGENCY/EXIT LIGHT WITH LED LAMPS, RED LETTERS, TWIN 6W EMERGENCY LIGHT HEADS, UNIVERSAL MOUNT, HIGH CAPACITY BATTERY BACKUP AND REMOTE TWIN HEAD OUTDOOR RATED FIXTURE. HOUSING FINISH COLOR WILL VARY BASED ON WALL PAINT COLOR; VERIFY REQUIREMENTS WITH ARCHITECT.	SURE-LITES LITHONIA OR EQUAL

BC PROJECT #: 23615  
MISSOURI PE COA #2009003629

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PANEL: H		VOLTS: 277/480V			PH: 3Ø	WIRE: 4W	LOCATION: UTILITY 144			MOUNTING: SURFACE							
BUS: 400A		MAIN:	400A	MLO	IC:	35,000		RMS SYM AMPS		FEEDER: SEE RISER DIAGRAM							
DKT	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS	DESCRIPTION	OKT NO		
1	RTU-1	30	3	10	6,731			6,731				10	3	30	RTU-3	2	
3					6,731			6,731								4	
5							6,731			6,731						6	
7	RTU-2	25	3	10	5,402			4,432				12	3	20	RTU-4	8	
9					5,402		4,432			4,432						10	
11									4,432							12	
13	DOAS-1	60	3	6	14,850							1	20		SPARE	14	
15						14,850					1					20	16
17							14,850				1					20	18
19	SPARE	20	1									1	20		SPARE	20	
21	SPARE	20	1									1	20		SPARE	22	
23	SPARE	20	1									1	20		SPARE	24	
25	BUSSED SPACE														BUSSED SPACE	26	
27	BUSSED SPACE														BUSSED SPACE	28	
29	BUSSED SPACE														BUSSED SPACE	30	
31	BUSSED SPACE														BUSSED SPACE	32	
33	BUSSED SPACE														BUSSED SPACE	34	
35	BUSSED SPACE														BUSSED SPACE	36	
37	PANEL A VIA TRANSFORMER	150	3	10	47,436			30,480				3	3	90	PANEL D VIA TRANSFORMER	38	
39						46,986			29,220		40						
41							45,646			30,900	42						
NOTES:					74,419	73,969	72,629	41,643	40,383	42,063	TOTAL CONNECTED LOAD:					345,106 VA	
					116,062		114,352		114,692	NEC DEMAND LOAD:					260,023 VA		
					DEMAND AMPS @ 480 VOLT / 3Ø:											312.76 A	

PANEL: C		VOLTS: 120/208V		PH: 3Ø	WIRE: 4W	LOCATION: UTILITY 144		MOUNTING: SURFACE								
BUS: 125A		MAIN: 100A	MLO	IC: 10,000	RMS SYM AMPS		FEEDER: SEE RISER DIAGRAM									
OKT	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	WIRE	POLE	AMPS	DESCRIPTION	OKT NO				
1	STUDIO 109 STYLING TOOLS	20	1	12	1,500			1,440		12	1	20	STUDIO 134 GENERAL [GF]	2		
3	STUDIO 109 BLOW DRYER	20	1	12		1,500			1,500	12	1	20	STUDIO 134 BLOW DRYER	4		
5	STUDIO 109 GENERAL [GF]	20	1	12			1,080			1,500	12	1	20	STUDIO 134 STYLING TOOLS	6	
7	SPARE	20	1					1,080			12	1	20	STUDIO 133 GENERAL [GF]	8	
9	SPARE	20	1						1,500	12	1	20	STUDIO 133 BLOW DRYER	10		
11	STUDIO 108 GENERAL [GF]	20	1	12			900			1,500	12	1	20	STUDIO 133 STYLING TOOLS	12	
13	STUDIO 107 GENERAL [GF]	20	1	12	900			1,080			12	1	20	STUDIO 132 GENERAL [GF]	14	
15	SPARE	20	1						1,500	12	1	20	STUDIO 132 BLOW DRYER	16		
17	SPARE	20	1							1,500	12	1	20	STUDIO 132 STYLING TOOLS	18	
19	STUDIO 106 GENERAL [GF]	20	1	12	900			1,440			12	1	20	STUDIO 131 GENERAL [GF]	20	
21	SPARE	20	1						1,500	12	1	20	STUDIO 131 BLOW DRYER	22		
23	SPARE	20	1							1,500	12	1	20	STUDIO 131 STYLING TOOLS	24	
25	STUDIO 137 STYLING TOOLS	20	1	10	1,500			1,440			10	1	20	STUDIO 130 GENERAL [GF]	26	
27	STUDIO 137 BLOW DRYER	20	1	10		1,500			1,500	10	1	20	STUDIO 130 BLOW DRYER	28		
29	STUDIO 137 GENERAL [GF]	20	1	10			1,440			1,500	10	1	20	STUDIO 130 STYLING TOOLS	30	
31	STUDIO 136 STYLING TOOLS	20	1	10	1,500				1,440		10	1	20	STUDIO 129 GENERAL [GF]	32	
33	STUDIO 136 BLOW DRYER	20	1	10		1,500				1,500	10	1	20	STUDIO 129 BLOW DRYER	34	
35	STUDIO 136 GENERAL [GF]	20	1	10			1,440			1,500	10	1	20	STUDIO 129 STYLING TOOLS	36	
37	STUDIO 135 STYLING TOOLS	20	1	12	1,500				1,440		10	1	20	STUDIO 128 GENERAL [GF]	38	
39	STUDIO 135 BLOW DRYER	20	1	12		1,500				1,500	10	1	20	STUDIO 128 BLOW DRYER	40	
41	STUDIO 135 GENERAL [GF]	20	1	12			1,440			1,500	10	1	20	STUDIO 128 STYLING TOOLS	42	
NOTES:					7,800	6,000	6,300	9,360	10,500	10,500	TOTAL CONNECTED LOAD:			50,460 VA		
(GF) GFCI BRKR 5mA					17,160		16,500		16,800	NEC DEMAND LOAD:				30,230 VA		
					DEMAND AMPS @ 208 VOLT / 3Ø:									83.91		

PANEL: A		VOLTS: 120/208V			PH: 3Ø	WIRE: 4W	LOCATION: UTILITY 144			MOUNTING: SURFACE						
BUS: 400A		MAIN: 400A		MCB	IC: 22,000	RMS SYM AMPS			FEEDER: SEE RISER DIAGRAM							
OKT	DESCRIPTION	AMPS	POLE	WIRE	ØA	ØB	ØC	ØA	ØB	ØC	WIRE	POLE	AMPS	DESCRIPTION	OKT NO	
1	LTG - SOUTHWEST	20	1	12	1,177			1,500			10	1	20	STUDIO 111 STYLING TOOLS	2	
3	LTG - WEST	20	1	12		1,372			1,500		10	1	20	STUDIO 111 STYLING TOOLS	4	
5	LTG - SOUTH	20	1	12			565			1,500	10	1	20	STUDIO 111 BLOW DRYER	6	
7	LTG - CENTRAL	20	1	12	1,407			1,500			10	1	20	STUDIO 111 BLOW DRYER	8	
9	LTG - CENTRAL	20	1	10		1,407			900		10	1	20	STUDIO 111 GENERAL [GF]	10	
11	LTG - NORTH	20	1	10			1,206			900	10	1	20	STUDIO 111 GENERAL [GF]	12	
13	LTG - EAST	20	1	8	1,372			1,500			12	1	20	STUDIO 112 STYLING TOOLS	14	
15	LTG - CORRIDORS	20	1	10		1,137			1,500		12	1	20	STUDIO 112 BLOW DRYER	16	
17	REC - SCENT MACHINE	20	1	10			1,200			1,080	12	1	20	STUDIO 112 GENERAL [GF]	18	
19	REC - DIRECTORY SCREEN	20	1	12	600			1,500			12	1	20	STUDIO 110 STYLING TOOLS	20	
21	REC - GENERAL	20	1	10		1,260			1,500		12	1	20	STUDIO 110 BLOW DRYER	22	
23	REC - GENERAL	20	1	12			1,290			1,080	12	1	20	STUDIO 110 GENERAL [GF]	24	
25	REC - DIRECTORY SCREEN	20	1	12	600			50			12	1	20	TIME CLOCK	26	
27	REC - SCENT MACHINE	20	1	12		1,200			1,200		12	1	20	BUILDING SIGNAGE	28	
29	DRINKING FOUNTAIN [GF]	20	1	12			500			1,200	10	1	20	BUILDING SIGNAGE	30	
31	REC - PHONE BOARD	20	1	12	360			225			12	1	20	GAS WATER HEATER	32	
33	REC - CCTV	20	1	12		360			225		12	1	20	GAS WATER HEATER	34	
35	REC - SERVER	20	1	12			720			225	12	1	20	GAS WATER HEATER	36	
37	REC - AV RACK	20	1	12	360			225			12	1	20	GAS WATER HEATER	38	
39	SPARE	20	1					25			12	1	20	LTG - OUTDOOR WALL SCONCE	40	
41	SPARE	20	1						900		12	1	20	RECEPT - ROOF CONVENIENCE	42	
SECTION 2																
43	CLOTHES DRYER	30	2	10	2,500			1,200			12	1	20	CLOTHES WASHER	44	
45						2,500			1,200		12	1	20	CLOTHES WASHER	46	
47	CLOTHES DRYER	30	2	10			2,500			1,200	12	1	20	CLOTHES WASHER	48	
49					2,500			1,200			12	1	20	CLOTHES WASHER	50	
51	CLOTHES DRYER	30	2	10		2,500		1,200			12	1	20	CLOTHES WASHER	52	
53							2,500			800	12	1	20	REC - LAUNDRY COUNTER	54	
55	CLOTHES DRYER	30	2	10	2,500			800			12	1	20	ICE MACHINE [GF]	56	
57						2,500			800		12	1	20	U.C. FRIDGE [GF]	58	
59	CLOTHES DRYER	30	2	10			2,500			800	12	1	20	U.C. FRIDGE [GF]	60	
61					2,500			800			12	1	20	U.C. FRIDGE [GF]	62	
63	REC - BREAK ROOM COUNTER	20	1	12		1,500			800		12	1	20	DW/GRAB DISPOSAL [GF]	64	
65	REC - BREAK ROOM COUNTER	20	1	12			1,500				1	20		SPARE	66	
67	REC - BREAK ROOM COUNTER	20	1	12	1,500						1	20		SPARE	68	
69	SPARE	20	1						600		12	1	20	TELEVISION [GF]	70	
71	SPARE	20	1							1,200	12	1	20	REC - PRINTER [GF]	72	
73	SPARE	20	1								1	20		SPARE	74	
75	SPARE	20	1								1	20		SPARE	76	
77	SPARE	20	1								1	20		SPARE	78	
79					19,560						1	20		SPARE	80	
81	PANEL B	100	3	3		19,800					1	20		SPARE	82	
83							20,280				1	20		SPARE	84	
NOTES:					36,936	35,536	34,761	10,500	11,450	10,885	TOTAL CONNECTED LOAD:					140,068 VA
(GF) GFCI BRKR 5mA					47,436		46,986		45,646	NEC DEMAND LOAD:						100,295 VA
										DEMAND AMPS @ 208 VOLT / 3Ø:					278.36	